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Editorial: Environmental policy integration: Taking stock of policy practice in different contexts

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Environmental Policy Integration (EPI) refers to the incorporation of environmental objectives in non-environmental policy sectors, such as agriculture, energy and transport, with the aim to target the underlying driving forces, rather than merely symptoms, of environmental degradation (Lafferty and Hovden, 2003; Nilsson and Persson, 2003; Runhaar et al., 2014). Specifically, in this sense it seeks to build the consideration of environmental objectives into those policy sectors where environmental degradation is caused, by avoiding inconsistencies and incoherence between the policies of different sectors, as well as ensuring that there are no gaps in sectors' environmental responsibility (Peters 1998). In practice but also in scientific literature, different interpretations have been attributed to the concept; EPI as a policy objective, a normative principle, a process, an organisational challenge, an output or outcome, etc. (Persson, 2007; Jordan and Lenschow, 2010). Overall, though, common features are:

- a) a shared responsibility for environmental protection by all policy sectors, at different levels;
- b) a proactive and preventive attitude towards environmental protection by early incorporation of environmental objectives in policy processes rather than implementing 'end-of-pipe' measures; and
- c) moving beyond the minimum environmental standards prescribed in environmental regulations (Mullally and Dunphy, 2015; Persson, 2007; Lundqvist, 2004).

While EPI as a concept has been thoroughly examined in scientific literature, little is still known about 'what works' when it comes to implementing it in practice (Runhaar et al., 2014). This special issue addresses this gap by drawing lessons from a set of empirical studies of efforts to implement EPI in practice.

In policy practice, EPI has played an increasingly important role over the last three to four decades as a policy principle (WCED, 1987; UNCED, 1992; EC, 2016a). For instance, since 1992, it is part of the Treaty of the European Union. Article 6 states that "environmental protection requirements must be integrated into the definition and implementation of the Community policies (...) in particular with a view to promoting sustainable development" (EC, 2016a). However, we find EPI in many other policy areas, often under different headings but largely based on the same basic premises. Public administration literature, not necessarily focused on environmental policy objectives in particular, has for long been concerned with 'policy coordination', 'policy integration' and 'joined-up government' (e.g., Peters 1998; Bogdanor, 2005; Candel and Biesbroek, 2016; Tosun and Lang 2017). Another example is 'mainstreaming', which is often employed in combination with climate change adaptation or with biodiversity objectives (e.g. EC, 2016b; IUCN, 2016; Kok et al., 2010; Karlsson-Vinkhuyzen et al., 2017; Runhaar et al., 2018) and is particularly common in the context of development cooperation (e.g., Gupta and van den Grijp, 2010). For the integration of nature conservation goals, a specific vocabulary has been developed, with concepts including 'natural capital', 'ecosystem services', 'eco-engineering', 'nature-based solutions' and 'building with nature' (e.g. Van den Hoek et al., 2014). These concepts emphasise the instrumental value of nature as a reason for its protection and integration and use in policies and plans (Kok and Alkemade, 2014; Runhaar, 2017). With the rise of climate change as a policy issue, the concept of 'climate policy integration' (CPI) has become a specific field of inquiry (Adelle and Russel, 2013; van Asselt et al., 2015). Finally, in the context of the SDGs, 'policy coherence' is a widely used term (Nilsson et al., 2016; OECD, 2017). EPI is implicitly addressed in target 17.14 to "enhance policy coherence for sustainable development",

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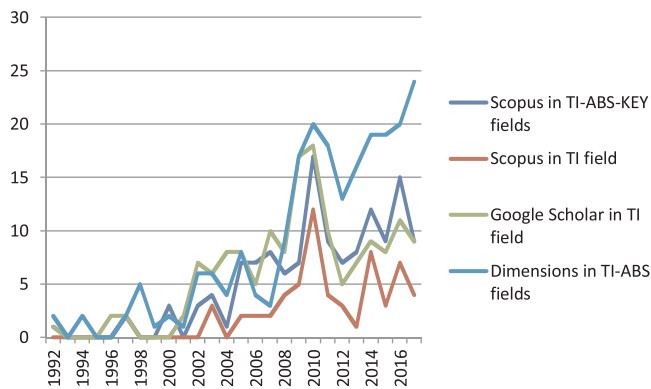


Fig. 1. Number of publications on environmental policy integration in three databases of scientific publications.

Sources: Scopus, Google Scholar and Dimensions. TI: title, ABS: abstract; KEY: keywords. Date of measurement: 5 February 2018.

which involves ensuring coherence between environmental, economic and social objectives.

Over time EPI has attracted quite some interest from many scholars (see e.g. Nilsson and Eckerberg, 2007; Jordan and Lenschow, 2008; Goria et al., 2010; Runhaar et al., 2014; Hogl et al., 2016). If a trend can be discerned in the number of papers published on the subject over time, it is because interest in EPI is increasing rather than decreasing. Fig. 1 shows a steadily increasing scientific literature on EPI, although still with gaps regarding systematic lesson-drawing on ‘what works’.

In this Special Issue of *Environmental Science and Policy*, we collect and draw lessons from empirical manifestations of EPI, in order to understand its performance in terms of contribution to environmental protection, and to identify the critical factors that explain the performance of specific EPI strategies in a variety of contexts and during various stages of the policy process. With ‘performance’ we mean EPI in terms of *process* (how the policy process has been re-arranged to integrate environmental objectives), *output* (formal decisions, e.g. concrete plans or measures taken in non-environmental policy sectors that aim at some form of environmental protection) and where possible, *policy outcomes or impact* (estimated or observed changes in behaviour and improvements of environmental conditions). Our compilation of a complementary set of studies facilitates theory development about effective EPI, something which is still in its infancy, despite initial work in the early 2000s (e.g. Nilsson and Persson, 2003; Jordan and Lenschow, 2010; Runhaar et al., 2014).

The papers in this special issue were originally presented in a section on EPI at the 2016 General Conference of the European Consortium for Political Research, which was organised by the Working Group on EPI under the umbrella of the Earth System Governance Taskforce on Conceptual Foundations (WG EPI, 2016). They represent a variety of manifestations of EPI, in different geographical contexts, policy sectors and stages of the policy process. The *levels of government/governance* examined are international (Tosun and Peters, 2018), international and national (Karlsson-Vinkhuyzen et al., 2018), EU to national (Russel et al., 2018; De Roeck et al., 2018), national (Schmidt and Fleig, 2018; Mullally et al., 2018; Widmer, 2018), and national to local (Van Oosten et al., 2018). In terms of *policy sectors* being targeted by EPI efforts, the papers together cover energy (Mullally et al., 2018), coastal and marine management (Russel et al., 2018; Karlsson-Vinkhuyzen et al., 2018), agriculture and forestry (Karlsson-Vinkhuyzen et al., 2018; Van Oosten et al., 2018), development co-operation (De Roeck et al., 2018), and multiple sectors (Schmidt and Fleig, 2018; Widmer, 2018). The *policy goals* to be integrated in these sectors relate to climate adaptation (Russel et al., 2018; Widmer, 2018; De Roeck et al., 2018), climate mitigation (Schmidt and Fleig, 2018; Mullally et al., 2018), biodiversity (Karlsson-Vinkhuyzen et al., 2018), or a broader set of environmental and climate goals (Tosun and Peters, 2018; Van Oosten et al., 2018).

The ninth paper, a policy note by Nilsson and Persson (2017), looks at the UN Sustainable Development Goals as an object of integration processes and potential lessons from the EPI literature.

In order to compare findings and to contribute to a systematic inventory of, and theory-building about, factors that explain EPI in terms of process, output and outcome, the same typology of forms of integration (see Lafferty and Hovden 2003; Mickwitz et al. 2009; Runhaar et al., 2009) is applied throughout the eight empirical research papers:

- coordination, i.e., avoiding contradictory sectoral policies or compensating for adverse environmental consequences of sectoral policies;
- harmonisation, i.e., an attempt to bring environmental objectives on equal terms with sectoral objectives; or
- prioritisation, i.e., favouring environmental objectives over others in sectoral policies.

This typology allows us to draw more general conclusions regarding dominant views of EPI and how they translate into practice. In the Conclusion paper of this special issue (Persson and Runhaar, 2018), we further extract a set of factors that explain EPI outcomes in the cases and contexts covered by the empirical papers. We organise these factors along the stages of the policy cycle, i.e. from policy preparation up to implementation. We recognise that this model has been fiercely criticised because of its assumption of ‘rational’ policy-making and because in practice, policy processes evolve in a much more messy way. Important to note is also that we apply this generic model to cases that go beyond public policy makers only thus representing examples of governance (e.g. Karlsson-Vinkhuyzen et al., 2017). The model nevertheless offers a useful heuristic device to identify certain activities in policy-making that are usually conducted in practice, whatever their order (Baker and Eckerberg, 2013).

We further distinguish between factors internal and external to the policy process. While the combined research presented in this special issue was not informed by a comparative research design, which would have produced more generalizable findings of ‘what works’ for EPI, our effort nevertheless represents a systematic attempt at cross-case learning through the common typology and identification of explanatory factors.

The papers illustrate how EPI ‘travels’ across the policy development and implementation chain, with some focusing on early stages of agenda-setting and problem framing and what commitments to EPI are made, some on how EPI influences policy design and organisational structures, and some on policy implementation at sub-national level and how EPI may face conflicts and challenges in practice. Policy-making stages is the principle by which we have ordered the contributions to this special issue.

Examining the agenda-setting stage, Tosun and Peters (2018) analyse how intergovernmental organisations (IGOs), as important sources of policy ideas, have committed to EPI, CPI and energy policy integration respectively in their primary laws. They find that having EU country members in IGOs is related to EPI figuring more strongly on their agenda. Studying the national level, Schmidt and Fleig (2018) use a global database of national climate legislation and conclude that CPI has increased significantly since 1990, in the sense that climate policy objectives can now be found in policy areas like energy and transport. The next set of papers unpack the policy process, to see if and how general EPI or CPI commitments translate into policy outputs. Mullally et al. (2018) conduct a discourse analysis of recent developments in Irish energy policy and suggest that EPI figures strongly, but also elaborate on the nature of ‘participative EPI’ and the democratic process. Russel et al. (2018) focus on integration of climate adaptation in EU coastal and marine policy, and find that institutional dynamics at macro, meso and micro levels have so far hindered strong integration. Also focusing on integration of climate adaptation in sectoral policy, Widmer (2018) finds that in Switzerland, in terms of policy goals the

integration process varies substantially across sectors, but in general backing by organisational and procedural measures is lacking. Karlsson-Vinkhuyzen et al. (2018) broaden the scope from public policy to governance involving private and civil society actors and find that the latter can play important role when EPI – and mainstreaming of biodiversity in particular – needs to occur within and along transnational commodity supply chains. The next two papers consider if EPI/CPI commitments and policy instruments are consistently applied in implementation and practice. De Roeck et al. (2018) find that while political salience favours strong integration of climate adaptation in EU development aid practices in recipient countries, progress is still limited by organisational factors like staff resources and 'mainstreaming fatigue'. Considering EPI at the level of landscape governance in Rwanda, Van Oosten et al. (2018) find a number of substantive and procedural policy conflicts that actors through various strategies resolve or operate under. Finally, Nilsson and Persson seek to draw lessons from decades of EPI study and practice, to understand the nature of the integration challenges implied by Agenda 2030.

In the Conclusion of this special issue, Persson and Runhaar (2018) identify and categorise explanatory factors for different forms of EPI, including the stages of the policy process at which they apply (albeit in a less refined manner than described above), in order to facilitate the next generation of EPI research and theory building.

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