



# Policy integration and climate change adaptation

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Policy integration is considered an important mode to govern cross-cutting policy problems effectively. In the context of climate change adaptation, calls for strengthened policy integration have recently emerged to ensure timely, adequate and effective actions. Though research on climate change adaptation policy integration is still in its infancy, current knowledge from policy studies offers a solid basis for informing future work on adaptation policy integration. This paper reviews the main reasons why governments pursue policy integration, identifies key enabling and constraining conditions, and discusses evaluation of policy integration in the context of climate change adaptation.

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### Introduction

Climate change impacts and their solutions transcend the traditional administrative and sectoral boundaries of policy systems. There is a growing body of literature arguing that crosscutting societal problems such as climate change can be governed most effectively by recognizing and anticipating the fragmented nature of the governance regimes within which they are embedded [1<sup>••</sup>,2<sup>•</sup>,3–6,7<sup>•</sup>]. Integration broadly refers to the process of embedding crosscutting policy issues across the compartmentalised, fragmented, traditional, or siloed policy subsystems [8<sup>••</sup>,9<sup>•</sup>] in which most decision making in modern democracies takes place. Policy integration (also referred to as ‘mainstreaming’ or ‘climate policy integration’ in the climate change literature [1<sup>••</sup>,3,10], or ‘coordination’ in the policy literature [11<sup>••</sup>]) is therefore often hallmarked as the ‘holy grail’ in policy studies and an ambition governments try to achieve but hardly ever realise [9<sup>•</sup>]. It can refer to horizontal policy integration (i.e.

integration of adaptation across policy sectors at the same administrative scale) or vertical integration [12], which is often equated with characteristics of multi-level governance [13–15].

Whereas policy integration in the past has been predominantly seen as an outcome — something which governments desired to achieve in order to deal with crosscutting policy issues — it has become clear in recent years that it is more productive to consider integration as a process of reflexivity and learning from past experiences, resulting in continuous adjustments by reconsidering the need to increase *or* decrease the degree of policy integration [2<sup>•</sup>,17,18] depending on how the issue evolves. Recent scholarship has developed this understanding of policy integration dynamics, recognizing the importance of the crosscutting nature of policy problems and solutions, policy subsystem involvement, integrative goal formulation, and instrument mixes and their calibrations [16].

This short review article aims to synthesize recently published literature on policy integration and climate change adaptation, focusing specifically on three critically important questions: i) why are governments pursuing policy integration in the first place?; ii) which processes and conditions are enabling and constraining policy integration processes?; and iii) how can we evaluate whether policy integration is successful (or not)? The next sections address these questions and the article ends with a brief conclusion.

### Why and how are governments pursuing policy integration?

Although governments have always pursued more or better policy integration, it became a prominent topic in the 1980s and 1990s. This was partly driven by the emergence of New Public Management (NPM) in most Western democracies where emphasis was placed on performance indicators such as efficiency and effectiveness, and agencification of public service delivery. Combined with the rise of increasingly complex societal problems, it became clear the existing governance systems were unable to govern cross-cutting societal issues as they had become increasingly siloed and fragmented. In response, governments pursued a range of integrative governing approaches, including the well-known Joint-up Government and Whole-of-Government approaches that thrived during the heydays of NPM [11<sup>••</sup>]. Despite tackling some of the critical challenges, studies showed that these efforts may have actually worsened the governance systems’ abilities to deal with cross-cutting policy problems in some cases [17,18]. Recent years witnessed a

shift away from NPM towards broader public governance discourses, but the need for policy integration continues to exist.

The recent reasons why governments pursue integration can be broadly categorised into *processual* and *structural* reasons.

*Processual* reasons have to do with the inner workings of public bureaucracies and the intricacies of policy making for cross-cutting societal issues. One of the key documented reasons is overcoming competing or incoherent policy goals and policy instruments; for example to overcome inconsistent policy instrument mixes to govern and implement adaptation actions on the ground, or to avoid or reconcile conflicting interests between climate and other sectoral interests [19,20,21]. Another reason is to avoid under reaction and over reaction on climate impacts by certain sectors or governmental departments. This is typically the case where departments or organisations hijack the climate agenda, resulting in unequal distribution of resources, overlooking important sectors, or leading to bureaucratic conflicts and turf-wars as result of competing issue attention between departments and governmental organisations. Results from monitoring and policy evaluations of the adequacy and effectiveness of climate actions are also important reasons for governments to pursue integration, particularly if these point to incoherent and inconsistent adaptation actions. Other reasons frequently reported include the negative side-effects of structural devolution and performance management which increases cross-scale inconsistencies, rapidly expanding transaction costs, asynchronous problem-solving between departments or organisations, or increasing access to governing capacity such as finances and rule of law to ensure the implementation of adaptation actions [2,9,11,15,22,23].

There are also more *structural* reasons why governments pursue policy integration. Scholars showed, for example, that country-specific characteristics of the political, legal and bureaucratic system influences the patterns of policy integration of climate change adaptation [24]. Governments with a long history in NPM, typically Anglo Saxon countries, for example, are more likely to pursue integration to tackle societal problems when compared to governments without these experiences. Whether or not governments pursue integration is also influenced by the (legal) competences to tackle cross-cutting issues. In some governance settings, the formalised tasks and responsibilities of departments do not allow for designing strong (legal) policies on crosscutting areas. Instead, departments depend on ‘soft’ governance tools such as persuasion, capacities and leadership to convince other departments or agencies to integrate climate change considerations. The limited competences of the European Commission in climate change adaptation, for

example, forces the Commission to focus on integrating adaptation in policy areas it has formal competences [25,26]. Departments and agencies with strong institutional authority experience urgency to integrate climate change without a top-down or strong push, particularly when compared to ‘new’ and cross-cutting policy areas such as climate change adaptation where limited substantive and institutional authority exist [27,28].

In recent years, the pursuit for climate policy integration has gained even more traction as result of policy accumulation and the ‘responsiveness trap’ [29]; citizens call for more climate action by governments and governments tend to respond to these calls by developing more policy outputs which create a complex and oftentimes incoherent policy landscape [30] which in turn requires strengthened integration to deal with the negative effects. Efforts to pursue policy integration is nearly always a combination of structural and processual reasons.

### Which processes and conditions enable or constrain policy integration processes?

Although there is increasing evidence that policy integration is taking place, including in climate change adaptation, the processes of integration are not straightforward and there are many factors and conditions that enable or constrain policy integration [1]. Considering these in the policy integration design and implementation reduces the chance of policy failure. Following Domorenok *et al.* [31], I discuss some of the main systemic, organisational and individual processes and conditions documented in the recent policy integration literature below and how these relate to climate change adaptation.

At the *systemic* level four processes and conditions are important in the context of adaptation policy integration.

- Political ideology and party positions: There is small but growing body of literature investigating the importance of political ideology and party positions on policy integration processes [32]. Studies have shown, for example, how the positions of political parties, driven by their political motivations, are shaping the intensity of policy integration reforms. In general, environmental studies show that centre-left governments are more likely to be supportive of policy integration arrangements [5]. Changes in political ideology, primarily due to election results, may change the ideas about climate change as political priority and how it ought to be governed through integration. Budget cuts to the Department of Environment, Food and Rural Affairs (DEFRA) and Department of Energy Climate Change (DECC) as result of new conservative majority government in the UK (2015) is a clear example with significant consequences for climate policy making across all levels of government [33]. Political positions play an

important role in setting integrative goals and shaping the ways through which these are realised [7\*,24]. Vertical integration may be more challenging in systems where political parties in power at national level are different from those at lower tiers of government.

- **Institutional alignment:** Each country has a unique socio-political-administrative system which has a particular way of functioning. In this context, reference is often made to ‘administrative traditions’ [34] and ‘policy styles’ [35] to capture the historically grown and institutionalised set of rules and practices that influence policy actors’ actions. These systems have certain preferences when it comes to pursuing policy integration, thus offering some information of which types of policy goals and instruments are more likely to succeed in being adopted than others. Anglo Saxon countries such as the UK and Australia, for example, have historically focused on coordination and integration, much more compared to other systems [34,36]. Countries with strong legalistic systems such as Germany are likely to be more sensitive to issue integration through laws [34,37,38] and hierarchical governance systems such as Vietnam take a different approach than networks or market systems found in most Western democracies [39,40]. Alignment to existing institutional systems and practice is important as misalignment can lower bureaucratic engagement, increase transaction costs, and runs the risk of policy termination.
- **Issue attention:** Whether or not crosscutting policy issues such as climate change adaptation make it to the political agenda is a well-researched question. High-profile societal and political issues are found to be more likely to be integrated than issues low on the political agendas [41,42]. Higher issue attention is also likely to increase the involvement of many policy actors from different policy subsystems and non-governmental actors, sometimes leading to undesirable consequences such as turf wars [2\*,9\*]. Like all policy problems, climate change adaptation competes for issue attention with other policy topics and thus runs the risk of being dropped of the political agenda. Actions such as climate activism can raise political attention [43]. For example, widespread policy disruption, such as the extensive periods of drought in 2018–2019 across Europe, raise the issue attention of climate impacts and need for adaptation [44]. High issue attention is instrumental in creating ‘windows of opportunities’ for departmental reforms and to strengthen integration and mobilize necessary resources [45].
- **Issue framing:** cross-cutting policy issues that do not provide major adjustments of the primary objectives of a policy sector, and allow for quick political gains, are more likely to be successfully integrated than other more controversial issues. Since adaptation is not a goal in and off itself, it always depends on other sectors to be successfully implemented. [1\*\*] In the absence of its

own institutional authority, framing devices such as ‘triple-wins’, ‘synergies’ and ‘co-benefits’ are often used (successfully) to enhance the attractiveness of integrating climate policy ambitions and actions in sectoral objectives and actions [46].

At the *organisational* level, three processes and conditions are frequently found to enable or constrain policy integration. Two others — timing and design — have been less studied empirically but can have large implications for the design of policy integration arrangements.

- **Capacity:** There is a vast body of literature that has looked at the importance of capacity to policy design and implementation for increasingly complex and crosscutting policy problems [31\*,47]. Using slightly different terms such as institutional capacity, governing capacity, policy capacity or administrative capacity [31\*,48], literature highlights the challenges to organise effective governance of policy integration processes and the resources required. In some instances this is formally arranged, either by appointing a lead ministry or department, or by installing a new unit with certain tasks, responsibilities and resources. In the absence of these formal arrangements, governing integration relies on inducements and incentives rather than mandatory controls [49]. Overall, capacity to integrate is found to be weaker for crosscutting issue areas compared to traditional policy issues, and strongly determined by individual factors such as (dis)trust [50]. The capacity to integrate is frequently reported as a key constraint to integrate climate change adaptation [1\*\*], particularly in county contexts with low administrative capacity [51].
- **Stickiness:** Pursuing policy integration is one thing, but ensuring that policy integration ‘sticks’ over a longer period of time is a question hardly asked [52]. Despite recognitions that degrees of policy (dis)integration change over time, studies have demonstrated that creating arrangements to ensure continuation of integrative ambitions is critical, particularly in the case of political turmoil, party politics and political controversies [24,32]. Stable and continued policy integration is also important for long term planning, for example in the context of economic investments in large scale infrastructural works under future climate change [53]. Several ways to strengthen stickiness are documented in the adaptation literature, including by creating laws and regulations like the UK Climate Change Act, or by placing policy integration responsibilities outside the sphere of influence of day-to-day politics [54].
- **Accountability:** Although in the past accountability was predominantly seen as a hindrance to integration, studies now show the importance of developing mechanisms that hold individuals and organisations accountable to the goals and ambitions they formulated. These

accountability mechanisms should provide clear directions in how to contribute to realising cross-cutting policy objectives [55\*,56]. Studies show that hierarchical accountability mechanisms with sanctioning mechanisms may discourage integration, and instead require deep engagement of the account giver to ensure success [23,57].

Two processes and conditions are specifically related to designing policy integration at organisational levels.

- **Design:** Designing policy integration arrangements raises the question of how to engage with bureaucrats in the process [23,51]. Although few studies have looked at these conditions, they show that bureaucrats from the same organisation hold different views of how to organize integration and coordination within their department or organisation [58]. Practitioners of implementing organisations were found to consider top-down mechanisms ineffective to achieve horizontal policy integration. Instead, bureaucrats were found to prefer adaptive arrangements, involvement, and deliberative processes when designing and implementing policy integration [59]. Informal networks that are based on trust relationships were also found to be important [37].
- **Timing:** Time rules and temporal discretions are arguably important in deciding when integration takes place and at what speed, but not much research has been conducted in this area. Studies show the importance of leaving discretion in setting and administering time rules for horizontal integration, which seems particularly relevant for voluntary rather than imposed types of integration [60]. Success of policy integration is also influenced by the ability to time and synchronize the process of integration with routine institutional procedures [61], such as budget and policy cycles [2\*].

At the *individual* level, political commitment, capacity, and core beliefs are found to be key processes and conditions that shape policy integration processes.

- **Political commitment:** Political commitment, or political will, is important for ensuring policy integration and effective actions [62,63]. Although commitment tends to be vaguely defined, it broadly captures the actions by political actors ensure certain policy goals and ambitions materialise. Commitment is therefore determined by actions taken, such as setting ambitious targets, designing substantive policy instrument mixes, and rearranging existing institutional structures to ensure integration processes. Political commitment affects all stages of the adaptation cycle, from placing adaptation on the political agenda, to adopting measures, allocating resources, and implementing actions. Political commitments are critical to counter symbolic actions, for example. Successful integration does not just requires

political commitment, but ultimately administrative and social commitment to ensure successful implementation. Political commitment is often most equated with champions, policy entrepreneurs, or (political) leaders. These can be individual actors or organisations with some level of political authority, are embedded in bureaucratic roles, and they are considered relevant in the context of climate change adaptation [64]. They play an important brokering role in policy networks and are critical to strategize for and remove barriers to integration [20\*,65]. One example is the so-called Delta Commissioner in the Netherlands, an experienced and well respected civil servant who is fulfilling a leadership role to ensure integration of climate change adaptation across sectors and regions [2\*].

- **Capacity:** Capacity at the individual level refers to the tangible and intangible resources, skills, knowledge, ideas, creativity, and so on that individual actors have or may obtain over time [31\*]. Of particular importance in the context of policy integration are cross sectoral and cross scale competencies and access to networks to exchange and get access to knowledge and expertise. Clearly the absence of individual capacity to cross-cut traditional boundaries is considered a major barrier to adaptation [1\*\*].
- **Policy-core beliefs:** Policy actors from different sectors and organisations are involved in policy integration processes, each with their own policy core beliefs that shape their behaviour [66]. Policy core beliefs refer to the normative and empirical commitments actors have based on their own norms, values and ideas. Coexistence of related policy core beliefs in a harmonious way — or at least following a ‘do-not-harm’ principle — are found to be important to ensure successful policy integration [2\*,67]. Once policy core beliefs start to diverge, for example as result of policy controversies, or spill over from other policy issues, processes of policy integration are weakened as those policy core beliefs of actors that control the decision making process tend to prevail [68\*]. Policy core beliefs can gradually change over time, for example as result of social learning [69].

Whilst these conditions and processes are presented here as separate items, they are clearly interlinked and influence each other; for example some level of issue attention is needed to create political commitment, which in turn depends on individual and organisational capacity to ensure successful actions.

### Measuring the success and failure of policy integration?

Considering the processes and conditions discussed above early in the design and implementation of policy integration processes may increase its success. Measuring policy integration and determining its success plays a crucial role in identifying what works where, why and for whom, which are critical questions to answer when

considering how to upscale and out-scale the lessons on successful integration to other contexts [1<sup>\*\*</sup>,26,70]. At the same time, determining what is successful (or unsuccessful) is a difficult question to answer, as there are different ontological roots in the literature about what is successful integration and how to best measure it (if at all), with some authors referring to success when predefined goals have been achieved, whereas others take a more normative stance [71]. The act of evaluation is generally perceived to be socially constructed and often cannot be disconnected from the political [72].

But surprisingly few studies have looked at the evaluation of policy integration from a conceptual or empirical perspective. Building on the work of McConnell [73,74] and general policy literature, Candel [75<sup>\*\*</sup>] argues that one can distinguish between political and programmatic measurements of successful integration (or failed integration) by looking at intermediary or final outcomes. Some policy integration may result in some degree of programmatic successful outcomes (e.g. coherence between policy goals is strengthened), but this does not translate to political success (e.g. enhanced political commitment). It is also possible that the success achieved is an intermediate outcome, which is no guarantee for successful outcomes at later stages in the process. Russel *et al.* [22], for example, demonstrate that whilst the EU climate change adaptation policies may have triggered countries to start integrating climate change adaptation considerations in national policies (i.e. constituting programmatic success), it hardly resulted in political action (i.e. constituting political failure). Although this type of evaluation is useful for broadly capturing the dimensions of success and failure of policy integration, it provides a limited operational framework to unpack critical indicators to evaluate policy integration.

## Conclusion

Policy integration is increasingly considered as an important mode to govern climate change adaptation in a timely, adequate and effective manner. Recent literature has developed processual perspectives on policy integration that allows unpacking of the processes and conditions that play an important role in pursuing policy integration. The rapidly expanding literature base has provided a wealth of insights on the processes and conditions at systemic, organisational and individual levels that can inform the design and implementation of policy integration process, and in doing so increase likelihood of success. But the pursuit of policy integration also raises critical questions that have hardly been explored, most prominently clear frameworks and indicators with which to assess whether policy integration is successful (or not).

Although literature has repeatedly claimed policy integration is no panacea for successfully implementing climate change adaptation, and many enablers and

constraints exist, there is growing evidence policy integration plays an important role in coherent and consistent climate change adaptation action [1<sup>\*\*</sup>,2<sup>\*</sup>,10].

## Conflict of interest statement

Nothing declared.

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- This paper offers one of the first attempts to conceptualise the evaluation of policy integration processes, building on recent insights from public policy theory.