



# Conclusion: Drawing lessons for Environmental Policy Integration and prospects for future research

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## 1. Introduction

Environmental Policy Integration (EPI) refers to the incorporation of environmental objectives in non-environmental policy sectors, such as agriculture and transport, rather than pursuing environmental protection through specialised environmental policies and legislation and by environmental institutions. In this way, EPI aims to target the underlying driving forces, rather than symptoms, of environmental degradation, and complements specialised environmental policies (Persson et al., 2018). The nine papers in this special issue analysed empirical manifestations of EPI in a variety of policy sectors and geographical contexts. The overall aim of the special issue was to understand the performance of attempts to promote EPI in terms of their (potential) contribution to environmental protection, and to identify the critical factors that explain this performance both during the stages of the policy process and in different contexts. However, the nine papers also contributed to EPI literature in other ways, namely by analysing the role of actors other than ‘the usual suspects’ (e.g. citizens, civil society, transnational corporations and farmers; Mullally et al., 2018; Karlsson-Vinkhuyzen et al., 2018; Van Oosten et al., 2018), by enriching EPI literature through drawing from other bodies of literature, resulting in novel strategies for promoting EPI (e.g. Van Oosten et al., 2018), the use of quantitative analysis of EPI performance (Tosun and Peters, 2018; Schmidt and Fleig, 2018) and applying EPI insights to a new global framework for integrated policy-making, the UN Sustainable Development Goals (SDGs) (Nilsson and Persson, 2017).

In this concluding paper, we take stock of the main lessons learned regarding ‘what works’. In Section 2 we reflect on what the authors of

the nine papers report, explicitly or implicitly, about the performance of EPI practices they analysed. In this Section we also identify some of the key contextual factors (sector, level of governance, geographical context) that affect the degree to which EPI practices contribute to environmental protection. In Section 3 we identify and analyse explanatory factors from the perspective of the policy process, exploring whether or not distinct factors play a role during the development, decision-making on and/or implementation of policies. In Section 4 we wrap up our main conclusions and formulate some suggestions for future research.

## 2. A reflection on the performance of EPI practices in this special issue

‘Performance’ is a multi-faceted concept that is easily interpreted differently. As explained in the Editorial to our special issue, we conceptualise EPI performance along two dimensions (Persson et al., 2018):

- Procedural: EPI in terms of *process* (re-arranging policy processes so as to integrate environmental objectives), *outputs* (formal decisions such as environmental objectives or concrete plans in non-environmental policies) and *policy outcomes* (impacts on behaviour and eventually in environmental conditions).
- Substantive: the relative weight of environmental objectives in sectoral policies, ranging from avoiding conflicts (‘coordination’) and striving for synergies (‘harmonisation’) up to favouring environmental objectives (‘prioritisation’).

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**Table 1**  
Overview of the performance of EPI practices in the eight empirical papers of the special issue.

Authors	Sector(s)	Policy level(s)	Geographical context	Form of integration
Tosun and Peters (2018)	Multiple sectors	International	Global	Mainly no integration, some harmonisation
Schmidt and Fleig (2018)	Multiple sectors	National	Global	Harmonisation
Mullally et al. (2018)	Energy	National	Ireland	All three forms, but mainly prioritisation
Russel et al. (2018)	Coastal and marine management	EU	Europe	Limited or early-stage integration
Widmer (2018)	Multiple sectors	National	Switzerland	Coordination/harmonisation
Karlsson-Vinkhuyzen et al. (2018)	Agriculture, forestry, coastal management	International to local (incl. non-state actors)	Global	Coordination/harmonisation
De Roeck et al. (2018)	Development co-operation	EU to national	Europe; developing country partners	Harmonisation
Van Oosten et al. (2018)	Agriculture and forestry	Landscape	Rwanda	Coordination/harmonisation

Table 1 below provides an impression of the performance of EPI as reported in eight of the nine papers that contain empirical analyses of EPI practices.

Our set of papers do not allow for a strict comparative analysis with controlled variables, but still illustrates a spectrum of EPI practices across different sectors and levels of government. In most of the papers, harmonisation and/or coordination between environmental and sectoral objectives were observed. This suggests that the EPI principle broadly has taken hold, across widely different policy and governance contexts. Specifically, Schmidt and Fleig's (2018) study shows a strong increase of climate policy integration (CPI; a specific form of EPI) globally, as measured by national climate legislation targeting different sectors. Integration in the form of prioritisation of environmental objectives seems unusual, though, and was only identified in the case examined by Mullally et al. (2018). Prioritisation of environmental objectives is furthermore politically hard to justify in light of the UN Sustainable Development Goals (SDGs) (Nilsson and Persson, 2017), which can be expected to increasingly drive policy integration. More comparative and longitudinal research, with a rigorous case selection strategy, is needed in order to establish whether the prevalence of harmonisation and coordination approaches means that EPI has been institutionalised in organisations and normalised among actors, and is less dependent on (temporary) political will (cf. Jordan and Lenschow, 2010; Persson et al., 2015).

However, the papers also point to some important exceptions to this trend. At the international level, it could be expected that most inter-governmental organisations (IGOs) would commit to EPI, considering they are typically not heavily engaged in policy implementation and therefore would not have to bear the 'cost' of any trade-offs with existing sectoral objectives that might not materialise until the implementation stage. However, a majority of economic and multi-issue IGOs were found to still not have EPI commitments in their primary law, which suggests that EPI is not perceived as important or that commitments made are not encoded into primary law documents (Tosun and Peters, 2018).

Limited EPI was also found in the case of mainstreaming climate change adaptation into EU coastal and marine policy (Russel et al., 2018). This raises the question of whether the nature of the issue or objective to be integrated matters. Among the three papers looking specifically at climate change adaptation as an issue, Russel et al. indeed find that there was low demand for adaptation vis-à-vis other environmental objectives among environmental interest groups. De Roeck et al. (2018) further noted that cognitive barriers, in the sense of low recognition of the relevance of climate adaptation in the given sector context, contributed to weak integration. However, Widmer (2018) does not suggest any such adaptation-specific barriers. A similar question raised is if integrating various environmental objectives with each other (e.g. integrating biodiversity objectives into climate mitigation or adaptation policies) is harder to achieve than integrating environmental objectives into non-environmental policy sectors,

considering the results of Tosun and Peters (2018).

No clear pattern regarding sectoral or geographical contexts is indicated by the nine papers, except the finding that EU member states, as well as IGOs that are focused on Europe, tend to be faster in adopting or promoting CPI (Schmidt and Fleig, 2018) and EPI (Tosun and Peters, 2018) respectively. The papers looking at the EU level confirm that EU institutions have formalised and operationalised EPI commitments to a large extent (including EPI-conditional funding streams), but that the outcome is largely dependent on matching interest from member states given the subsidiarity principle (Russel et al., 2018) and on resources and priorities of EU officials implementing policy on the ground (De Roeck et al., 2018).

Further, the papers that analysed the policy implementation stage in detail found that this is indeed the critical stage for EPI performance, where the delivery of high-level commitments is compromised by a 'messy' environment of multiple policy goals and priorities, multiple actors, and often scarce resources. This can result in different outcomes, either that EPI fails to be implemented as intended (De Roeck et al., 2018; see also Runhaar et al., 2013) or that creative strategies are developed to navigate around institutional and political constraints (van Oosten et al., 2018). Deficits in implementing integrated environmental objectives were also reported in a recent systematic review of empirical research on climate adaptation mainstreaming – a specific form of EPI (Runhaar et al., 2018). Including environmental objectives in sectoral policies is easier in the policy development stage, than later translating them into concrete measures. We assume this is because implementing EPI requires i) specificity and precision in terms of objectives to be integrated and ii) explicit weighing against sectoral objectives, as opposed to more generic and less committal references to EPI broadly.

### 3. Identifying the key factors that affect the performance of EPI practices in this special issue

Previous studies on EPI have identified a variety of factors that contribute to, or impede, EPI (for a recent overview: see Runhaar et al., 2018). Rather than producing a new list here, we aim to contribute to further theory development on EPI by organising the factors according to the stage in the policy cycle where EPI practices take place. In this way we hope to identify challenges and opportunities for EPI along the policy process. This is a relatively novel approach (but which actually was also applied by De Roeck et al., 2018) aimed at getting a better understanding of 'what works' in EPI by moving beyond mere lists of barriers and other factors (cf. Biesbroek et al., 2015).

Table 2 summarises the factors that were mentioned, explicitly or more implicitly, in the nine papers that form this special issue (the policy note by Nilsson and Persson was also included because it also contained factors that were derived from other studies). We acknowledge that the policy stages model is a simplification and is not necessarily unidirectional. Yet the basic stages of the policy process are common for most policy processes and therefore provide an organising

**Table 2**  
Factors explaining the performance of EPI practices in the eight empirical papers of the special issue.

Authors	Policy development	Policy implementation
Tosun and Peters (2018)	- Geographical focus on Europe (or European Commission as member)	
	- General economic or multi-issue focus	
	- Primary law adopted after 1987	
Schmidt and Fleig (2018)	- EU membership	
	- High GDP per capita	
	- Partly, environmental vulnerability	
Mullally et al. (2018)	- Legislative provisions (e.g. SEA).	
	- Organisational provisions (e.g. inter-sectoral cooperation and provisions for public participation).	
	- Inter-sectoral policy objectives and frameworks.	
	- Public awareness and support.	
Russel et al. (2018)	- Staff and knowledge resources	- Funding rules for implementation projects (integration as requirement to access funding)
	- Clarity of policy goal to be integration	
	- Organisational competition (conflicting norms and concepts)	
	- Formal consultation procedures	
	- Compatibility with historical policy frames	
	- Subsidiarity principle/member state support	
	- Interest group/stakeholder support/demand	
	- Problem definition (climate impacts not severe yet)	
Widmer (2018)	- Inter-sectoral policy objectives and frameworks.	
	- Leading department (that is accepted by most other departments).	
	- Resources.	
	- Lack of knowledge.	
	- Guidelines for sectoral departments.	
	- Reporting and information system.	
	- Overlap with sectoral objectives.	
	- Inter-sectoral interactions.	
Karlsson-Vinkhuyzen et al. (2018) (*)	- (Individual) leadership, including from private sector and civil society	
	- Knowledge resources	
	- Consumer demand and market access (sustainability standards)	
De Roeck et al. (2018)	- Inter-sectoral policy objectives and frameworks.	- Guidelines for sectoral departments.
	- Overlap with sectoral objectives.	- Cognitive barriers
	- High level political will and commitment.	- Staff and other resources.
		- Competition with other tasks
		- Political will
		- Leadership
Van Oosten et al. (2018)		- Framing of policy objectives
		- Flexibility in compliance
		- Opportunities for institutional entrepreneurship

Note: (\*): take a broader perspective and do not explicitly distinguish between stages in the policy process.

principle. We distinguish between the following stages:

- *Policy development*: making the initial case for the need for EPI during agenda-setting, problem framing, policy preparation and ultimately decision-making in sectoral policy sectors. In terms of the procedural dimension of EPI (see above), mainly EPI as process (administrative routines and procedures to promote EPI) and outputs such as explicit environmental objectives are to be expected.
- *Policy implementation*: how policies, and their integrated environmental objectives, are implemented in ‘downstream’ planning and project design on the ground. In this stage, policy outcomes are to be expected, but also many challenges apply – in a recent meta-analysis of studies on climate adaptation mainstreaming it appeared a major ‘implementation gap’ appeared to exist in terms of translating adaptation objectives into concrete measures (Runhaar et al., 2018).

We recognise this is a very simple presentation of the policy cycle and that by unpacking the policy cycle into ‘sub stages’ such as agenda-setting and problem framing, deeper insights can be obtained (see e.g. Tosun and Peters, 2018, or Mullally et al., 2018). However, since the set of papers in this special issue is too small to make such detailed accounts of if and how EPI ‘works’ at each sub stage, we leave this issue for further research.

In Fig. 1 we visualise the factors from Table 2, and we categorise them into ‘internal’ (i.e., those that can be actively addressed and changed by the agents responsible for integration, such as a

government) and ‘external factors’ (i.e., those that are beyond the direct control of the policy integration process in question). The paper by Van Oosten et al. (2018) discusses strategies for overcoming conflicting policies on the ground by farmers and other actors. In doing so, it shows how internal factors are mobilised to address obstructive external factors, and that proactive approaches can be developed at the implementation stage to influence policy development (see the feedback loop from policy implementation to development in Fig. 1).

Most of the papers have a primary focus on the *policy development* stage. External factors that were found to be conducive to EPI include the geographical focus or context of key actors (awareness or commitment to promote EPI seems higher in EU member states), high income level, public awareness and support (including public as citizens and public as consumers), stakeholder and interest group support, support by other governmental actors (e.g., EU member states), and compatibility with pre-existing sectoral policy frames. At this stage, a number of internal factors are also significant for the performance of EPI: political will, overlap with sectoral objectives, urgency of the issue to be integrated, norms promoting integration expressed through overarching policy frameworks, organisational provisions for inter-sectoral cooperation, leadership and resources.

A few papers (also) looked at the *implementation* stage and found that important internal factors there include political will, leadership, resources, guidance and knowledge. Only one explicit external factor was mentioned, namely opportunities for creatively dealing with or even influencing external policies so as to achieve policy integration.

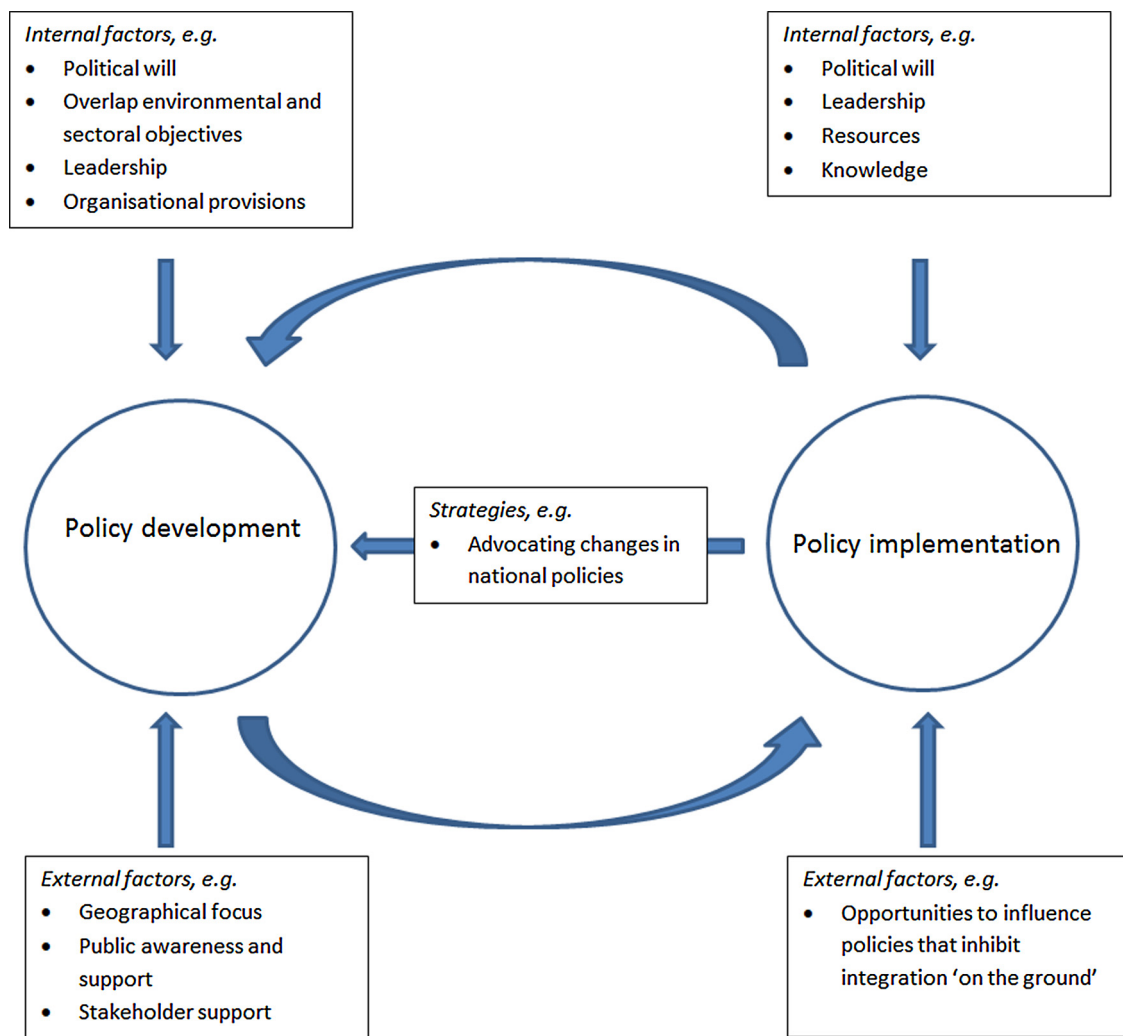


Fig. 1. Factors affecting EPI organised along the policy cycle.

However from other studies (e.g. Runhaar et al., 2018 on climate adaptation mainstreaming) we know that there are more external factors, such as (a lack of) coordination and cooperation between departments or and (a lack of) financial resources. But, again, the papers in this special issue are not necessarily representative of EPI practices worldwide, and so neither is the above inventory of factors that promote or inhibit EPI.

By reorganising the factors affecting the performance of EPI practices according to stage in the policy process and by classifying them into internal and external, we hope to encourage other researchers to continue research into EPI, in order to move beyond inductive lists of barriers and to open up the ‘black box’ of EPI (cf. Biesbroek et al. 2015).

#### 4. Directions for future research

Based on the nine papers in this Special Issue and the wider EPI literature, we identify several directions for future research. First, whereas EPI – and related concepts such as CPI and mainstreaming – have clearly had an impact on policy processes and stated intentions, we observe that the implementation stage is still critical (see also Runhaar et al., 2018). Some cases looking at this vertical dimension of EPI indicate that there is an implementation gap and other cases show that it is not until this stage that workable combinations of environmental and sectoral objectives are made, costs and gains materialise, and trade-offs need to be made. For this reason, studies of EPI would benefit from drawing even more on policy implementation literature,

which has a long and rich history (starting with classic work by, e.g. Pressman and Wildavsky, 1973 and Lipsky, 1980, but also in the environmental domain, e.g. Jordan, 1999).

Second, several of the papers hint that it is not always self-evident what is ‘environmental’ in EPI, i.e. what is the specific nature of the environmental objectives to be integrated into sectoral policies. This needs to be stated by practitioners, and/or teased out by students of EPI, in order to better understand potential trade-offs and synergies. Being more specific will help determine what are the main goal conflicts at stake, and help understand the origins of low commitment to and performance of EPI.

Third, despite decades of EPI research, the boundary between EPI and specialised, stand-alone and environmental policy is still somewhat fuzzy, which risks conceptual stretching. Considering this conceptual issue and the current empirical trend of increased use of traditional litigation approaches to promote environmental and climate objectives (Nachmany et al. 2017), a new research frontier is to understand the (synergistic or conflictive) relationship between i) proactive EPI measures upstream in the policy process and ii) reactive use of environmental safeguards and standards downstream, including within role of the judicial system. Under what circumstances is one of these approaches more effective than the other? And how do we define effectiveness, as longer-term policy learning and change or as certainty in achieving environmental objectives?

Fourth, this special issue has demonstrated that the predominantly qualitative research methods used to empirically analyse EPI can be

complemented with more quantitative methods. EPI studies should continue to refine methods used, and research field would particularly benefit from multi-case comparative research designs.

Finally, reflecting on EPI literature and practice over the last decades, we can ask whether this principle is still relevant and valid when a growing coalition of actors are claiming the need for deep societal transformation to achieve the ambitious environmental objectives of the Paris Agreement and the SDGs (Patterson et al. 2017). Is EPI too incremental and does it essentially preserve a status quo in Earth system governance, rather than promote more radical change (see e.g. Termeer et al., 2016)? This is perhaps the most urgent question for future research, but we take note that the principle of EPI can be interpreted both as a minor adaptation of existing policies and as a (radical) reprioritisation of societal objectives. If implementation gaps were overcome, we may see *de facto* transformative policy outcomes and impacts.

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