

ENVIRONMENTAL POLICY INTEGRATION AND MULTI-LEVEL GOVERNANCE

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Environmental policy integration and changes in governance in Swedish energy and agriculture policy over two decades

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Abstract

This paper examines environmental policy integration (EPI) as a process in which sectors' policy objectives and strategies, but also understandings of key problems and long term vision, evolve over time. The paper draws upon and synthesises key empirical results from a four-year collaborative research programme studying EPI processes at the national policy level in Sweden. It presents the evolution of EPI at the national policy level in two sectors; agriculture and energy, and then traces the evolution of governance in terms of changes in actors, organizations, policy instruments and procedures in these sectors over the last two decades. Two overarching questions are posed: First, how has the principle of EPI manifested itself in policy development in the two sectors? Second, how did the implementation of EPI interact with the evolution in national level governance systems? The findings suggest that there are strong interrelations between EPI and governance shifts but that it is very difficult to untangle them. At times, EPI has been a driver of governance shifts, and in other processes, governance shifts have facilitated EPI. It is however clear that the co-evolution of the two processes of EPI and governance renewal is important and merits further academic scrutiny and more formal analysis.

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1. INTRODUCTION

In the late 1980s, the international policy discourse around environmental policy went through significant change. After several decades of developing environmental protection policies across the Western world, it was acknowledged that the end-of-pipe approach to, and sectorisation of, environmental protection could only take us thus far. In response, the UN-initiated Brundtland Commission formulated the principle of environmentally integrated policymaking, stipulating that mainstream economic sectors should proactively incorporate environmental objectives and concerns into their respective policies and strategies, rather than viewing them as constraints or adding them as reactive mitigation measures in the implementation (WCED, 1987). This principle has since been coined “Environmental Policy Integration” (EPI) (Lenschow, 2002). It has quickly spread into global, regional and national governance systems, including the UN conference in Rio, the EC treaties and its Environmental Action Plan (EAP) and in EU Member State countries such as Sweden, the Netherlands and the UK. EPI and its evolution has been systematically studied in particular in Europe and foremost at the EU level (Weale and Williams, 1993, Liberatore, 1997, Lenschow, 1997).

In the late 1980s and early 1990s, the need for EPI was articulated in the EAPs, but practical implementation and a prominent legal basis was lagging. Progress was made with the 1997 Amsterdam Treaty, where Article 6 elevated the proactive principle of integration. In 1998, Article 6 was followed up by the so-called Cardiff process, in which the sectoral Council formations were asked to prepare strategies, timetables and indicators for better environmental integration within their respective policy areas. Still, however, progress on strategy development and implementation was very uneven across the sectors (see (Fergusson et al, 2001, European Environment Agency, 2005, European Commission, 2004), and by the mid 2000s the process was considered effectively dead (Jordan and Schout, 2006). Instead, considerable faith was put in the procedure for *ex ante* Impact Assessment of EU policy and legislative proposals.

EPI has been increasingly linked to the concept of governance, as a way of contextualising this policy principle for enhancing environmental protection and sustainability in a broader discourse on how public and private actors interact in

steering processes. A key focus in this literature has been the practical instruments for EPI and the extent to which they represent different modes of governance (HOHMEYER, 2006). For example, in a recent review on this theme, (Wilkinson, 2007) argues that there is now a tendency of considering a move away from soft, non-hierarchical modes of governance for EPI, towards a more top-down, hierarchical approach. This would suggest a reversal of an earlier identified trend towards “new” environmental policy instruments (Tews et al, 2003, Jordan et al, 2003).

This paper treats EPI as a separate variable from the governance system and sets out to examine and understand the interactions between the evolution of EPI and changes in sectoral governance that has occurred over the last two decades. What has been the relation of EPI developments to broader governance shifts in society? In what ways has EPI been a result of, or driver for, changes in governance? We do not a priori examine EPI tools and instruments (this would have pulled us dangerously close to making a circular argument), but conceptualise EPI as the enduring reorientation of sector policy over a longer time period, involving possible shifts in fundamental *policy objectives* and dominating *policy frames* in different economic sectors through a process of environmentally oriented policy learning. We will explore the commonalities between the ways in which two different sectors have come to integrate environmental concerns, but also reveal dissimilarities.

Our account of governance distinguishes two dimensions:

Actors and organizational landscape – who have been involved, broadly, in sectoral policymaking over time? What organizational changes have occurred? To what extent have actor (re)configurations contributed to more or less successful pursuit of EPI?

Policy instruments and procedures – how have *general* sectoral (i.e. not specific to EPI) policy instruments and decision-making procedures changed over time? To what extent and how have these facilitated EPI? We are interested in general trends, not specific instruments and procedures motivated by EPI.

2. THE CASE OF SWEDEN

Overall, EPI at the EU level has tended to be implemented and discussed in quite operational and practical terms, such as new, "add-on" tools and procedures imposed upon sectoral policy-makers (e.g. sector environmental assessments and annual reports, environmental correspondents in sector departments). However, as mentioned, we argue that EPI needs to be understood in terms of long-term changes in fundamental objectives and frames governing sector policies. To capture such developments over time, we will focus on one state (Sweden) and two sectors (energy and agriculture). Sweden was a forerunner in adopting EPI as a political principle, by establishing the sector responsibility principle already in the 1988 Environmental Bill, just after the Brundtland Report. By the mid 1990s, the effort towards EPI was stepped up, and a range of practical measures were introduced (see Table 1). Given this intense activity and political commitment, the Swedish case is of particular interest for investigating how EPI has unfolded in practice over the last two decades.

Table 1 Milestones in Swedish EPI (Source: Nilsson, et al 2007)

1988	Ministry for the Environment is created
1988	The Environment Bill establishes the principle of "sector responsibility"
1994	Government Communication declares that all policy should be subject to environmental assessment
1996	Prime Minister presents vision of "green welfare state" (<i>det gröna folkhemmet</i>)
1996	Environmental Advisory Council report on EPI, leading to a Commission of Ecologically Sustainable Development of ministers that carry forward suggestions for measures
1996	Legal generic sector responsibility established for central government authorities
1997	Environmental Management Systems (EMSs) adopted in government bodies
1997	The first annual sustainable development report from the government to the parliament
1998	Local Investment Programmes for environment and employment
1998	Special sector responsibility for 24 government authorities
1999	The Environmental Code enters into force
1999	Fifteen National Environmental Quality Objectives (NEQOs) introduced (a sixteenth added in 2004)
2001	Green public procurement for government authorities and public bodies (<i>EKU-verktyget</i>) is

	launched
2002	First version of a National Sustainable Development Strategy), revised in 2004 and 2006
2004	Sustainable development coordination unit established in Prime Minister's Office
2005	Ministry of Sustainable Development established (dissolved in 2006)

The present paper will synthesise the findings from a rich empirical material characterising EPI at the national level in Sweden. The research is based on a triangulation of: a) qualitative analysis of arguments and reasoning in publicly-available documents; b) characterisation of policy decisions; and c) complementary information from around 50 semi-structured interviews with policy actors, carried out between 2002 and 2005. A detailed account of methodology and empirical material is available in a recent book (Nilsson and Eckerberg, 2007).

3. EPI AND POLICY LEARNING

As mentioned, the principle of EPI has recently been the topic of extended policy deliberations and academic debate in Europe. Policy studies from organizations such as the EEA or the OECD tend to address EPI in a "checklist" fashion, i.e. whether certain tools and procedures have been put in place. From the academic side, different conceptual interpretations have been put forward, ranging from stronger interpretations such as giving the environment "principled priority" over other policy issues (Lafferty and Hovden 2003), to weaker ones such as taking the environment into account during the policy formation (Lenschow 2002). Another dimension of this debate is what the EPI principle means in terms of shaping, or organizing, policy processes and the institutional arrangements around them. Some take a more political view, emphasizing the importance of ensuring a proper power balance between economic and environmental interests, by way of access, resources and representation (see Hey 2002; Hertin and Berkhout 2001). Others highlight a rational view, exploring the supposed purposiveness of public policymaking, pointing to stronger coordination activities, setting clear goals and responsibilities, and providing the best knowledge available to inform decision making (Underdal 1980; Peters 1998).

Here, we study EPI as a long-term change in fundamental and "mainstream" policy objectives in the sectors. We want to understand how these sector

objectives evolve over time – either towards higher or lower EPI – in a process of change. Importantly, this approach considers how EPI evolves over time, rather than viewing it as a static phenomenon or a phenomenon that develops in a linear fashion. In our research, we have argued that the principle of EPI in its essence can be interpreted as a process of profound policy learning (“conceptual learning”), whereby sectoral decision makers reinterpret – or reframe – their understanding of the sector. This may be in terms not only of the sector’s impact on the environment, but the very outlook on the sector’s problems, purposes, goals, and strategies to encompass sustainability values (Nilsson, 2005b, Nilsson and Eckerberg, 2007, Nilsson, 2005a, Nilsson and Persson, 2003). From a methodological point of view, the approach of studying EPI as policy learning poses particular challenges. Studying learning “requires painstaking archival work, supplemented by elite interviews with key informants. The task is to discover the “core beliefs” of the key agents – in whichever societal or state institutions they reside – as well as the more specific evidence that was marshaled to explore or justify policy decisions” (Bennet and Howlett, 1992, p 290). To apply a policy-learning approach on EPI studies implies:

- economic sectors as entry points for the analysis;
- studying relatively long time horizons (at least a decade) (Sabatier, 1989);
- reliance on qualitative data with a strong focus on interviews to detect underlying frames and perspectives;
- data triangulation, including policy documents, interviews and text analysis to discern empirical patterns of policy learning;
- distinctions of policy phases with common dominant frames shifting or evolving over time into a new phase.

The EPI concept can also be fruitfully discussed through an “input-process-output-outcome” framework, and it has been justifiably argued that EPI should ideally be measured throughout such a framework (EEA, 2005). With our focus on learning, we measure EPI in outputs primarily, i.e. sector policy objectives and decisions and their changes over time. As mentioned earlier, it is thus different from an “inputs / process” perspective where analysts examine the use of EPI tools and mechanisms.

From a policy-learning perspective one would argue that the latter are factors that may (or may not) causally contribute to the change in policy output but that they do not in themselves represent EPI. However, through our interest in the dynamic

processes of change underlying these output changes we of course take the process side seriously. Essentially, the policy-learning perspective synthesises output and process factors (Nilsson, 2005a). For those interested in a review of EPI tools and mechanisms for Sweden, please consult Nilsson and Persson (2008).

In the following sections, we will first present a synthesis of the findings of this research approach applied on the energy and agriculture sectors in Sweden over the last two decades¹. EPI is characterised as a shift in focus on political priority and framing change in the policy agenda towards environmental sustainability. As mentioned, such change is ultimately associated with policy-learning processes among policy actors. Second, we examine the governance system by way of identifying key actors and organizations involved in policy making and types of policy instruments and procedures emerging in the system. Third, we discuss the empirical results by drawing upon a typology of governance models developed in Pierre and Peters (2006).

4. ENVIRONMENTAL POLICY INTEGRATION IN ENERGY AND AGRICULTURE

4.1. The energy sector

When we start our analysis, in the late 1980s, the energy sector was quickly waking up to environmental concerns. Following the Chernobyl accident in 1986, debates around the future of nuclear power was high on the political agenda. A referendum on the issue held in 1980 had produced an ambiguous result which opened for continued political conflict. Green parties cropped up and won seats in national parliaments in many countries, including in Sweden in 1988. The Brundtland Commission put a global spotlight on the issues. Thus environmental protection requirements were high on the agenda. In Sweden this was manifested by the establishment of the Ministry for the Environment and Energy in 1987 and the strategic positioning of and far reaching policy bills on the environment (Prop, 1987/88:85) and on energy (Prop, 1987/88:90) in 1988. Among other things, the world's first carbon tax was introduced, albeit with exemptions for industry. Following this first surge of EPI, however, Sweden's

¹ For a more detailed account of the results, see Nilsson and Eckerberg (2007), in particular Chapters 5 - 7.

economic situation deteriorated quickly in the early 1990s, and environmental concerns fell back on the political agenda. This profoundly affected the environment's relative importance in energy policy. The Minister for the Environment lost the energy portfolio to the Minister for Industry in 1991. The carbon taxation and nuclear phase-out policies were loosened. As Sweden's economy headed for a full blown financial crisis in 1992, environmental issues were pushed back across society.

Nevertheless, in the wake of the Rio Conference, to which Sweden prided itself of having been a major contributor, new spotlight flooded the sustainability of the energy sector. The government appointed a major commission to examine sustainable energy alternatives for the long term (SOU, 1995:139-140). In 1997, however, the new Prime Minister Göran Persson negotiated a deal with the Centre party that went against the Commission's recommendations. This deal called for a much more far-reaching policy in terms of nuclear phase out and supported the development of new alternative sources of energy. It took a strong view on the importance of state interventions and stringent regulation, coloured by the state-building ideology that had characterized the Prime Minister's first government declaration the year before. In retrospect, many of the policies were later abandoned or revoked although the government did push ahead and closed two of Sweden's twelve nuclear reactors, which remain closed to this day. The nuclear issue has been a particularly sensitive issue in Sweden, and one where the dominating Social Democratic party have seen itself torn between multiple internal constituencies, from very pro-nuclear trade unions to anti-nuclear leading politicians (Nilsson, 2006). The energy policy agreement of 1997 also entailed the creation of the National Energy Agency, charged with the implementation of a sustainable transition of the Swedish energy system (Prop, 1996/97:84). It is fair to say that ever since then, energy policy has been strongly influenced by the EPI agenda.

In the 2000s, energy policy focus moved more and more towards climate change mitigation and a set of policies came about to address the climate change issue, including the introduction of investment support programmes at the local level, tradeable green certificates and emissions trading system under the EU. As a result, other environmental issues were crowded off the agenda (Engström et al, 2008) whereas climate change mitigation has risen to become the top priority for energy policy overall, vastly overshadowing nuclear phase out but also being

more prominent than security of supply and competitive pricing concerns. Indeed, greenhouse gas emissions from the energy sector have been reduced significantly over the past decade, thanks to carbon taxation which has led to a transformation of the thermal power and heat production towards renewable energy sources. CO₂ emissions were reduced by 6% from 1990 to 2002, and fossil fuels have been virtually phased out (Naturvårdsverket and Energimyndigheten, 2004). The pricing of carbon emissions has continued and accentuated through the introduction of the European emissions trading system in the 2000s.

4.2. The agricultural sector

Agricultural policy has undergone large shifts over the past decades, not least from an environmental point of view. Problems associated with the use of pesticides and mercury-based fungicides were discovered in the 1960s but not incorporated into agricultural policy until the early 1970s when alternative methods and organic farming became recognized. Food surpluses appeared in the early 1980s and by the end of this decade the costs of agricultural policy were growing quickly, both for the state budget and in terms of consumer prices. Demand was growing for a fundamental reform of agricultural policy. This then coincided with the wider societal stream of environmental awareness, where concerns were raised about potentially harmful impacts on the environment as a result of deregulation. The 1985 food policy incorporated an action plan to deal with environmental protection, nature conservation and sustainable agriculture – in addition to the conventional agricultural goals (Vail et al 1994, p. 115). New environmental subsidies promoting the protection of cultural heritage and landscape values in agriculture were introduced in Swedish agriculture in 1986, and these were increased dramatically thereafter (Eckerberg 1994, p. 83). In addition, a special programme to reduce the leaching of nutrients from agriculture was adopted. Nonetheless, the deregulation reform materialised in 1990, just a few years before Sweden joined the EU in 1995.

The EU had offered Sweden, along with the other two new member states Finland and Austria, a special deal, namely more extensive support to the Environmental and Rural Development Plans (ERDPs), and the first ERDP (1995-1999) focused on environment rather than rural development. It covered, in particular, eutrophication, the loss of micro-habitats, and organic farming. The whole agricultural administration had to find its way in a new context, both in

relation to the new environmental goals and in responding to EU requirements for following up measures (Hagberg 1996 and 1997). In the second ERDP (2000-2006) rural development formed a second pillar of the Common Agricultural Policy (CAP), building on an integrated course of action towards rural development in order to preserve the landscape and environment. Here, two parallel priorities were adopted, "Environmentally Sustainable Agriculture" and "Economically and Socially Sustainable Development" (Eckerberg and Wide 2001). The framing of the debate during this period was very pragmatic and to a large extent dominated by the need to quickly adapt to a new administrative system. However, the separation of the first ERDP from the ordinary CAP measures structurally cemented the division between the agri-environmental and conventional production policy tracks.

At the same time, the 1998 Environmental Bill introduced sector responsibility for agriculture, along with the National Environmental Quality Objectives to be implemented in agriculture, which marked a new period in Swedish agricultural policy. In the reform of the CAP in 2003, Sweden had pushed for a substantial expansion of agri-environmental measures (SOU 1997:102), and the implementation of this reform meant further emphasis on the protection of biodiversity associated with open landscapes. In particular, ecological farming has increased rapidly from the early 1990s and onwards. The government had set a goal in 1994 to have 10 per cent of the farming area ecologically managed by 2000 (Prop 1993/94:157) and in 2005 this goal was raised to 20 per cent to be reached by 2010 (Skr 2005/06:88). According to statistics from 2005, 19 per cent of the arable land is ecologically managed, but only 7 per cent is certified according to the eco-label KRAV due to various bottle-necks in the marketing of agricultural products (Skr 2005/06:88 p. 7). This is remarkably high compared to the average share in the EU (3,3 per cent in 2002).

In sum, the EPI agenda "hit the ground running" in the late 1980s. Although there have been backlashes it has over time successfully transformed the sectors' goals and strategies. Some environmental concerns have cropped up to become almost overarching ambitions of the two sectors' policies, most notably the abatement of carbon dioxide emissions and resource efficiency issues in the energy sector, and the promotion of organic farming and landscape and biodiversity preservation in the agricultural sector (See Engström et al for a detailed account). Policymakers have clearly made a different prioritisation of

different environmental issues over time. For instance, in the early 1990s, there was a lot of attention to local and regional air pollution from energy production, as was acidification and health impacts. As climate change rose on the agenda, these issues were lost. The prevalence of internal environmental goal conflicts between these issues makes it problematic to work with a simplistic view on EPI as a question of priority of the environment over economic growth .

In the following section, we will discuss how this pattern of EPI has interacted with the general governance changes that have taken place at the same time. We will start by looking at how the actors and organizational landscapes have changed over time, and after that move on to look at policy instruments and procedures of decision making.

5. ACTORS AND ORGANIZATIONAL LANDSCAPE

5.1. The energy sector

The actor configuration in energy policy has undergone major shifts during the last two decades. Most markedly, the sector shifted from being governed by a closed corporatist network, to a much more open and fluid one. The corporatist network was relatively state-centred and centralistic, but also well institutionalised in terms of all participants basically sharing the same view and frame of reference about the sector, its goals and strategies. Energy policy had been seen as a technical planning issue influenced by a relatively closed set of actors. There was a tendency to rely on the state as the provider of the necessary coordination, planning and optimal development of the sector, but dominated by corporatist arrangements and a small set of actors. Some have defined this as an "iron-triangle", involving three sets of actors: industry, labour unions, and the government (Kaijser, 2001).

In the late 1980s and early 1990s, however, the sector became more open to unpredictable participation by various stakeholders. Coalitions were formed on an issue by issue basis, involving, in addition to the old players, both environmental, consumer and niche industry interests. The EU as a legislator became indirectly involved. The shift was triggered partly by internal changes in the sector. First, one of the major hubs, large energy technology firm Asea, merged with a Swiss company and formed ABB, with head quarters in Zurich. ABB quickly became a

truly global company with relatively little dependence and interest in the Swedish market (or politics). Second, the power producing government agency Statens Vattenfallsverk became a state-owned limited company, Vattenfall AB. It thus effectively ceased to be an implementing agency for government policy and plans, and instead operated on pure business grounds. Third, new actors cropped up as a result of the state supporting particular niches and technologies in renewable energy, including the Swedish Association of Bioenergy (Svebio). Fourth, municipalities began to create companies of their energy production facilities and often sell them to private investors, and thereby further decreased the public ownership of and political stakes in energy overall.

The new, more pluralistic landscape was firmly institutionalized in the late 1990s when Sweden along deregulated electricity distribution to end consumers and separated the production and distribution chains, following the European directive (European Parliament and Council of the European Union, 1996), and also established a regional electricity market with its neighbouring countries, complete with its own market exchange place; "NordPool". Any new actor could provide electricity to the grid, and any new actor could buy electricity from the market and sell to consumers. In effect, electricity and heat became just another commodity which was reflected in the new configuration of actors.

5.2. The agricultural sector

In the agricultural sector, corporatism had also prevailed for a long time, with a strong governmental involvement. The Ministry of Agriculture and National Board of Agriculture remained the central players in designing national agriculture and food policy, but after Sweden joined the EU in 1995 their role changed to implementing the CAP and the national ERDP. Regional units at the County Administrations took over responsibilities for more devolved governance and administration of EU support programmes. However, when the new agri-environmental policy was to be implemented, two parallel "tracks" can be discerned in CAP and the ERDP in which EPI is only visible in one, namely in the ERDP. The Ministry of Agriculture and its implementing agency became divided into one track that was liaised with the Ministry of Finance arguing for increased market orientation and deregulation, and another one that was linked to environmental interests and sustainable development goals. In contrast, the Federation of Swedish Farmers (LRF), who used to be very production oriented,

had quickly adapted during the 1990s to new concerns of environment and rural development as did also the Rural Economy and Agricultural Societies. LRF is now a member of the international ecological-farming network, and has launched campaigns for Swedish farming to become "the world's cleanest agriculture". The relations between the farmers' organizations, as well as between experts/scientists (in particular from the Swedish University of Agricultural Sciences and the Swedish Institute for Food and Agricultural Economics) and the public authorities remain strong, and form informal think-tanks that advise policymakers in both EU negotiations and in Swedish implementation of the CAP. In recent years, organizations and interests outside agriculture, including environmentalists, have gained a stronger voice. Although the environmental movement has a large influence on media and public opinion, there is, however, a weaker connection to specific decisions. For instance, in the most recent CAP reform their impact was only minor.

In sum, in terms of actors and organizations, we can see some rather pronounced differences, where the energy sector has undergone a much more fundamental shift than the agricultural sector. In the latter the corporatist structures are still more or less intact, although some niche players have developed over time. In the former, the actor changes indicate a profound change in governance. An important question is whether we can associate the more pluralistic actor configuration within the energy sector with a more profound EPI. We will come back to this question in the discussion.

6. POLICY INSTRUMENTS AND PROCEDURES

6.1. The energy sector

The instruments deployed by the energy sector have undergone some shifts. In the first phase of our study up to the mid 1990s, the energy sector was steered in a traditional mode that had dominated for decades. there was strong emphasis on policy instruments such as timed phase-out plans (regulatory approach), domestic taxation, and targeted R&D. In addition, public ownership of energy production facilities was a key instrument to realise energy policy objectives. While the new environmental agenda clearly implied a change pressure to the governance system, the state-centric planning regime still prevailed also in the emerging "greening" of the sector. Hence, the state was seen as the provider of

environmentally integrated solutions, and devised among other things a strict nuclear phase-out time table. Over time, as the sector evolved, each of these instruments played out their roles or were called into question. This process was arguably a result of a wider shift in the political views on the role of the state versus the role of the market within governance. The EU entry in 1995 added to the reorientation of the sector towards market system with, as a consequence of the internal market policy agenda, and as incarnated in the electricity and gas market directives. But there were also domestic evaluations and rethinking feeding into this shift. The time-table approach to nuclear phase out had little connection to the real dynamics of the sector and failed to gain wide-spread support. A major evaluation in the early 2000s suggested that state-supported R&D programmes had been ineffective. Second, it was clearly observed that in the Nordic electricity market context where electricity was traded freely following the establishment of Nordpool in 1997, national taxation of thermal power production had immediate and full spillover effects, by shifting marginal power production abroad. For a few years, for reasons of differential taxation, Swedish plants stood idle while Danish coal power constituted the main marginal power asset in the Nordic system.

In response to the shifting dynamics of the sector, including the Europeanization of policies and the international deregulated market, the Swedish government pressed forward with a number of initiatives in the early 2000s, including voluntary agreements on energy efficiency (Ds, 2001:60), green tradeable certificates for electricity from renewable energy sources (Prop, 2002/03:40), and, of course, implementing the EU's Emissions Trading Scheme (ETS) (Prop, 2003/04:132). Furthermore, new models of "network bargaining" were tested out for the nuclear power issue. The Swedish government sought a long-term solution on nuclear power by importing a bargaining model from Germany, whereby the state would negotiate an agreed phase out plan with the power industry. However, these negotiations were inconclusive and were discontinued in 2004. At present, there are renewed efforts on technology R&D as policy instruments, triggered by the sudden surge in climate change interest on the political agenda.

6.2. The agricultural sector

Agricultural policy was traditionally production oriented through detailed regulation and large government subsidies aimed at increasing the size of farms, mechanization, and measures towards intensification of land use. As mentioned, a break-through for agri-environmental policy occurred in 1990 with a new food policy including deregulation of the internal market for agricultural products (Prop 1989/90:146). At this time, all subsidies were abolished except those favouring environmental protection. However, the entry into CAP has implied reintroducing regulation in agricultural policy. In the most recent CAP reform, the debate centred on how the national envelope should be distributed - either according to a farm-based or a regional model. While the Federation of Swedish Farmers argued strongly for the farm model, environmental interest groups advocated the regional model. The government settled for a compromise between the two models. The reliance on advisory services has, however, remained constant over time regardless of the entry into the EU. As a consequence, the use of subsidies is accompanied by advice to farmers both from the agricultural authorities and the farmers' organizations. Similarly, both those parties are heavily engaged in promoting and following up of the NEQOs. Indeed, the procedures surrounding the NEQOs constitute an important platform for EPI, and probably more so than in the energy sector. Largely, the implementation of those environmental goals relies upon the measures contained in the second and third ERDPs (2007-2013) (Ministry of Agriculture, 2006).

In sum, both sectors have experienced important policy shifts in the types of instruments deployed and for what purpose. The agricultural sector is to a strong degree framed by EU's CAP and hence still strong connected to subsidies and payments, but have under that frame also changed in terms of what the payments are for and what are the major aspirations of the policies. The energy sector has experienced a gradual shift towards more market-based instruments. Sweden adapted its instruments to European rules, to a new deregulated market orientation and to international electricity trade through the full integration of the Nordic electricity markets.

7. DISCUSSION: EVOLVING RELATIONS BETWEEN GOVERNANCE AND EPI

It appears that some successes in EPI observed are closely associated with new procedures and instruments, and with changes in actors and organizational landscape. There are evidently interesting questions of governance emerging in these patterns of change. In this section we will try to unpack and discuss further some of the major linkages between EPI developments and governance changes. To do this, we use a set of alternative models of governance developed by Pierre and Peters (2006). They describe five alternative models of governance, ranging from strong state dominance to a model where the state is one actor among many. These models address the two dimensions of governance we are interested in here; actors and organizations, and instruments and procedures.

(1) The “étatiste” model, based on the very strong state being able to govern with little involvement of other actors, involving highly technocratic decision procedures and relying primarily on coercive policy instruments;

(2) the “liberal-democratic” model, where the states are still place as central actors but where there is a mutualism however defined by the state, to include other actors to a limited degree, with a tendency to have policies implemented through third-parties and through regulatory instruments;

(3) the “state-centric” model, which has a stronger association with corporatist arrangements but where social interests and ideas are seen as more legitimate and where a selected few actors have the ability to participate in and influence decisions; and also interact with the state in implementation of policy instruments;

(4) the “Dutch governance model” where the state has a much weaker role, and policies are strongly contingent on the support of external actors. Networks and public/private partnerships figures prominently, which also has profound effects on policy implementation and instruments, often developing in a bottom-up approach; to lastly

(5) the “governance with out government” model where the formal political institutions play a minor role compared with inter-organizational and self-

governing networks. It is in particular here that the governance becomes much bigger than government, and that the relative powers of different actors have shifted from the public to the private and civil spheres. Rather than executive political bodies, the state participants tend to be knowledge providers and agencies operating at a considerable distance from the legislative and executive.

With the aid of this taxonomy we can see several patterns of governance shifts and interactions with EPI emerging in our story:

In both sectors, the governance systems of the 1980s still resided within a *state-centric model* that had prevailed for a long time. A selected number of actors *within* the sectoral production system participated and had important influences on policy formulation and implementation. A series of initial triggers, internal and external, to the state-centric networks played an important role to open them up to new actors, ideas and interests. The EU entry was of particular significance. Sweden did not enter until 1995, but preparations and alignments to EU principles and policies were on-going from the late 1980s. Our findings regarding when EPI processes were triggered and the period of lag time suggest that the governance shifts were a necessary but insufficient condition for EPI. However, this change in actors and interests was far more pronounced in the energy sector than in the agricultural sector.

Governance change was also induced from outside the sectors and Sweden. The environmental agenda coincided with the neo-liberal ideology of the Thatcher/Reagan era which put a heavy mark on both the constitutional elements of the EU and on national policies and reforms all over the world. These forces combined induced an exogenous pressure on the corporatist arrangements and the strength of the state, and these pressures hit the agricultural and energy sectors in the same way, forcing the opening of actor networks and decision-making arenas towards what bears close resemblance to the *Dutch governance model*, where any actors of relevance can access decision making. The EPI agenda therefore appears a causal contributor to broader governance shifts as much as an effect of it.

Sweden is traditionally associated with a strong importance attributed to the state and the organized interests as depicted in the *state-centric* model. Indeed, the observed shift towards more networking and less state-oriented forms of

governance was far from a linear, and at points in time, there were major waves of more *state-centric* or *liberal-democratic* governance of environmental issues, in which the state reclaimed the initiative and the right to formulate the problems and goals of society and its sectors. This tendency emerged in particular in the wake of high political stakes in environmental policy issues for the executive, such as was the case a) when environmentalism first reached the political mainstream with the green parties winning their first seats in parliament in the late 1980s, b) when Prime Minister Göran Persson launched the “Green People’s Home” as the key future vision of the Social Democracy in 1996, or c) more recently in 2006 as climate change became the hottest topic of the moment for the international and national news media. In these episodes, we saw the government actively “articulating a common set of priorities for society”, while it had a less state-centric approach when it came to the actual “steering” towards these priorities and objectives (see Pierre and Peters, 2005: 4).

In Sweden and elsewhere, the disappearance of the state in contemporary governance often appears overstated. Nonetheless, the long-term trend, notwithstanding the variations described above, is one of more *laissez-faire* and less direct engagement through state regulation. In the wake of these changes, the role of governmental agencies is changing explicitly. In line with a networking approach to governance, the Swedish EPA, located under the Ministry for the Environment and responsible for the overall implementation of environmental policy today sees – and presents – itself rather as a facilitator and knowledge provider than a regulating body. In a somewhat different vein, but signifying the same kind of shift, the Swedish Board of Agriculture sees itself rather as an administrator of EU-related support funds, and knowledge support to farmers, than a regulating agency.

The EPI agenda has also triggered changes in intra-governmental relationships towards a more inclusive networking approach. The sectoral responsibility has become a driver to enhanced coordination and interactions between government departments in central government and between agencies, who now frequently become engaged in joint fact finding projects and joint reporting. One might therefore consider EPI as a causal contributor to, rather than a consequence of, more networked forms of governance. The interactions and organizational coordination has been accentuated in the energy sectors through manifold organizational changes in the ministries, where the energy department has

moved between the agricultural, industrial and environmental ministries four times since 1988.

It seems that there has been a stronger governance shift in energy where both actor configurations, power relations, organizations and policy instruments have gone through fundamental change, while the agricultural sector is rather stable when it comes to the participation of actors in policy networks and the use of policy instruments. Energy has also been a more politicised issue whereas agriculture has been almost depoliticised – and more of an administrative concern. EPI is prevalent in both sectors, but it appears more profound and fundamental in the energy sector. In agriculture, EPI is more or less contained in the ERDP track and does not appear to reach the core decision-making regarding sectoral production the way it has happened for carbon dioxide abatement in energy. For the future, however, we see growing interrelations between the two sectors, as the production of bioenergy will demand agricultural land and compete with food production. It is therefore likely that food and agriculture will be higher on the political agenda in the future. What this means for EPI in the agriculture remains to be seen.

This research has focused on studying policy objectives and framing in policymaking, and is therefore concerned with policy outputs rather than outcomes, i.e. the actual environmental impact associated with each sector. This implies that the picture we present may be interpreted as too positive. Sector environmental assessments performed during this time period suggest that policy outcomes, while improving in some respects, have not been quite as positive (Engström, 2006). In particular it is worth pointing to the export, or externalisation, of Sweden's sector's environmental impact, through increased imports of goods and services from abroad, such as coal-fired power in the energy sector, and food in the agricultural sector.

8. CONCLUSION

Discussions about the nature and direction of change in the ways societies are governed have frequently focused on the perceived move away from government as a central actor using its power to impose regulations on different actors, to “new” modes of governance, based increasingly on networks and informal relations between the state and civil society. At the same time an emerging

literature has examined the implementation of the EPI principle, and how governments have embarked on moving from environmental policy defined as its own sector to infusing environmental policy concerns into all economic sectors. Sweden has been portrayed as a front runner not only in environmental protection generally, but also in EPI specifically, not least through the early establishment of the sector responsibility and the national environmental quality objectives (NEQOs). The front-runner status makes Sweden an interesting case to study somewhat more in-depth with respect to how EPI has unfolded in sectors. This paper has discussed the evolution of EPI at the national level in Sweden over the last two decades. We have shown how the EPI agenda emerged in the late 1980s and with some fluctuations over time it actually transformed the policy agendas, goals, and priorities of the energy and agricultural sectors. This process of EPI achievements has interacted with changes and shifts in governance that have been ongoing at the same time. There are such strong interrelations between EPI and governance shifts that it is very difficult to untangle them. At certain points in time, EPI has been a driver of governance shifts, for instance through the imposition of new actor constellations, coordination requirements, and new procedures of making decisions. In other instances, governance shifts have facilitated EPI, for instance through the breaking up of old corporatist networks and introducing new and for sectors more acceptable environmental policy instruments. Some of the marked relations include:

(1) A more pluralistic network of actors in the energy and agriculture sectors opened up for higher prioritisation of environmental objectives and reframing the sectors' *raison d'être*. The new actors put pressure on the traditionally corporatist networks to engage with the environmental policy agenda. This change in actor configuration and network cohesion appears to be a first enabling condition for EPI. In Sweden it was driven from both exogenous and endogenous factors.

(2) The EU entry generally pushed for a stronger market orientation of Swedish governance, which opened up for more innovative, market-based and less hierarchical policy instruments. As this tied in more directly with how the sector operated and generated income, it facilitated a more rapid acceptance and uptake of the environmental policy agenda in the sectors. This was a second enabling condition for EPI.

(3) Ultimately, however, the environmental agenda came across strong resistance in both sectors, since environmental priorities at some points inevitably came into conflict with the traditional economic goals of the sectors. In these recurring instances, the further integration of environmental concerns relies on more state-centred and hierarchical modes of governance, where the government clearly sets out its priorities and sectoral stakeholders simply have to oblige. It should be noted that such coercion has been significantly more acceptance by the sectors, and therefore effectiveness, when driven from the EU-level as opposed to national initiatives.

The question of which governance model is more effective or conducive for EPI is beyond the reach of our analysis. We have only two sector cases, and possibly an international comparative overview is needed to reach some results on this question, following the work of eg Jänicke and Weidner (1997) who correlated advanced environmental policies with the dominance of the Social Democratic welfare state model. Our study does not support or reject that hypothesis, but rather suggest that EPI appears to rely on a movement “up and down” across governance models, where each model has its time and its advantages.

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