4

Interlinkages, Integration and Coherence

LEAD AUTHORS
MÅNS NILSSON AND MARJANNEKE J. VIJGE

CONTRIBUTING AUTHORS
IVONNE LOBOS ALVA, BASIL BORNEMANN, KARIN FERNANDO,
THOMAS HICKMANN, MICHELLE SCOBIE AND SABINE WEILAND

The 2030 Agenda for Sustainable Development represents a novel approach to global sustainability governance. It goes beyond the earlier Millennium Development Goals in that it envisions a global transformation for economic prosperity, human well-being and planetary health (UNGA 2015). The breadth of this agenda, however, creates novel challenges of policy interlinkages and goal integration. The 2030 Agenda emphasizes that 'interlinkages and the integrated nature of the Sustainable Development Goals' are crucial for its success (UNGA 2015: 2). Also, the 17 Sustainable Development Goals were officially designed as an 'integrated and indivisible' set, and every goal has to be met equally to attain sustainable development (UNGA 2015: 1). In short, integration is a leitmotif of the 2030 Agenda (Nilsson and Persson 2017).

The integrated nature of the goals, however, increases complexity in policy-making, because it implies that the implementation of the goals must consider the interactions among them. Progress or lack of progress with one goal will affect other goals, some positively and others negatively, creating synergies and trade-offs (Nilsson and Weitz 2019). Institutional integration and policy coherence hence become central in addressing normative conflicts, fragmentation and policy complexity across the goals. The challenge is embodied as part of Goal 17, which calls upon governments and other actors to enhance policy coordination and policy coherence for sustainable development (UNGA 2015: Targets 17.13–17.14).

Institutional integration and policy coherence have thus become central concerns in the implementation of the 2030 Agenda, in national and global governance. At the national level, most governments acknowledge the need to consider synergies and trade-offs in implementing the Sustainable Development Goals. At the global level, there is growing recognition that governments need better capacities, tools and resources to address the interlinkages, synergies and trade-offs between goals. Many international organizations have produced guidance documents and tools to support governments, including the United

92

Nations Development Group (UNDG 2017), the United Nations Department for Economic and Social Affairs (UNDESA 2021), the United Nations Development Programme (UNDP 2017a) and the Organization for Economic Co-operation and Development (OECD 2018). The interest in linkages between the global goals has led to more research on institutional integration and policy coherence for sustainable development. A key question is here whether the Sustainable Development Goals have had an integrative effect and can be shown to strengthen institutional integration and policy coherence since 2015.

At the global level, scholars have studied whether the goals foster institutional integration between United Nations agencies and other intergovernmental bodies. The highest UN body for the governance of Sustainable Development Goals – the High-level Political Forum on Sustainable Development – has received much attention here. While some authors highlight the potential of the forum to enhance integration, coordination and coherence across the United Nations system (Abbott and Bernstein 2015; Boas, Biermann and Kanie 2016), others argue that it has failed to act as a strong coordination body and lacks political leadership and guidance (Beisheim and Bernstein 2020). This literature on the effects of the goals on global institutional integration is reviewed in Chapters 2 and 6 of this volume.

In this chapter, we focus on the national level and explore here the interlinkages, institutional integration and policy coherence in the context of the 2030 Agenda for Sustainable Development and the Sustainable Development Goals.[1] We first define institutional integration and policy coherence in the context of governance for sustainable development. We then review how perspectives on interlinkages between the global goals have shaped a new discourse, followed by an analysis of the steering effects of the Sustainable Development Goals on institutional integration and policy coherence. The conclusion reflects on our main findings, and points to further research avenues.

Conceptualization and Methods

Institutional integration and policy coherence are rooted in practices of rational decision-making within public policy and public administration (Candel and Biesbroek 2016; Peters 1998). Since the 1980s, there has been widespread interest and political support for integrated policy-making, both within and beyond governance for sustainable development (Tosun and Lang 2017). For example, policy coordination and coherence were central in the study of peace and security, mainly between civil and military interventions (de Coning and Friis 2011). Likewise, in development cooperation, 'policy coherence for development' gained momentum in the early 2000s (OECD 2018). In environmental governance, 'environmental policy integration' became prominent in many jurisdictions in the

1990s, including in the European Union, which enshrined this concept in its foundational treaties (European Communities 1997).

Both institutional integration and policy coherence have been studied extensively, often with different terminology.

Institutional integration is a concept closely linked to notions of institutional interlinkages (Hickmann et al. 2020), institutional coordination (Zürn and Faude 2013), institutional interaction and interplay management (Oberthür and Stokke 2011; Stokke 2020), and intra- or inter-organizational mainstreaming (Runhaar et al. 2018) (for overviews of these concepts, see Visseren-Hamakers 2015, 2018). A key question here is how to deal with complexity in policy-making and how to foster a division of labour across levels and actors to achieve more effective regulatory frameworks. Institutional integration has been a central question especially in the study of international governance. Numerous studies have explored here links between international institutions under conditions of complexity and fragmentation (Biermann 2014; Biermann et al. 2009; Hickmann et al. 2020; Oberthür and Gehring 2006; Oberthür and Stokke 2011; van Asselt 2014; Young 1996; Zelli and van Asselt 2013). Depending on whether governance fragmentation is seen as desirable or not (see discussion in Biermann et al. 2009, 2020), studies have focused on how to deal with fragmentation (Ostrom 2010), how to 'orchestrate' it (Abbott and Snidal 2010) or how to ameliorate it through institutional integration. Institutional integration is often believed to result from enhanced coordination across agencies or the creation of new, sometimes overarching agencies that connect others, such as through an often-debated international agency for the environment (Kim et al. 2020).

Policy coherence is often studied at the national level. Related terms, with slightly varying meanings, are policy coordination (Peters 1998), environmental policy integration (Jordan and Lenschow 2010; Persson and Runhaar 2018) and environmental mainstreaming (Karlsson-Vinkhuyzen et al. 2017). Policy coherence also refers to the degree of consistency across different policies (Nilsson et al. 2012). Here we understand policy coherence as consistency across the policy cycle: setting and prioritizing objectives, policy instruments and implementation and monitoring, analysis and reporting on policy outcomes (Scobie 2016). For example, setting and prioritizing objectives should avoid unintended negative impacts on other sectors (Makkonen et al. 2015) or the international norms and goals to which a country has committed (Kalaba, Quinn and Dougill 2014).

Institutional integration and policy coherence are causally linked. Policy coherence needs collaborative institutions and mechanisms across scales, networks, departments, levels of authority and sectors. Hence, policy coherence often results from institutional integration, even though it can also happen without.

For both institutional integration and policy coherence, the involvement of stakeholders and local political actors in knowledge-sharing, learning and problem solving is often seen as important (Smith et al. 2014). In the following, however, we only focus on how governments seek to advance institutional integration and policy coherence.

We base our analysis on two types of sources. First, we identified relevant scholarly literature through the Scopus database, using a search string that combined three requirements: publications including any of the search terms '2030 Agenda', 'sustainable development goals' and 'SDG' (including variations); publications focusing on the topics of integration and coherence, for which a combination of the terms 'integration', 'coherence', 'trade-off', 'synergies' and 'interaction' (including variations) apply; and publications with a declared policy or governance focus. This search resulted in 1,281 articles. We narrowed this sample to 93 by excluding: publications that refer to the 2030 Agenda or the Sustainable Development Goals only to frame the argument without making any substantive references; publications that have no clear connection to policy or governance, either conceptually or empirically; and publications that were not accessible for language or other reasons. We analysed the remaining articles, looking specifically at how they consider and frame interlinkages, and how they refer to institutional integration and policy coherence in relation to the 2030 Agenda or the Sustainable Development Goals.

To complement our review, we studied scholarly analyses of the Voluntary National Reviews that countries report to the High-level Political Forum on Sustainable Development. These Voluntary National Reviews inform on institutional arrangements and policy approaches and outline how countries pursue the Sustainable Development Goals and integrate them into legislation, policies, plans, budgets and programmes. We draw on analyses of Voluntary National Reviews from 2016 to February 2021 that have been published in peer-reviewed journals, using the search words 'Voluntary National Reviews', 'Sustainable Development Goals' and 'SDGs', combined with 'policy integration' and 'policy coherence' in Scopus, Web of Science and Google Scholar. In addition, we included grey literature, specifically reviews and discussion papers of Voluntary National Reviews published from 2016 to 2021 by the United Nations and other international organizations (Okitasari et al. 2019; Partners for Review 2017, 2018a, 2018b, 2018c, 2019a, 2019b, 2020; UNDESA 2016, 2017, 2018a, 2018b, 2019, 2020) and civil society coalitions (Cutter 2016; Kindornay 2018, 2019; Kindornay and Gendron 2020). To illustrate our findings from this review of the academic and grey literature, in the following section we use also a few examples from a range of countries.

Research Findings and Practical Insights

We now analyse steering effects of Sustainable Development Goals in three respects. First, we assess how the Sustainable Development Goals lead to normative changes by focusing on their effects on the coherence among policies, legislation and regulations. Second, we assess institutional changes due to the goals, by focusing on their effects on institutional integration. Third, we assess discursive changes in how actors understand and describe the 2030 Agenda as an interlinked system.

Normative Effects

We start with reviewing the state of knowledge on the impact of the Sustainable Development Goals on policy coherence, that is, the synergistic alignment of policies with the Sustainable Development Goals (as opposed to the integration of institutions that we discuss later). Overall, evidence on policy coherence induced by the Sustainable Development Goals is rare and weak. The focus of the literature is not on analysing whether and how the goals are implemented coherently, but on the development and validation of approaches and methods to support their coherent implementation (see Banerjee et al. 2019; Horan 2020; Janetschek et al. 2020; Nhamo et al. 2018).

In terms of the effects of the Sustainable Development Goals on policy coherence, many countries acknowledge in their Voluntary National Reviews the importance of policy coherence in the implementation of the Sustainable Development Goals (UNDESA 2017, 2020). Although the Voluntary National Reviews rarely inform on the effects of the goals on policy coherence (UNDESA 2020), evidence suggests that governments make some efforts to advance policy coherence. In their review of Voluntary National Reviews, for example, Allen, Metternicht and Wiedmann (2018) observe that 92 per cent of the 26 countries studied did some mapping and alignment of Sustainable Development Goals and targets in relation to their policies (see also Okitasari et al. 2019; UNDESA 2017). The authors also observed that about four-fifths of the studied countries had either put in place (27 per cent) or begun to establish (54 per cent) monitoring and review arrangements.

Despite this, by 2018, only 19 per cent of the countries had mainstreamed the Sustainable Development Goals in their national strategies or plans, while 46 per cent were in the process of doing so (Allen, Metternicht and Wiedmann 2018). A synthesis report of the Voluntary National Reviews in 2020 stated that many countries were still integrating the Sustainable Development Goals into their policies (UNDESA 2020). Cross-referencing between Sustainable Development

Goals and other global sustainability frameworks, such as the climate convention, is also a challenge for many countries (UNDESA 2019; Deutsche Gesellschaft für Internationale Zusammenarbeit and World Resources Institute 2018; Okitasari et al. 2019; Shawoo et al. 2020). For example, only few countries address trade-offs between climate policies and Sustainable Development Goals, and very few have mainstreamed their climate commitments in their national targets under the Sustainable Development Goals. Overall, planning and budget processes for the Sustainable Development Goals and climate action are most often not aligned (Deutsche Gesellschaft für Internationale Zusammenarbeit and World Resources Institute 2018). Budgeting processes in particular seem to lag behind: a report from the United Nations University found that fewer than 20 of the 99 Voluntary National Reviews (submitted by 2018) had indicated that the Sustainable Development Goals had been integrated in national budgeting (Okitasari et al. 2019; see also UNDESA 2020).

While all countries face challenges with the interlinkages among the Sustainable Development Goals, higher-income and lower-income countries differ in terms of the application of a coherent approach. Lower-income countries are generally least advanced (Allen, Metternicht and Wiedmann 2018; Okitasari et al. 2019). However, in both the Global North and South there are countries that successfully advance policy coherence for the goals, and these do not always fit general expectations. Germany, for example, is a relative latecomer in formulating its first national sustainability strategy (Bornemann 2014) but was one of the first countries to fully align its strategy with the goals. The Netherlands, in contrast, is traditionally a frontrunner in environmental planning but lacks a strategic vision on how to implement the goals. The goals have only once been mentioned in a political coalition agreement in the context of development cooperation (Yunita et al. 2022).

The efforts of countries to advance policy coherence centre on their national (sustainable) development strategies that they seek to align with the 2030 Agenda and the Sustainable Development Goals (Cutter 2016; Partners for Review 2017; UNDESA 2020). For example, Indonesia's implementation of the Sustainable Development Goals is based on the national development vision *Nawacita*. This vision is operationalized in the National Medium Term Development Plan, which covers most goals and targets relevant for the country. Another example is Ethiopia, where the Growth and Transformation Plan II is now the main national carrier of the Sustainable Development Goals (Partners for Review 2017).

Also in Sri Lanka, an overall vision and strategic path for sustainable development – aimed at 'balanced-inclusive-green-growth' and cutting across silos – was developed specifically targeting the 2030 Agenda. However, while this agenda was a government-sanctioned report, by the time it was completed those

that sanctioned it were no longer in power and there is no indication that these recommendations will be used. In Colombia, the government conducted an update of its National Development Plan to incorporate the Sustainable Development Goals with 92 targets; the country even approved the Sustainable Development Goals as law (Colombian National Planning Department 2018, 2019). Likewise, most Caribbean islands have, after substantial public consultation, aligned the Sustainable Development Goals with their national development agendas. St. Lucia aligned its Medium-Term Development Strategy of 2019–12 to all but three of the Sustainable Development Goals and to its six areas of national priority: agriculture, citizen security, education, health, infrastructure and tourism (Government of St. Lucia 2019: 10). Jamaica's 'ownership' of the 2030 Agenda began in 2014, with national consultations on the alignment of the country's development vision and strategy with the 2030 Agenda and the Sustainable Development Goals (Government of Jamaica 2018). These examples show that countries are actively trying to align the Sustainable Development Goals with their overall development visions, policies and planning, which could lead to more policy coherence at the national level.

Some analyses focus less on the 2030 Agenda as a whole than on the coherence of policies related to specific goals. Aftab et al. (2020), for example, report in their literature review how health-related Sustainable Development Goals are aligned with national development agendas. Specifically, they report about mechanisms of linking the implementation of the goals with budgetary processes. While in most countries financial allocation is ensured by incorporating the Sustainable Development Goals into funded development strategies and plans, the authors also report countries that reoriented their budgeting so that expenditures for Sustainable Development Goals become traceable to assess financial allocation. Examples include ministry budgets in Afghanistan that are aligned with the Sustainable Development Goals, the coding of the goals in budgets to track goal-related expenditures in Nepal, and the cross-matching of budgets and priorities to estimate goal-specific funds in Mexico (Aftab et al. 2020).

Research has addressed the enabling and hindering conditions for a coherent implementation of the Sustainable Development Goals. Although many countries explicitly recognize the interlinkages between Sustainable Development Goals and highlight synergies and trade-offs (such as, for instance, Cambodia, Ghana and the United Kingdom) (UNDESA 2019), most countries lack appropriate mechanisms to assess these (Allen, Metternicht and Wiedmann 2018) or to link their assessments to decision-making (Breuer, Leininger and Tosun 2019). Many policy interventions lack the analytic capacities to assess the scale of impact and find synergies and trade-offs. Allen, Metternicht and Wiedmann (2018) identify gaps regarding the application of integrated and systems-based approaches to the

implementation of the Sustainable Development Goals. Many countries lack adequate frameworks for prioritizing Sustainable Development Goals. Furthermore, only one-fifth of the 26 analysed countries applied nexus or clustering approaches; there was even less evidence of countries adopting qualitative or quantitative approaches to understand interlinkages between the Sustainable Development Goals (Allen, Metternicht and Wiedmann 2018).

The lack of coherence in Sustainable Development Goals implementation can also be attributed to a lack of financial resources. In the Caribbean, for example, there are deeper challenges to policy coherence such as limited fiscal space because of large national debt burdens and the lack of sustainable funding for development. External financial and environmental shocks further disrupt sustainable development policy and planning as unexpected natural disasters or global economic shocks quickly erode hard-earned progress (Scobie 2019a).

In addition to a lack of financial resources, lower-income countries face barriers such as high donor dependence, and lack of disaggregated and reliable data (Aftab et al. 2020). Mbanda and Fourie (2019) found that policy coherence around the Sustainable Development Goals in South Africa faces several challenges, including a lack of institutional structures, the development of skills and the (lack of) involvement of party politics. Horn and Grugel (2018) studied the implementation of the goals in Ecuador and point to political path dependencies and an instrumental interpretation of the goals that is motivated by power-related political calculations of competing political parties. Both factors undermine the integrated nature and ambition of the agenda. Forestier and Kim (2020) studied the prioritization of the Sustainable Development Goals in 19 countries and found that the capacity of dealing with the goals in an integrative manner is not only affected by national political factors and institutional arrangements, but also by international organizations and the external funding offers they provide, particularly in lower-income countries.

Overall, our analysis shows that the Sustainable Development Goals have some effects on policy coherence, especially by aligning national sustainable development visions, strategies and plans. However, significant barriers remain to further advance policy coherence, particularly regarding coherence among sectoral policies and in budgeting processes. Barriers are compounded in lower-income countries owing to lack of resources and capacities.

Institutional Effects

We now discuss how Sustainable Development Goals affect institutional integration at national level. Overall, the literature indicates that only little empirical evidence exists on institutional integration in relation to the Sustainable

Development Goals, let alone on possible institutional integration effects of the goals. Considerable parts of the literature in this area are normative–prescriptive and focus on developing, justifying and validating approaches to improve institutional integration (Janetschek et al. 2020; Nhamo et al. 2018; Mbanda and Fourie 2020), instead of empirically studying the integration of institutional arrangements.

Apart from these prescriptive accounts, some studies report on institutional arrangements for implementing the 2030 Agenda and the Sustainable Development Goals; some explicitly refer to the integrative function of institutional arrangements. However, it is often unclear whether these arrangements, such as inter-ministerial coordination bodies, were established specifically to implement the Sustainable Development Goals or whether they existed beforehand. The review by Allen, Metternicht and Wiedmann (2018) of 26 countries, for example, shows that almost all countries had implemented initial steps for the establishment of institutional coordination mechanisms (96 per cent) or multi-stakeholder consultation processes (96 per cent), and many had monitoring arrangements for reporting on and follow-up to the goals (81 per cent). Countries often seem to build on existing institutional frameworks, such as those for the Millennium Development Goals (Okitasari et al. 2019; Partners for Review 2019a; UNDP 2017a; UNDESA 2017, 2018, 2020). This is backed by earlier studies of national sustainability governance that show that governments and public agencies developed similar integrative institutions as part of their sustainability strategies, suggesting that not all reported institutions have been created because of the 2030 Agenda (Cutter 2016). Accordingly, there seem to be strong institutional path dependencies in implementing the 2030 Agenda in which existing institutions are used to govern the Sustainable Development Goals (Tosun and Leininger 2017). On the one hand, this may cause siloed institutional structures to be unaffected by the goals and obstruct institutional integration. On the other hand, if goals are implemented through entirely new and potentially poorly institutionalized or integrated frameworks, this would also not necessarily advance their steering effects and institutional integration (Deutsche Gesellschaft für Internationale Zusammenarbeit and World Resources Institute 2018).

At the centre of many institutional arrangements for the implementation of the Sustainable Development Goals in governments are usually specific bodies that bear the main responsibility for and oversee the implementation process. The most common governmental agencies responsible for the Sustainable Development Goals are the offices of the head of government; planning ministries; finance, economy and development ministries; and ministries for environment and foreign affairs (Cutter 2016; Deutsche Gesellschaft für Internationale Zusammenarbeit and World Resources Institute 2018; Kindornay 2018; UNDESA 2019, 2020). Some

countries also have specific ministries for sustainable development (Deutsche Gesellschaft für Internationale Zusammenarbeit and World Resources Institute 2018). A considerable diversity of institutions can be identified, which come with different implications for institutional integration. In Germany, for example, the chief responsibility for implementing the Sustainable Development Goals lies with the Federal Chancellery (Scholz, Keijzer and Richerzhagen 2016; UNDESA 2016). Although sustainable development was dealt with by the Chancellery before the Sustainable Development Goals were launched, this centralization indicates that the broad and comprehensive integration approach of the 2030 Agenda is reflected in Germany's institutional arrangements (Bornemann 2014).

Most other higher-income countries have placed responsibility for the goals with the ministries of foreign affairs or environment in a more sectoral approach (Deutsche Gesellschaft für Internationale Zusammenarbeit and World Resources Institute 2018; Breuer, Leininger and Tosun 2019). The Netherlands for example have placed the responsibility for the goals with the Ministry of Foreign Affairs, hence putting the focus more on foreign than domestic policies (De Jong and Vijge 2021; Yunita et al. 2022). In Sweden, the location has shifted over time, from shared ownership between the Prime Minister's office, the Ministry of Finance and the Ministry for the Environment to shared ownership between the Ministry for Foreign Affairs and the Ministry for the Environment.

Many countries also rely on inter-departmental coordination mechanisms for allocating responsibility for implementing the goals to specific institutions. The Voluntary National Reviews of some countries stated that this is the first step towards implementing the Sustainable Development Goals (UNDESA 2019). While many countries show in their Voluntary National Reports at least some progress in strengthening their domestic institutional frameworks (UNDESA 2016, 2017, 2018, 2019, 2020), about half of the countries that submitted their Voluntary National Reports by 2018/19 claim to have created new cross-sectoral platforms for coordinating the Sustainable Development Goals across sectors and government levels (Okitasari et al. 2019; UNDESA 2018b), showing that the Sustainable Development Goals have at least some institutional effects. In Germany, for example, an inter-ministerial committee has been established at the highest government level, in addition to national advisory councils that provide recommendations on how to implement the Sustainable Development Goals in a holistic way (De Vries 2015). Bhutan's Gross National Happiness Commission is an example of an inter-sectoral coordinating body designed to foster horizontal coherence, integration and partnerships across government sectors (UNDP 2017b). In some countries, such as in the Caribbean, the Sustainable Development Goals have also been used as a catalyst to continue existing policies to improve inter-agency cooperation in national public administrative systems (Scobie 2019b).

Similarly, some countries – such as Bangladesh, Belgium and India – have mapped ministries and other government agencies based on their responsibilities to implement the Sustainable Development Goals. India even published the results of their mapping exercise to facilitate awareness and coordination among government agencies (UNDESA 2017). Likewise, in Sri Lanka, the former Ministry for Sustainable Development launched an institutional mapping focused on policy coherence to analyse how roles and responsibilities of governmental agencies – including 425 central agencies – relate with the Sustainable Development Goals (de Zoysa, Gunawardena and Gunawardena 2020).

Parliaments are often seen as critical for implementing Sustainable Development Goals through their oversight and legislative functions, including their budgetary rights (UNDESA 2017, 2018a, 2018b, 2019). Because parliaments cover all areas of decision-making, the engagement of parliaments can be an effective form of institutional integration. Most countries, however, have not yet fully engaged their parliaments in governing the global goals (UNDESA 2020), even though many organize briefings and dialogues with parliaments on the 2030 Agenda and the goals. Some also include members of parliament in their delegations to the High-level Political Forum (UNDESA 2018a, 2018b, 2020). Some parliaments have also adopted motions to monitor, review or foster progress on the implementation of the Sustainable Development Goals. In Finland, for example, motions adopted by the parliament require the government to use the Sustainable Development Goals as guiding principles and to link the goals to national policy frameworks (UNDESA 2020). In Sri Lanka, a Parliamentary Select Committee for Sustainable Development was in operation (2016–18) to strengthen the role of parliament and to work with line ministries to support the uptake of the Sustainable Development Goals, with support of the United Nations Development Programme (Parliament of Sri Lanka 2017).

Apart from these insights on institutional approaches to attain the 2030 Agenda as a whole, other studies look into efforts to promote institutional integration around specific Sustainable Development Goals, for example, coordinating bodies that bring together departments that work on one goal. Koide and Akenji (2017) surveyed national sustainable consumption and production policies, and concluded that governance here is not breaking traditional silos because of the absence of key ministries in coordination bodies. In contrast, Aftab et al. (2020, p. 8) find 'that multisectoral structures with health at the centre [. . .] are evolving'. Yet, how effective these structures are and whether and under what conditions the health sector can successfully lead the multisectoral agenda remains unclear.

Overall, Breuer, Leininger and Tosun (2019) find that institutional integration for the Sustainable Development Goals is more likely to happen in high-income

countries, which more often involve two or more institutions – that is, multiple line ministries or the presidential office – in implementing the goals. Even in these countries, however, significant challenges to institutional integration remain. These include a lack of resources, lack of capacity among stakeholders, lack of a well-structured collaboration between state and non-state actors and the management of high stakeholder expectations (UNDESA 2017, 2018a). In Germany, for example, efforts for nation-wide institutional integration are impeded by the traditionally strong boundaries between line ministries or the departmental divide between German ministries. A key challenge for the German government is thus to create a shared ownership between the central leadership at the Chancellery with the responsibility of all line ministries. In the Netherlands, national institutional arrangements that have been established for the Sustainable Development Goals – such as the SDG coordinator and SDG focal points in each ministry – do not clarify on who should be coordinating with whom and which ministry is responsible for which goal, and they do not consider interactions between institutions that work on foreign and domestic policies (Yunita et al. 2022).

As another example, the institutionalization of the Sustainable Development Goals in Sri Lanka has been stymied by political volatility, fragmented institutions, wavering leadership and lack of a clear strategy. At the very onset of the Sustainable Development Goals in 2015, Sri Lanka had a new government in place that established a new Ministry of Sustainable Development to implement the Sustainable Development Goals. In 2018, however, there was a constitutional disruption to the legislature that led to changes in institutional structures, with presidential elections in 2019 changing these again. All of this had repercussions on how the goals were implemented in Sri Lanka (de Zoysa, Gunawardena and Gunawardena 2020).

Overall, the Sustainable Development Goals had some institutional effects in terms of the creation of new cross-sectoral coordination mechanisms, sometimes at the highest levels of government. In many countries, however, the effects of the Sustainable Development Goals on institutional integration are hampered by path dependencies related to countries' heavy reliance on existing institutional frameworks or their inability to overcome siloed structures.

Discursive Effects

We now turn to discursive effects of the 2030 Agenda and the Sustainable Development Goals. In the practice and study of governance for sustainable development, environmental policy integration has been a central notion, focusing on how environmental goals are, or should be, mainstreamed and prioritized in non-environmental policies (Lafferty and Hovden 2003). The 2030 Agenda

departs from these earlier interpretations of integration: away from one-directional and selective environmental policy integration towards a comprehensive, reciprocal and complex integration in which all Sustainable Development Goals are equally important and can only be achieved together (Bornemann and Weiland 2021). The prioritization of single goals should be based on a functional logic that identifies priority goals as 'leverage points' for advancing the achievement of other goals (Allen, Metternicht and Wiedmann 2018; Kroll, Warchold and Pradhan 2019).

This interpretation has become prevalent in the academic discourse and literature. Various studies highlight the integrated nature of the Sustainable Development Goals and their targets, which implies that progress in one domain depends on, or has implications for, other domains (e.g., Allen, Metternicht and Wiedmann 2018; Boas, Biermann and Kanie 2016; Liu et al. 2018; Nerini et al. 2019; Nilsson et al. 2018). The interlinkages between Sustainable Development Goals often point to complex networks of relations in which potentially every goal and target is related to every other (e.g., Kroll, Warchold and Pradhan 2019; Nerini et al. 2019; Singh et al. 2018; Weitz et al. 2018). On the other hand, some studies also highlight the uneven linkages between the Sustainable Development Goals, with some goals having more and others fewer links (Le Blanc 2015).

In this debate, the interlinkages between the Sustainable Development Goals are typically framed in terms of 'synergies' (that is, positive interactions – when progress in one goal favours progress in another goal – also described as 'co-benefits') or 'trade-offs' (that is, negative interactions – when progress in one goal hinders or even reverses progress in another) (Pradhan et al. 2017). The overall finding in the literature is that most interlinkages between the Sustainable Development Goals and related targets are positive. This is revealed by empirical studies of the relations between goals and targets and their evolution (e.g., Allen, Metternicht and Wiedmann 2018; Kroll, Warchold and Pradhan 2019; Maes et al. 2019; Singh et al. 2018; Weitz et al. 2018).

The knowledge base on interlinkages and more integrated approaches for the implementation of the Sustainable Development Goals has grown, including through the development of approaches and tools to assess interlinkages between the goals. These approaches and tools cover qualitative and quantitative methodologies and combinations of both, and range from simple scoring tools (Nilsson, Griggs and Visbeck 2016) to elaborate integrated or systems modelling tools (e.g., Hutton et al. 2018; Pradhan et al. 2017; Kroll, Warchold and Pradhan 2019; for an overview of methodologies, see Bennich, Weitz and Carlsen 2020 as well as Chapter 7 of this book).

The literature on interlinkages, and in particular on synergies, is gaining attention and also affects the public policy discourse. In general, we observe a change in how political actors, in particular governments, understand and describe

the 2030 Agenda, and a growing interest of governments in assessing interlinkages, trade-offs and synergies between the Sustainable Development Goals (Partners for Review 2020), with the aim to exploit synergies and cross-sectoral benefits and to reduce trade-offs (Bai et al. 2016; Boas, Biermann and Kanie 2016; Liu et al. 2018; Nerini et al. 2019; Nilsson et al. 2018), or even to turn trade-offs into synergies (Kroll, Warchold and Pradhan 2019; Scherer et al. 2018). By 2018, almost all countries reported on interlinkages in their Voluntary National Reports to the High-level Political Forum, referencing the three dimensions of sustainable development as well as interlinkages between Sustainable Development Goals (Partners for Review 2018c). However, there is much less consideration among governments for trade-offs than for synergies between Sustainable Development Goals (UNDESA 2020). In 2019 and 2020, the Voluntary National Reports provided almost no references to specific trade-offs between the goals (Partners for Review 2019b, 2020; Kindornay 2019; see also Kindornay and Gendron 2020).

In addition, the studies that we reviewed diverge in how they assess where integration is taking place. Some see the Sustainable Development Goals as 'an enabler of integration', and 'a common benchmark against which development progress can be assessed' (Le Blanc 2015: 180–2) – thus the focus is on *goal* integration (Biermann, Kanie and Kim 2017; Biermann et al. 2020). Others in contrast emphasize *contextual* integration during implementation (Allen, Metternich and Wiedmann 2018; Bowen et al. 2017; Nilsson et al. 2018; Weitz et al. 2018). This means that goals and targets need to be adapted to and then integrated in their national and sub-national contexts. In the national implementation of the Sustainable Development Goals, not all countries specify interlinkages between goals for their context. Hence, they pursue a general approach to implementation, rather than a specific one that is adapted to the country's context-specific interlinkages between Sustainable Development Goals (Tosun and Leininger 2017). Exceptions include Turkey, which conducted a comprehensive analysis of the synergies and trade-offs, including the nature and level of interlinkages between the Sustainable Development Goals based on Turkey's context. This led to the identification of so-called 'gravity centres' with the highest number of linkages for implementation of Sustainable Development Goals (UNDESA 2019: 16).

Discourses around interlinkages in the 2030 Agenda are not only embodied in academic studies and policy reports, but also in software tools and online platforms. A family of online platforms and tools has emerged, such as the 'SDG Interlinkages Analysis and Visualization Tool' to show synergies and trade-offs between targets for Asian countries, based on correlations between national development indicators (IGES 2019), and the 'KnowSDGs platform', which is a web platform to provide tools and organize knowledge on policies, indicators,

methods and data to support the evidence-based implementation of the Sustainable Development Goals (European Commission 2019). The United Nations Environment Management Group launched a 'Nexus Dialogues Visualization Tool', in which experts assess interactions between Sustainable Development Goals related to global environmental issues (UNEMG 2019). The 'Sustainable Development Goals Synergies' tool of the Stockholm Environment Institute (2020) is designed to guide priority-setting and policy coherence among stakeholders, using cross-impact analysis and a scoring of interactions, as first popularized by the International Science Council (International Science Council 2017; Nilsson et al. 2016).

These tools all emphasize the role of evidence and knowledge as the basis for managing synergies and trade-offs between the goals. Context-specific data, assessment tools and methods are needed to help scientists and policy-makers in analysing goal interlinkages and formulating coherent policy approaches. Such a data-driven approach brings its own challenges, however, because the metrics and scales that are used around the world are difficult to combine and evaluate coherently (Allen, Metternicht and Wiedmann 2018).

Despite these challenges, the methodologies and tools that have been developed in the context of the Sustainable Development Goals – demonstrating their discursive effect – can now help countries to map and manage synergies and trade-offs between issues and advance institutional integration and policy coherence. Pilot uses have led to some institutional integration. For example, the 'SDG Synergies' tool has been officially adopted in Mongolia (Trimmer 2019). As these tools are used more and more across countries, the knowledge on interlinkages will grow and enable comparative studies to examine the steering effects of these tools – and hence the Sustainable Development Goals – in terms of normative and institutional changes.

Conclusions and Future Directions

This chapter took as its starting point the 2030 Agenda's premise, set out in the preamble of the declaration, that its success relies on an integrated approach with consideration to the interlinkages between the Sustainable Development Goals. In particular, we assessed here the state of knowledge about the steering effects of the goals in terms of more policy coherence (normative change), the extent to which the 2030 Agenda has led to institutional integration (institutional change), and widespread attention to interlinkages between the goals (discursive change).

We showed that the Sustainable Development Goals have generated a significant discourse on interlinkages and interactions, visible in academic and grey literatures and in new analytical tools and online platforms. We also observed

examples of measures to advance institutional integration by governments that bring their public administrative systems in line with the 2030 Agenda. This has happened, for example, through coordination by central agencies and through inter-departmental coordination bodies, and, more rarely, through giving parliaments and advisory councils an integrative oversight role.

Yet despite such steps towards institutional integration, policy coherence is still not in view, even though in many countries the goals have been incorporated into development strategies and action plans. This was to be expected due to an assumed sequential relation between the two: institutional integration processes normally need to run their course before policy coherence in outputs and decisions can be observed. However, there is a risk of weakening political interest, as the 2030 Agenda now reaches its mid-term in 2022. There is a risk that waiting for more coherent policies and decisions will continue as time drags.

There are important barriers to institutional integration and policy coherence in the institutional and political context of governments, and these barriers have not disappeared with the 2030 Agenda. Some barriers are deeply rooted in institutions, procedures and routines in the bureaucracy. Yet we have also found at times a lack of political interest from top levels of government and waning ownership of the 2030 Agenda in governments. This can be understood considering the difficulty of 'selling' the 2030 Agenda to the public as well as the issue-attention cycle of politics.

As for remaining knowledge gaps and further research avenues, we note that the conceptualization of interlinkages, integration and coherence and the general understanding of factors, drivers and barriers have been substantially advanced. These advancements have been pursued in academic literature, and many have informed policy and practice as well. However, empirical studies are still few and limited.

To understand better interlinkages, integrated approaches, quantitative modelling, statistics and stakeholder-driven approaches are all likely to make large contributions in the coming years. An unresolved issue is the degree of contextualization that is necessary to define interlinkages and the extent to which empirical relations are valid across contexts. Another important research area is how decision-support tools advance institutional integration and policy coherence for the Sustainable Development Goals.

Regarding institutional integration, the empirical knowledge base is growing but is still mainly found in the grey literature, such as reviews of the Voluntary National Reviews and other international policy reviews. Since such reviews are led by governments, they are not independent and unbiased. More academic research is needed with fine-grained empirical studies. Moving towards a generic classification for further empirical study, institutional integration can be seen as

new architectures or procedures for coordination in policy-making, between national agencies or parts of government. These include the positioning of Sustainable Development Goals in the centre of government or with ministries for finance; the anchoring of the goals in parliaments; the establishment of inter-departmental coordination mechanisms for the goals; and the allocation of roles across multiple agencies in implementation and reporting.

As for policy coherence, the knowledge base is more limited. Here the field suffers from a lack of conceptual clarity and empirical data. Countries and international organizations show some interest in the issue and how they could tackle it, but they are constrained by time lags and the difficulty in empirically studying coherence in terms of policy or development strategy. In future research, policy coherence could be studied as a consequence of integration and as alignment of goals, strategies, policies or implementation at the national level. This could include a focus on cross-references across policies in terms of objectives, mixes of policy instruments and budgets; the mainstreaming of Sustainable Development Goals in national sustainable development planning; or the visibility of the goals in policy bills and national budgets.

Overall, institutional integration and policy coherence are central in both the 2030 Agenda and the implementation of the Sustainable Development Goals by governments. Further research on the barriers to institutional integration and policy coherence, and the entrenched institutional structures and political interests that prevent integration and coherence, are needed to further advance in this area and coherently implement the 2030 Agenda.

Note

1 For detailed discussions on policy coherence and the Sustainable Development Goals, see Bennich, Weitz and Carlsen 2020; Collste, Pedercini and Cornell 2017; Le Blanc 2015; Nilsson, Griggs and Visbeck 2016; Scobie 2019a; Stafford-Smith et al. 2017; Weitz et al. 2018.

References

Abbott, K. W., & Bernstein, S. (2015). The High-level Political Forum on Sustainable Development: Orchestration by default and design. *Global Policy*, 6, 222–33.

Abbott, K. W., & Snidal, D. (2010). International regulation without international government: Improving IO performance through orchestration. *Review of International Organization*, 5, 315–44.

Aftab, W., Siddiqui, F. J., Tasic, H., Perveen, S., Siddiqi, S., & Bhutta, Z. A. (2020). Implementation of health and health-related Sustainable Development Goals: Progress, challenges and opportunities: A systematic literature review. *BMJ Global Health*, *5*, e002273.

Allen, C., Metternicht, G., & Wiedmann, T. (2018). Initial progress in implementing the Sustainable Development Goals (SDGs): A review of evidence from countries. *Sustainability Science*, 13, 1453–67.

Bai, X., Surveyer, A., Elmqvist, T., Gatzweiler, F., Güneralp, B., Parnell, S., . . . Webb, R. (2016). Defining and advancing a systems approach for sustainable cities. *Current Opinion in Environmental Sustainability*, 23, 69–78.

Banerjee, O., Cicowiez, M., Horridge, M., & Vargas, R. (2019). Evaluating synergies and trade-offs in achieving the SDGs of zero hunger and clean water and sanitation: An application of the IEEM Platform to Guatemala. *Ecological Economics*, 161, 280–91.

Beisheim, M., & Bernstein, S. (2020). The High-level Political Forum Review 2020: An opportunity to fulfill the HLPF's mandate. In Friends of Governance for Sustainable Developments (eds.), *Governance for sustainable development, volume 4: Challenges and opportunities for implementing the 2030 Agenda for Sustainable Development* (pp. 138–46). New World Frontiers Publications.

Bennich, T., Weitz, N., & Carlsen, H. (2020). Deciphering the scientific literature on SDG interactions: A review and reading guide. *Science of the Total Environment*, 728, 138405.

Biermann, F., Pattberg, P., van Asselt, H., & Zelli, F. (2009). The fragmentation of global governance architectures: A framework for analysis. *Global Environmental Politics*, 9 (4), 14–40.

Biermann, F. (2014). *Earth system governance. World politics in the Anthropocene*. Cambridge, MA: MIT Press.

Biermann, F., Kanie, N., & Kim, R. E. (2017). Global governance by goal setting: The novel approach of the UN Sustainable Development Goals. *Current Opinion in Environmental Sustainability*, 26–27, 26–31.

Biermann, F., van Driel, M., Vijge, M. J., & Peek, T. (2020). Governance fragmentation. In F. Biermann & R. E. Kim (eds.), *Architectures of earth system governance: Institutional complexity and structural transformation* (pp. 158–80). Cambridge: Cambridge University Press.

Boas, I., Biermann, F., & Kanie, N. (2016). Cross-sectoral strategies in global sustainability governance: Towards a nexus approach. *International Environmental Agreements: Politics, Law and Economics*, 16, 449–464.

Bornemann, B. (2014). *Policy-Integration und Nachhaltigkeit: Integrative Politik in der Nachhaltigkeitsstrategie der deutschen Bundesregierung* (2nd ed.). Wiesbaden: Springer VS.

Bornemann, B., & Weiland, S. (2021). The UN 2030 Agenda and the quest for policy integration: A literature review. *Politics and Governance*, 9 (1), 96–107.

Bowen, K. J., Cradock-Henry, N. A., Koch, F., Patterson, J., Häyhä, T., Vogt, J., & Barbi, F. (2017). Implementing the 'Sustainable Development Goals': Towards addressing three key governance challenges: Collective action, trade-offs, and accountability. *Current Opinion in Environmental Sustainability*, 26–27, 90–6.

Breuer, A., Leininger, J., & Tosun, J. (2019). Integrated policymaking: Choosing an institutional design for implementing the Sustainable Development Goals (SDGs). *Discussion Paper,* No. 14/2019. Bonn: German Development Institute.

Candel, J. J., & Biesbroek, R. (2016). Toward a processual understanding of policy integration. *Policy Sciences*, 49, 211–31.

Collste, D., Pedercini, M., & Cornell, S. E. (2017). Policy coherence to achieve the SDGs: Using integrated simulation models to assess effective policies. *Sustainability Science*, 12, 921–31.

Colombian National Planning Department (2018). *Estrategia Para La Implementación De Los Objetivos De Desarrollo Sostenible (ODS) En Colombia*. Documento Conpes 3918. Available at: https://1library.co/document/z3d1w77y-documento-conpes.html. Accessed: 31 March 2021.

Colombian National Planning Department (2019). *Plan Nacional de Desarrollo 2018–2022. Pacto por Colombia, pacto por la equidad*. Ley 1955/2019. Available at: https://colaboracion.dnp.gov.co/CDT/Prensa/Ley1955-PlanNacionaldeDesarrollo-pacto-por-colombia-pacto-por-la-equidad.pdf. Accessed: 2 July 2021.

Cutter, A. (2016). *Progressing national SDG implementation: Experiences and recommendations from 2016*. London: Bond.

De Coning, C., & Friis, K. (2011). Coherence and coordination: The limits of the comprehensive approach. *Journal of International Peacekeeping*, 15, 243–72.

De Jong, E., & Vijge, M. J. (2021). From Millennium to Sustainable Development Goals: Evolving discourses and their reflection in policy coherence for development. *Earth System Governance*, 7, 1000087.

De Vries, Michiel (2015). *The role of national sustainable development councils in Europe in implementing the UN's Sustainable Development Goals: Overview and conclusions*. Den Haag/Berlin/London: German Council for Sustainable Development (RNE) and EEAC.

De Zoysa, U., Gunawardena, A., & Gunawardena, P. (2020). *Localising the transformation in the new normal: A domestic resource mobilization framework for Sustainable Development Goals in Sri Lanka*. Janathakhan (GTE) Ltd. and Centre for Environment and Development.

Deutsche Gesellschaft für Internationale Zusammenarbeit & World Resources Institute (2018). *Connecting the dots: Elements for a joined-up implementation of the 2030 Agenda and Paris Agreement*. Bonn: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and World Resources Institute (WRI).

European Commission (2019). *KnowSDGs platform*. Available at: https://knowsdgs.jrc.ec.europa.eu. Accessed: 12 September 2020.

European Communities (1997). *Treaty of Amsterdam – Amending the Treaty on European Union, the treaties establishing the European Communities and certain related acts*. Luxembourg: Office for Official Publications of the European Communities.

Forestier, O., & Kim, R. E. (2020). Cherry-picking the Sustainable Development Goals: Goal prioritization by national governments and implications for global governance. *Sustainable Development*, 28, 1269–78.

Government of Jamaica (2018). *Jamaica Voluntary National Review Report on the Implementation of the 2030 Agenda for Sustainable Development June 2018*. Kingston, Jamaica: Planning Institute of Jamaica.

Government of St. Lucia (2019). *Saint Lucia Voluntary National Review Report on the implementation of the 2030 Agenda for Sustainable Development July 2019*. Castries, St. Lucia: Ministry of Education, Gender, Innovation and Sustainable Development.

Hickmann, T., Van Asselt, H., Oberthür, S., Sanderink, L., Widerberg, O., & Zelli, F. (2020). Institutional interlinkages. In F. Biermann & R. E. Kim (eds.), *Architectures of earth system governance: Institutional complexity and structural transformation* (pp. 119–36). Cambridge: Cambridge University Press.

Horan, D. (2020). National baselines for integrated implementation of an environmental Sustainable Development Goal assessed in a new integrated SDG index. *Sustainability*, 12, 6955.

Horn, P., & Grugel, J. (2018). The SDGs in middle-income countries: Setting or serving domestic development agendas? Evidence from Ecuador. *World Development*, 109, 73–84.

Hutton, C. W., Nicholls, R. J., Lázár, A. N., Chapman, A., Schaafsma, M., & Salehin, M. (2018). Potential tradeoffs between the sustainable development goals in coastal Bangladesh. *Sustainability*, 10, 1108.

IGES (2019). *SDG Interlinkages Analysis & Visualisation Tool (V3.0).* Available at: https://sdginterlinkages.iges.jp. Accessed: 12 September 2020.

International Science Council (2017). *A Guide to SDG interactions: From science to implementation*. Paris: International Science Council.

Janetschek, H., Brandi, C., Dzebo, A., & Hackmann, B. (2020). The 2030 Agenda and the Paris Agreement: Voluntary contributions towards thematic policy coherence. *Climate Policy*, 20, 430–42.

Jordan, A., & Lenschow, A. (2010). Environmental policy integration: A state of the art review. *Environmental Policy and Governance*, 20 (3), 147–58.

Kalaba, F. K., Quinn, C. H., & Dougill, A. J. (2014). Policy coherence and interplay between Zambia's forest, energy, agricultural and climate change policies and multilateral environmental agreements. *International Environmental Agreements: Politics, Law and Economics*, 14, 181–98.

Karlsson-Vinkhuyzen, S., Kok, M. T. J., Visseren-Hamakers, I. J., & Termeer, C. J. A. M. (2017). Mainstreaming biodiversity in economic sectors: An analytical framework. *Biological Conservation*, 210, 145–56.

Kim, R. E., Van Asselt, H., Kotzé, L. J., Vijge, M. J., & Biermann, F. (2020). Hierarchization. In F. Biermann & R. E. Kim (eds.), *Architectures of earth system governance: Institutional complexity and structural transformation* (pp. 275–96). Cambridge: Cambridge University Press.

Kindornay, S. (2018). *Progressing national SDGs implementation: An independent assessment of the Voluntary National Review reports submitted to the United Nations High-level Political Forum on Sustainable Development in 2017*. Ottawa: Canadian Council for International Co-operation.

Kindornay, S. (2019). *Progressing national SDGs implementation: An independent assessment of the Voluntary National Review reports submitted to the United Nations High-level Political Forum on Sustainable Development in 2018*. Ottawa: Canadian Council for International Co-operation.

Kindornay, S., & Gendron, R. (2020). *Progressing national SDG implementation: An independent assessment of the Voluntary National Review reports submitted to the United Nations High-level Political Forum on Sustainable Development in 2019*. Ottawa: Canadian Council for International Co-operation.

Koide, R., & Akenji, L. (2017). Assessment of policy integration of sustainable consumption and production into national policies. *Resources*, 6, 48.

Kroll, C., Warchold, A., & Pradhan, P. (2019). Sustainable Development Goals (SDGs): Are we successful in turning trade-offs into synergies? *Palgrave Communications*, 5, 140.

Lafferty, W., & Hovden, E. (2003). Environmental policy integration: Towards an analytical framework. *Environmental Politics*, 12 (3), 1–22.

Le Blanc, D. (2015). Towards integration at last? The Sustainable Development Goals as a network of targets. *Sustainable Development*, 23, 176–87.

Liu, J., Hull, V., Godfray, H., Tilman, D., Gleick, P., Hoff, H., . . . Li, S. (2018). Nexus approaches to global sustainable development. *Nature Sustainability*, 1, 466–76.

Maes, M. J. A., Jones, K. E., Toledano, M. B., & Michigan, B. (2019). Mapping synergies and trade-offs between urban ecosystems and the sustainable development goals. *Environmental Science and Policy*, 93, 181–8.

Makkonen, M., Huttunen, S., Primmer, E., Repo, A., & Hilden, M. (2015). Policy coherence in climate change mitigation: An ecosystem service approach to forests as carbon sinks and bioenergy sources. *Forest Policy and Economics,* 50, 153–62.

Mbanda, V., & Fourie, W. (2020). The 2030 Agenda and coherent national development policy: In dialogue with South African policymakers on policy coherence for Sustainable Development Goals. *Sustainable Development*, 28, 751–8.

Nerini, F. F., Sovacool, B., Hughes, N., Cozzi, L., Cosgrave, E., Howells, M., . . . & Milligan, B. (2019). Connecting climate action with other Sustainable Development Goals. *Nature Sustainability*, 2, 674–80.

Nhamo, L., Ndlela, B., Nhemachena, C., Mabhaudhi, T., Mpandeli, S., & Matchaya, G. (2018). The water–energy–food nexus: Climate risks and opportunities in Southern Africa. *Water*, 10, 567.

Nilsson, M., & Persson, Å. (2003). Framework for analysing environmental policy integration. *Journal of Environmental Policy & Planning*, 5, 333–59.

Nilsson, M., & Persson, Å. (2017). Policy note: Lessons from environmental policy integration for the implementation of the 2030 Agenda. *Environmental Science and Policy*, 78, 36–9.

Nilsson, M., & Weitz, N. (2019). Governing trade-offs and building coherence in policy-making for the 2030 Agenda. *Politics and Governance*, 7 (4), 254–63.

Nilsson, M., Griggs, D., & Visbeck, M. (2016) Policy: Map the interactions between Sustainable Development Goals. *Nature*, 534, 320–2.

Nilsson, M., Zamparutti, T., Petersen, J. E., Nykvist, B., Rudberg, P., & McGuinn, J. (2012). Understanding policy coherence: Analytical framework and examples of sector–environment policy interactions in the EU. *Environmental Policy and Governance*, 22, 395–423.

Nilsson, M., Chisholm, E., Griggs, D., Howeden-Chapman, P., McCollum, D., Messerli, P. . . . Stafford-Smith, M. (2018). Mapping interactions between the Sustainable Development Goals: Lessons learned and ways forward. *Sustainability Science*, 13, 1489–1503.

Oberthür, S., & Gehring, T. (eds.) (2006). *Institutional interaction in global environmental governance: Synergy and conflict among international and EU policies*. Cambridge, MA: MIT Press.

Oberthür, S., & Schram, O. S. (eds.) (2011). *Managing institutional complexity: Regime interplay and global environmental change*. Cambridge, MA: MIT Press.

OECD [Organisation for Economic Co-operation and Development] (2018). *Policy coherence for sustainable development 2018. Toward sustainable and resilient societies*. Paris: OECD Publishing.

Okitasari, M., Sunam, R., Mishra, R., Masuda, H., Morita, K., Takemoto, K., & Kanie, N. (2019). Governance and national implementation of the 2030 Agenda: Lessons from Voluntary National Reviews. *UNU–IAS Policy Brief,* No. 18/2019. Tokyo: United Nations University Institute for the Advanced Study of Sustainability.

Ostrom, E. (2010). Beyond markets and states: Polycentric governance of complex economic systems. *The American Economic Review*, 100, 641–72.

Partners for Review (2017). *Comparative analysis of 43 VNRs submitted to the HLPF 2017*. Bonn: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ).

Partners for Review (2018a). *Tracking progress together: Emerging practices in national SDG review*. Bonn/Eschborn: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ).

Partners for Review (2018b). Discussion paper. *The whole of society approach: Levels of engagement and meaningful participation of different stakeholders in the review process of the 2030 Agenda*. Bonn: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ).

Partners for Review (2018c). *Voluntary National Reviews submitted to the 2018 High-level Political Forum: A comparative analysis.* Bonn: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ).

Partners for Review (2019a). Discussion paper. *The whole of government approach: Initial lessons concerning national coordinating structures for the 2030 Agenda and how review can improve their operation.* Bonn: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ).

Partners for Review (2019b). *Voluntary National Reviews submitted to the 2019 High-level Political Forum for Sustainable Development: A comparative analysis.* Bonn: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ).

Partners for Review (2020). *2020 Voluntary National Reviews: A snapshot of trends in SDG reporting.* Bonn: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ).

Parliament of Sri Lanka (2017). Interim report of the Select Committee of Parliament on the United Nations 2030 Agenda for Sustainable Development. *Parliamentary Series No. 226 of The Eighth Parliament of the Democratic Socialist Republic of Sri Lanka (First Session).* Colombo: Government Publication Bureau.

Persson, Å., & Runhaar, H. (2018). Conclusion: Drawing lessons for environmental policy integration and prospects for future research. *Environmental Science & Policy*, 85, 141–5.

Peters, B. G. (1998). Managing horizontal government: The politics of coordination. *Public Administration*, 76, 295–311.

Peters, B. G. (2015). *Pursuing horizontal management: The politics of public sector coordination.* Lawrence: University Press of Kansas.

Pradhan, P., Costa, L., Rybski, D., Lucht, W., & Kropp, J. P. (2017). A systematic study of Sustainable Development Goal (SDG) interactions. *Earth's Future*, 5, 1169–79.

Runhaar, H., Wilk, B., Persson, Å., Uittenbroek, C., & Wamsler, C. (2018). Mainstreaming climate adaptation: Taking stock about 'what works' from empirical research world-wide. *Regional Environmental Change*, 18, 1201–10.

Scherer, L., Behrens, P., de Koning, A., Heijungs, R., Sprecher, B., & Tukker, A. (2018). Trade-offs between social and environmental Sustainable Development Goals. *Environmental Science & Policy*, 90, 65–72.

Scholz, I., Keijzer, N., & Richerzhagen, C. (2016). Promoting the Sustainable Development Goals in Germany. *Discussion Paper,* No. 13/2016. Bonn: German Development Institute.

Scobie, M. (2016). Policy coherence in climate governance in Caribbean Small Island Developing States. *Environmental Science & Policy,* 58, 16–28.

Scobie, M. (2019a). SIDS and environmental governance in the Anthropocene. In M. Scobie (ed.), *Global environmental governance and small states: Architectures and agency in the Caribbean* (pp. 1–13). Cheltenham: Edward Elgar Publishing.

Scobie, M. (2019b). Sustainable development and climate change adaptation: Goal inter-linkages and the case of SIDS. In C. Klöck & M. Fink (eds.), *Dealing with climate change on small islands: Towards effective and sustainable adaptation* (pp. 101–22). Göttingen: Universitätsverlag Göttingen.

Shawoo, Z., Dzebo, A., Hägele, R., Iacobuta, G., Chan, S., Muhoza, C., . . . Vijge, M. J. (2020). Increasing policy coherence between NDCs and SDGs: A national perspective. *SEI Discussion Brief*, No. March/2020. Stockholm: Stockholm Environment Institute.

Singh, G. G., Cisneros-Montemayor, A. M., Swartz, W., Cheung, W., Guy, J. A., Kenny, T.-A., . . . Ota, Y. (2018) A rapid assessment of co-benefits and trade-offs among Sustainable Development Goals. *Marine Policy*, 93, 223–31.

Smith, H. M., Blackstock, K. L., Wall, G., and Jeffrey, P. (2014). River basin management, development planning, and opportunities for debate around limits to growth. *Journal of Hydrology*, 519, 2624–31.

Stafford-Smith, M., Griggs, D., Gaffney, O., Ullah, F., Reyers, B., Kanie, N., . . . O'Connell, D. (2017). Integration: The key to implementing the Sustainable Development Goals. *Sustainability Science*, 12, 911–19.

Stockholm Environment Institute (2020). *SDG Synergies Tool*. Available at: https://tool .sdgsynergies.org/. Accessed: 10 March 2021.

Stokke, O. S. (2020). Interplay management. In F. Biermann & R. E. Kim (eds.), *Architectures of earth system governance: Institutional complexity and structural transformation* (pp. 207–32). Cambridge: Cambridge University Press.

Tosun, J., & Lang, A. (2017). Policy integration: Mapping the different concepts. *Policy Studies*, 38, 553–70.

Tosun, J., & Leininger, J. (2017). Governing the interlinkages between the Sustainable Development Goals: Approaches to attain policy integration. *Global Challenges*, 1, 1700036.

Trimmer, C. (2019). *Mongolia finds many ways to use SDG Synergies approach*. Available at: www.sei.org/featured/sdg-synergies-mongolia/. Accessed: 31 March 2021.

UNDESA [United Nations Department of Economic and Social Affairs] (2016). *Synthesis of Voluntary National Reviews 2016*. New York, NY: UNDESA Division for Sustainable Development.

UNDESA [United Nations Department of Economic and Social Affairs] (2017). *2017 Voluntary National Reviews: Synthesis report*. New York, NY: UNDESA Division for Sustainable Development.

UNDESA [United Nations Department of Economic and Social Affairs] (2018a). *2018 Voluntary National Reviews: Synthesis report*. New York, NY: UNDESA Division for Sustainable Development.

UNDESA [United Nations Department of Economic and Social Affairs] (2018b). *Working together: Integration, institutions and the Sustainable Development Goals. World Public Sector Report 2018*. New York, NY: UNDESA Division for Public Administration and Development Management.

UNDESA [United Nations Department of Economic and Social Affairs] (2019). *2019 Voluntary National Reviews: Synthesis report*. New York, NY: UNDESA Division for Sustainable Development.

UNDESA [United Nations Department of Economic and Social Affairs] (2020). *2020 Voluntary National Reviews: Synthesis report*. New York, NY: UNDESA Division for Sustainable Development.

UNDESA [United Nations Department of Economic and Social Affairs] (2021). *CEPA Strategy Guidance Note on Promotion of Policy Coherence*. New York, NY: UNDESA Division for Sustainable Development.

UNDG [United Nations Development Group] (2017). *Mainstreaming the 2030 Agenda for Sustainable Development: Reference guide to UN country teams*. New York, NY: UNDG.

UNDP [United Nations Development Programme] (2017a). *Institutional and coordination mechanisms: Guidance Note on Facilitating Integration and Coherence for SDG Implementation*. New York, NY: UNDP.

UNDP [United Nations Development Programme] (2017b). *Rapid Integrated Assessment (RIA). To facilitate mainstreaming of the SDGs into national and local plans*. New York, NY: UNDP.

UNEMG [United Nations Environment Management Group] (2019). *Nexus Dialogues Visualization Tool*. Available at: https://embed.kumu.io/f29ef5c11bd23aa4bb17d5a dec370161#overview/. Accessed: 12 September 2020.

UNGA [United Nations General Assembly] (2015). *Transforming our world: The 2030 Agenda for Sustainable Development*. UN Doc. A/RES/70/1.

Van Asselt, H. (2014). *The fragmentation of global climate governance: Consequences and management of regime interactions.* New Horizons in Environmental and Energy Law series. Cheltenham: Edward Elgar Publishing.

Visseren-Hamakers, I. J. (2015). Integrative environmental governance: Enhancing governance in the era of synergies. *Current Opinion in Environmental Sustainability*, 14, 136–43.

Visseren-Hamakers, I. J. (2018). Integrative governance: The relationships between governance instruments taking center stage. *Environment and Planning C: Politics and Space*, 36, 1341–54.

Weitz, N., Carlsen, H., Nilsson, M., & Skånberg, K. (2018). Towards systemic and contextual priority setting for implementing the 2030 Agenda. *Sustainability Science*, 13, 531–48.

Young, O. R. (1996). Institutional linkages in international society: Polar perspectives. *Global Governance*, 2, 1–24.

Yunita, A., Biermann, F., Kim, R. E., & Vijge, M. J. (2022). The (anti-) politics of policy coherence for sustainable development in the Netherlands: Logic, method, effects. *Geoforum*, 128, 92–102.

Zelli, F., & van Asselt, H. (2013). Introduction: The institutional fragmentation of global environmental governance: Causes, consequences and responses. *Global Environmental Politics*, 13 (3), 1–13.

Zürn, M., & Faude, B. (2013) Commentary: On fragmentation, differentiation and coordination. *Global Environmental Politics*, 13 (3), 119–30.