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Philipp Lange ^a, Peter P.J. Driessen ^{b a}, Alexandra Sauer ^a, Basil Bornemann ^a & Paul Burger ^a

^a Department of Social Sciences, Sustainability Research, University of Basel, Klingelbergstrasse 50, 4056, Basel, Switzerland

^b Faculty of Geosciences, Copernicus Institute of Sustainable Development, Utrecht University, P.O. Box 80115, 3508, TC, Utrecht, The Netherlands
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Governing Towards Sustainability—Conceptualizing Modes of Governance

PHILIPP LANGE*, PETER P.J. DRIESSEN**, ALEXANDRA SAUER*,
BASIL BORNEMANN* & PAUL BURGER*

*Department of Social Sciences, Sustainability Research, University of Basel, Klingelbergstrasse 50, 4056 Basel, Switzerland

**Faculty of Geosciences, Copernicus Institute of Sustainable Development, Utrecht University, P.O. Box 80115, 3508 TC, Utrecht, The Netherlands

ABSTRACT *There is a growing scientific debate regarding the suitability of certain modes of governance for promoting sustainable development (SD). However, thus far there is neither agreement on ways to meaningfully distinguish and understand governance modes nor a foundation of the aspects to be chosen for this endeavour. In order to overcome this conceptual vagueness, this paper presents a meta-framework for a sound conceptualization of governance modes. Founded on a reinterpretation of the discourse 'from government to governance', we argue that only a multi-dimensional approach giving consideration to political processes (politics), institutional structures (polity) and policy content (policy) adequately captures the complexity of governance phenomena. We furthermore highlight possible key features for exploring these dimensions and compare three recently published frameworks for modes of governance. By offering a sound conceptual clarification of governance modes, we facilitate both their meaningful differentiation and a more systematic understanding of their inherent complexity. In so doing, we inform both theoretical and empirical research on governance for SD. We pave the way not only for making more differentiated theoretical statements on the relationship between governance modes and SD but also for empirically exploring this relationship on a profound basis.*

KEY WORDS: Governance of sustainable development, modes of governance, dimensions of governance

1. The Problem: Missing Conceptual Clarity on Modes of Governance

There is a broad consensus within both scholarly and political debates that 'governance' is a pivotal domain for the realization of societal transformation

Correspondence Address: Philipp Lange, Department of Social Sciences, Sustainability Research, University of Basel, Klingelbergstrasse 50, 4056 Basel, Switzerland. Tel.: +41 61 2670428; Email: philipp.lange@unibas.ch

processes towards sustainable development (SD; cf. e.g. Ayre & Callway, 2005; European Commission, 2009). Some authors even consider the lack of sustainability that characterizes prevalent development patterns to be mainly a crisis of governance (Adger & Jordan, 2009; Farrell *et al.*, 2005; Van Zeijl-Rozema *et al.*, 2008). Against this backdrop, it is further argued that governance practices have to be reoriented towards SD. However, it remains an open question on how to govern society in such a way that sustainability is fostered, or as Lafferty (2004, p. 2) puts it: 'what works where, when and how for the promotion of sustainable development?'

'Governance' has emerged as a concept in political science, sustainability science and other fields as a response to the growing awareness that governments are no longer the only relevant actors when it comes to the management of societal issues. Within governance literature it is argued that over the past decades governing has increasingly become a shared responsibility of state, market and civil society (Kooiman, 2003; Pierre & Peters, 2000; Rhodes, 1997; Stoker, 1998). Resulting from these changes in governing, a variety of co-existing modes of governance have emerged within modern societies.

One of the most important questions in the search for suitable governance for SD is which governance mode (or mix of modes) is best suited to promoting SD and therefore ought to be advocated. Assuming specific functional prerequisites of SD, this includes asking which mode of governance best reflects and serves them. However, in order to explore this relationship between governance modes and SD, a differentiated understanding of such modes is needed.

In the effort to distinguish governance modes, some contributions focus on individual aspects such as policy instruments (e.g. Jordan *et al.*, 2005). Although such studies give useful insights, they do not by themselves help to grasp the complexity of governance phenomena. Recently, several authors from the empirical-analytical sustainability governance discourse¹ have made efforts to consider this complexity by including multiple aspects in their analyses of governance arrangements (Arnouts *et al.*, 2012; Driessen *et al.*, 2012; Howlett *et al.*, 2009; Hysing, 2009; Pahl-Wostl, 2009; Tollefson *et al.*, 2008; Van de Meene *et al.*, 2011; Van Leeuwen & Van Tatenhove, 2010; Weber *et al.*, 2011). However, thus far there is neither agreement on ways to meaningfully distinguish and understand governance modes nor a foundation of the aspects to be chosen for this endeavour. Accordingly, Hillman *et al.* (2011, p. 409) concluded that '[p]ast attempts to conceptualize modes of governance have sometimes led to more confusion than clarity [...] Better analytical clarity is needed to arrive at operationalizations useful for empirical research'.

This paper aims to overcome this conceptual vagueness by identifying a substantiated way of approaching modes of governance. Taking into consideration insights from the contributions mentioned above and governance publications at large² we present a meta-framework for a sound conceptualization of governance modes. It builds on systematic reasoning on the dimensions to be incorporated in respective conceptualizations and highlights possible key features for exploring these dimensions. The inherent complexity of governance modes will thereby be revealed as dynamic relations among political processes (*politics*), institutional structures (*polity*) and policy content (*policy*).

The meta-framework serves several purposes. First, it represents a useful analytical instrument for scrutinizing and comparing the potential and limitations of concrete frameworks for governance modes. Second, it provides a sound

conceptual basis for distinguishing modes of governance and understanding their inherent complexity. Third, the meta-framework is intended to support the development of a coherent body of knowledge on governance modes and their relations to SD. On the one hand, it shall inform future theoretical research on governance for SD by offering a more differentiated and comprehensive way to study the relations between governance modes and SD. On the other hand, it serves as a foundation for guiding empirical analysis of real-world modes of governance and their suitability for promoting SD. The better the inherent complexity of such modes is understood, the easier it is to explore their relations to SD in empirical research.

Our argument proceeds in five steps. We start with a short introduction to SD and governance (Section 2). Subsequently, we elaborate the meta-framework for a sound conceptualization of governance modes founded on a reinterpretation of the discourse ‘from government to governance’ (Section 3). Based on this, we scrutinize and compare three frameworks for governance modes from recent literature (Arnouts *et al.*, 2012; Driessen *et al.*, 2012; Hysing, 2009) and deduce desiderata for further work (Section 4). We will then highlight the relevance of our argument for the SD discourse in terms of both theoretical and empirical research (Section 5). Finally, conclusions are drawn and directions for future research are sketched out (Section 6).

2. Sustainability and Governance

Governance of SD can be characterized as ‘processes of socio-political governance oriented towards the attainment of sustainable development’ (Meadowcroft, 2007, p. 299). The field encompasses the joint promotion of societal transformation processes by governments, market actors and civil society. These processes take place on various levels (local to international), affect different policy fields (e.g. energy, housing or the agricultural sector) and refer to multiple temporal scales.

Within academia, the two terms ‘sustainability’ and ‘governance’ serve as bridges among disciplines. The number of publications comprising both notions has grown remarkably over the past decades, indicating the increasing relevance of the field. However, both sustainability and governance are characterized by conceptual ambiguities. Kemp *et al.* (2005, p. 13) argue that ‘neither of these terms is yet mature or clearly defined. Perhaps more importantly, the overlaps between their wider meanings remain understudied’.

The notion of ‘sustainability’ calls for connecting the political goal of global justice and the related discourse on human development with the fact of restricted environmental resources and fragile ecosystems. Sustainability is, at its root, a hybrid term linking normative (intra- and intergenerational justice) with systemic (mechanisms of human–nature interaction or processes in socio-ecological systems) foundations. Moreover, societal deliberation and negotiation also belong to SD alongside justice-related aspects (cf. Burger & Christen, 2011). As a mission statement, SD nowadays represents a role model with nearly universal appeal. Despite this, there are diverging perspectives when it comes to its precise meaning (cf. e.g. Kates *et al.*, 2005). A large discrepancy exists between the intuitive version of the regulative ideal of SD that frames public and political debates and its theoretical conceptualization and operationalization (see in more detail, e.g. Christen & Schmidt, 2011).

When SD is construed as a policy objective, two important characteristics can be identified. First, there is a need to steer a process of deep social transformation requiring action across a variety of temporal, spatial and structural scales. Second, the steering logic exhibits a multi-dimensional character due to uncertain and ambivalent objectives (that might also change over time), the need for a long-term perspective, and consideration of multiple levels, sectors and steering instruments (cf. e.g. Baker, 2009; Meadowcroft, 2007). The pursuit of SD thus represents a paradigm case of what motivated the governance approach in general: the increasingly complex, dynamic and interdependent nature of contemporary policy-making. Accordingly, the concept of SD has triggered the debate on governance, since institutionalizing sustainability has promoted a range of novel governance arrangements.

The notion of 'governance' has become prominent both in scholarly and political debates. In general, it refers to practices through which societies are governed—while governing is usually understood as activities that make a 'purposeful effort to guide, steer, control, or manage sectors or facets of societies' (Kooiman, 1993, p. 2). Traditionally, governing was associated with government (formal institutions of the state), whereas 'governance' emerged as a concept to grasp novel dynamics in governing (cf. e.g. Bevir, 2011; Hajer & Wagenaar, 2003; Pierre, 2000), especially non-hierarchical forms such as network arrangements in which the boundaries between public and private sectors have become blurred (cf. e.g. Bellamy, 2011; H  ritier & Rhodes, 2011). These arrangements are frequently characterized by complex multi-actor interactions across state, market and civil society and occur at multiple levels (cf. e.g. Bache & Flinders, 2004; Hooghe & Marks, 2001).

However, when it comes to its exact meaning, 'governance' is far from being well characterized (cf. e.g. Knill, 2004; Robichau, 2011; Van Kersbergen & Van Waarden, 2004). Scientific and political debates cover a broad range of different understandings and there is not even consensus on the range of phenomena that can be grouped under the term. Against this backdrop, we use the notion in an encompassing sense in two respects. We restrict it neither to non-hierarchical forms nor to a specific dimension of governing. We define 'governance' as a process of—more or less institutionalized—interaction between public and/or private entities ultimately aiming at the realization of collective goals. The particular collective interest in this context is sustainability.

3. Towards a Substantiated Way of Conceptualizing Governance Modes

Quite similar to the notion of 'governance', there is no universally accepted definition of 'modes of governance' (for an overview see, e.g. Homeyer, 2006). Die-drichs *et al.* (2011, p. 1) recently pointed out: 'Still, there is little consensus on what modes of governance exactly are and how far they have changed over recent years' (cf. also Smismans, 2006; Toemmel, 2009). Several authors conceive 'modes of governance' on a highly abstract, aggregated societal level. The term then refers to the three general ideal types 'hierarchy', 'market' and 'network' (e.g. Lowndes & Skelcher, 1998). However, understanding real-world governance arrangements (and their relations to SD) calls for going beyond such abstract types. A more detailed categorical picture is required to understand the conditions for realizing collective goals.

Our first step in the direction of greater clarity is to propose a working definition for 'governance modes'. According to our definition of 'governance' in the prior section, the core objective of governance comes down to realizing collective goals by means of collective action (i.e. coordinated interaction of actors; cf. also Stoker, 1998). Consequently, we define 'modes of governance' as 'forms of realizing collective goals by means of collective action'.

With this definition we understand 'governance modes' as encompassing governance arrangements comprising multiple inherent key features grouped along different dimensions of governance (political processes, institutional structures and policy content, cf. below). Furthermore, we avoid the prominent terminology of 'new' modes of governance as some modes may have historically been relatively new in some sectors but have already been long-established practices in other contexts (see also, e.g. Bäckstrand *et al.*, 2010).

Based on this terminological clarification, we now address the task of conceptualizing governance modes. We proceed in three steps. Since the contemporary variety of governance modes results from multiple and complex changes in governing over the past decades, we systematize the diversity of these changes by asking what has actually changed and in which direction (Section 3.1). Based on this analysis, we develop the basic structure of a meta-framework for a sound conceptualization of governance modes (Section 3.2) and further operationalize this structure (Section 3.3).

3.1 *Reinterpreting the Discourse 'from Government to Governance'*

Within the mainstream (SD) governance literature, the changes in the way society is governed are frequently proclaimed in a very broad manner as a shift 'from government to governance', that is, as a general shift from state-centric to society-centric governance. The inflationary spread of this elusive discourse has contributed to the confusion surrounding 'modes of governance' and has hampered the building of a unified and coherent typology. Below, we will thus scrutinize the discourse by taking a closer look at the direction of the changes in governing and the objects of change.

The frequently cited storyline 'from government to governance' implies that forms of hierarchical governance have increasingly given way to non-hierarchical ones. Accordingly, the mainstream academic debate has presented the changes in governing in a fairly unidirectional way—towards non-hierarchical governance modes (see also Weber *et al.*, 2011). However, there is little empirical evidence supporting this widespread assumption (cf. e.g. Adger & Jordan, 2009; Hysing, 2009; Kjær, 2004; Van Kersbergen & Van Waarden, 2004). Moreover, it remains contested to what extent the developments in governing have impacted the steering capacity of the state. Generally speaking, there is a state-centric and a society-centric viewpoint (for an overview see Bell & Hindmoor, 2009). Some authors regard the developments as signs of a weakening of the state (Rhodes, 1997). Others speak of a shifting role, in which the state's constitutional power is altered towards facilitation and cooperative partnering (Kooiman, 2003). As non-hierarchical governance is frequently embedded in hierarchical structures operating in a 'shadow of hierarchy', it is further argued that the state remains a central actor, especially with respect to legitimacy and accountability (cf. e.g. Boerzel & Risse, 2010).

Moreover, recent empirical research has indeed revealed that the supposed storyline 'from government to governance' is too superficial and represents an

oversimplification disguising the richness of co-existing governance modes (Driessen *et al.*, 2012; Howlett *et al.*, 2009; Hysing, 2009; Jordan *et al.*, 2005; Tollefson *et al.*, 2008; Weber *et al.*, 2011). These studies highlight that changes in governing are frequently not unidirectional but point to bidirectional movements along a continuum between the two opposing extremes of state intervention (traditional hierarchical government control through authoritative allocation of values to society) and societal autonomy (self-organizing networks of co-coordinating societal actors). Also, governance modes could be placed in most cases somewhere along this continuum, rather than at the extreme poles. Along this line, Jordan *et al.* (2005, p. 484) argue that ‘government and governance [...] are actually much more intertwined than is implied by some governance theorists’. Using this terminology, ‘government’ and ‘governance’ thus are not fixed and clearly separated entities but could be interpreted as two poles on a spectrum of different governance forms for realizing collective action.

Hence, instead of understanding the discourse ‘from government to governance’ as a uniform shift towards so-called ‘new modes of governance’, it is rather to be interpreted in terms of multiple shifts between two poles on a continuum of state intervention and societal autonomy. Contemporary real-world governing accordingly displays a plurality of simultaneously co-existing modes of governance resulting from multiple shifts in governing. Yet, the question remains, what these shifts consist in detail.

The storyline ‘from government to governance’ tends to ignore internal differences, especially with regard to which changes in governing it actually entails. It thus neglects the complex and multifaceted nature of real-world governing phenomena. In the words of Howlett *et al.* (2009, p. 384), ‘what makes “new governance” something new and different is not always clear in accounts provided of the “government to governance” shift’.

Distilling the governance literature and the empirical-analytical sustainability governance literature in depth, it becomes apparent that changes in governing have taken place within different dimensions. Examples of changes are shifts in the locus of governance such as novel actors and increasing levels of policy-making, as well as shifts in the focus of governance like changing institutional rules and new policy instruments. These changes have also had an influence on other aspects of governing such as power relations between actors, decision-making structures, the way policy is made, how problems are defined and which solutions are considered legitimate (cf. e.g. Howlett *et al.*, 2009; Pahl-Wostl, 2009; Tollefson *et al.*, 2008; Van de Meene *et al.*, 2011; Van Leeuwen & Van Tatenhove, 2010; Weber *et al.*, 2011).

Altogether, the changes in governing are characterized by many interdependencies. For instance, an increasing participation of non-state actors tends to foster a more pronounced multi-level character of governance processes. These trends in turn provoke new practices of policy-making, challenging the conventional formal ‘rules of the game’ and leading to new (e.g. more informal) institutional rules and types of law and regulations (e.g. soft law and voluntary agreements). Participating actors in any mode of governance are actively involved in shaping the rules and objectives of governing.

3.2 *Basic Structure of the Meta-Framework*

Since the plurality of simultaneously co-existing modes of governance results from multiple and complex changes in governing, a typology of governance

modes has to include all these facets. In order to meet this demand, we therefore capture the changes in governing sketched above, and differences among governance modes, by using the triad of politics, polity and policy (cf. also, e.g. Christou & Simpson, 2009; Kritzinger & Pülzl, 2008; Treib *et al.*, 2007). The *politics dimension* covers the process side of governance and refers to the actors and interaction processes inherent in a mode of governance. The *polity dimension* denotes the structural side of governance understood as the institutional 'rules of the game' that shape the interactions of actors. The *policy dimension* encompasses the content of governance; it refers to policy formulation and implementation and thus to objectives and instruments of political steering towards outputs.

Aside from being able to capture the changes in governing, the choice of these dimensions can be further rationalized as follows. First, according to our working definition of governance modes, all three dimensions are of vital importance since they are all constitutive for realizing collective goals by means of collective action. Since the latter includes political processes, institutional structures and contents (reflecting intended results), a categorical scheme must be able to cover all these aspects. Arguing in a similar way, Hillman *et al.* (2011) characterize governance via the question of 'who governs, how do they govern and what do they govern?' (cf. also Newell *et al.*, 2009). Accordingly, we are critical of specific conceptions of governance that neglect one of the three dimensions such as policy content (e.g. Meuleman & In't Veld, 2010). Second, the triad is an all-embracing approach since all aspects of governing can be classified in one of the three dimensions. As a matter of fact, the dimensions cover all the different facets that are associated with the notion of 'governance' in the literature. While Rhodes (1997), for example, puts his focus on politics, Rosenau (1995) concentrates on polity and Héritier (2002) emphasizes the policy dimension of governance. Accordingly, the triad is not only differentiated and clear but also comprehensive. Third, the triad is well established in political science in general (where it is frequently used to structure the political) and is therefore compatible with approaches studying the political beyond governance literature. Fourth, it is not based on a specific theoretical perspective and can thus be connected to a broad range of different theoretical approaches (such as power- and interest-based, institutional or discourse theories).

Additionally, a satisfactory categorical scheme must be able to address the interdependencies of the different facets of governance as outlined above. Our approach allows for differentiated analyses of the interplay between the three dimensions (cf. also Van Leeuwen & Van Tatenhove, 2010). First, the *polity-politics interlinkage* defines the political playing field. The institutional architecture, for instance, determines the actors and levels involved in governance processes, as well as the division of power resources. The interlinkage is two-sided: On the one hand, politics is embedded in the polity. On the other hand, changes within the political arena can provoke alterations in the 'rules of the game'. Second, the *polity-policy interlinkage* determines the institutional setting of policy formulation and implementation. Polity represents the rules and procedures through which policy-making is performed. Again, there is a two-sided relationship since variation in the policy process can lead to change in the institutional setting and vice versa. Finally, the *politics-policy interlinkage* denotes, for example, the potential of state and non-state actors in a governance arrangement to actively participate in policy-making (for a concrete operationalization of the interlinkages see Van Leeuwen & Van Tatenhove, 2010).

Due to their interconnected nature, changes in one of the three dimensions almost certainly result in alterations within the other two.

By means of the three dimensions the discourse 'from government to governance' can thus be specified in terms of the objects of change. Instead of regarding governance changes as one-dimensional shifts, they now appear as a consequence of complex and variable relations between political processes, institutional structures and policy content. While the standard discourse implies that governing evenly shifts away from hierarchical to non-hierarchical modes within all three dimensions of politics, polity and policy without actually differentiating among these, it should be considered that changes among governance modes can be a good deal more complicated. Variations of differing magnitudes and directions occur within the three dimensions. The contemporary plurality of governance modes in turn results from these variations.

The basic structure of our meta-framework not only incorporates all three dimensions of politics, polity and policy but also acknowledges their interdependencies, thus capturing the complexity of governance. In the following section, we further operationalize this structure by specifying the three dimensions.

3.3 Specification of the Meta-Framework

In the preceding paragraph, we have already indicated that the dimensions of politics, polity and policy embrace multiple aspects and have highlighted some of these. However, we have not elaborated on each dimension in detail. We will do so now by distilling the broader literature that addresses the dimensions individually, as well as (SD) governance literature.

In the *politics dimension*, relevant aspects are the specific relationships of state and non-state actors during the initiation and coordination process of a governance arrangement, as well as the distinctive usage of power and dependence on resources: How are divergent preferences translated into policy choices and how are different social interests transformed into collective action? (cf. e.g. Kickert *et al.*, 1997; Stoker, 2006). Within (SD) governance literature, most of the contributions propose a single key feature that can be assigned to the politics dimension to distinguish governance arrangements. Howlett *et al.* (2009), for instance, use the factor of the locus of power, that is, whether political power favors state or non-state actors, determining their relative strengths. Treib *et al.* (2011) propose a more encompassing distinguishing factor, the 'forms of interest intermediation', understood as the way in which societal interests are taken into consideration within the process of policy-making (cf. also Kritzing & Pölzl, 2008). This leads to four general systems of interest intermediation: statism, pluralism, corporatism and network governance (see in more detail, e.g. Kohler-Koch, 1999).

Within the *polity dimension*, relevant aspects are the institutions, norms and procedural settings, that is, the institutional architecture in which politics and policy-making take place, as well as the prevalent interaction patterns among participating actors on multiple policy levels.³ Accordingly, the institutional embedding of governance is usually characterized as a system of formal and informal 'rules of the game' shaping the patterns of interaction among involved actors (cf. e.g. North, 1990; Ostrom, 2005; Scott, 2001). Within (SD) governance literature, the most prominent feature used to distinguish governance arrangements that can be assigned to the polity dimension is the degree of formality regarding relevant institutions (cf. e.g. Howlett *et al.*, 2009; Pahl-Wostl, 2009).

In general, formal institutions are associated with official channels of governments, and informal institutions encompass social or cultural norms that are implemented devoid of legally sanctioned channels. Treib *et al.* (2011) propose a more comprehensive approach comprising the institutional form, the structure and the degree of formal institutionalization. Following Mayntz and Scharpf (1995) they distinguish four 'modes of interaction': hierarchical direction, majority vote, negotiated agreement and unilateral action. Hillman *et al.* (2011), furthermore, highlight the feature of the predominant institutional level at which involved actors interact, ranging from international, through national and regional down to local.

Finally, the *policy dimension* refers to objectives and forms of political steering. It denotes the formulation of policy problems, as well as the implementation of strategies and policy instruments to realize specific goals. This dimension thus also includes aspects like policy integration, as well as policy knowledge and learning (cf. e.g. Fiorino, 2006; Gunningham & Grabosky, 1998; Hill, 2005; Jordan & Lenschow 2008). The most predominant policy feature that is discussed within (SD) governance literature to distinguish governance arrangements is the nature of regulation deployed in policy implementation (cf. e.g. Tollefson *et al.*, 2008). As mentioned above, some governance analyses also particularly scrutinize the steering instruments used in certain policy domains to elaborate the development of governance modes in general. The steering tools vary, for instance, in terms of hard versus soft law for the achievement of specific policy goals. Different typologies of instruments can be found within the literature—cf., for example, the classification of regulative, economic and communicative instruments (e.g. Glasbergen, 1992) or coercion, voluntarism, targeting and framework regulation (e.g. Treib *et al.*, 2007).

In this overview, we have presented possible key features that can be used within each dimension to distinguish among modes of governance in detail. The question of which features should ultimately be selected cannot be answered *a priori* but only on theoretical and/or empirical grounds taking into account the particular research question of interest. In the first respect, normative requirements or the specific theoretical perspective from which research is undertaken determine the selection. In the latter respect, empirical fertility and context adequacy function as a touchstone. In any case, the rationale for choosing certain features ought to be explicitly disclosed.

A simplified illustration of the meta-framework as elaborated in section 3 is presented in Figure 1.

4. Frameworks for Governance Modes

Based on the insights of the previous section, we will now compare three concrete frameworks for governance modes recently offered within the literature. To our knowledge these are the only ones that aspire to meaningfully distinguish among modes of governance as they are conceived in this paper, that is, extending over different dimensions of governance.⁴ Our aim is to determine to what extent these frameworks correspond with our meta-framework. After presenting the key elements of the three approaches, we highlight the similarities and differences and point out respective desiderata for future work.

The first framework under scrutiny has been developed by Arnouts *et al.* (2012), who follow Kooiman's (2003) distinction of hierarchical, co- and

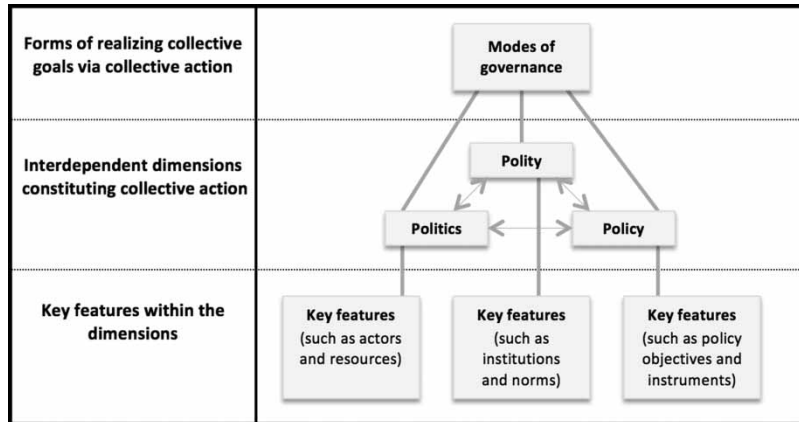


Figure 1. Meta-framework for conceptualizing governance modes.

self-governance. These three ideal-typical governance modes differ from each other in the extent to which state and non-state actors are involved. Referring to the variety of ways in which these actors can cooperate, the authors further elaborate the mode of co-governance into closed co-governance and open co-governance (the former describing a more restricted, structured and fixed form and the latter a more flexible and autonomous form of co-governing). This results in a differentiation of four modes of governance that form a continuum. Arnouts *et al.* then refine their modes via the so-called ‘policy arrangement approach’ (see, e.g. Arts *et al.*, 2006). This leads to an operationalization in terms of an actor, a power and a rule dimension (Table 1).

Within their *actor dimension*, the authors distinguish between state and non-state actors and look at the coalitions that are visible among such actors. Within the *power dimension*, they focus on the key feature of the relative power of state and non-state actors vis-à-vis each other. Here, the authors propose exploring the means that constitute the capacity of actors, as well as the extent to which the actors use this potential. Within the *rule dimension* that sketches a certain role division among the actors, the proposed aspects to be investigated are two types of interaction rules: access rules (referring to which actors are allowed to take part in a governance arrangement) and responsibility rules (determining the division of responsibilities among the involved actors; cf. also Arnouts, 2010).

Table 1. Ideal-typical governance modes according to Arnouts *et al.* (2012)

	Hierarchical governance	Closed co-governance	Open co-governance	Self-governance
Actors	Mainly governmental actors	Select mixed group of actors	Large mixed group of actors	Mainly non-governmental actors
Power	With government	Pooled	Diffused	With non-government
Rules	Governmental coercion	Restricted cooperation	Flexible collaboration	Non-governmental forerunning

The second framework is provided by Hysing (2009). He uses the intensity of state involvement as the distinguishing factor to place different governance modes along a continuum from direct state intervention to societal autonomy (cf. also Hysing, 2010). The modes are further differentiated by means of three dimensions that Hysing deduces by distilling the broader governance literature (Table 2).

The first dimension is concerned with the *relationship between public and private actors*. While modes of governance closer to the state-centred side of the continuum are characterized by mono-centric, hierarchically organized political institutions as the prime governors of society, modes near to the society-centred side feature networks of self-governing private and voluntary actors. The second dimension concerns the relations between *policy levels*. Here, the continuum ranges from governance modes where the level of nation state is the central locus of authority to modes that are characterized by actors and institutions operating on multiple policy levels autonomously from the state. Finally, the third dimension highlights *governing instruments and styles* ranging from the exercise of sovereign rule by central governments as the primary governing mechanism to soft policy steering tools like information and voluntary instruments.

The third framework is offered by Driessen *et al.* (2012). Within this approach, five ideal-typical modes of governance are mapped on a continuum referring to the extent of state and non-state actor involvement. The scheme distinguishes forms where public actors are the main protagonists (subdivided in a centralized and decentralized mode), forms of public–private interactions ('public–private governance' and 'interactive governance'), as well as arrangements where primarily private actors participate ('self-governance'). These five ideal types are further refined by a distinction of the three dimensions of actor base, institutional features and features concerning content (Table 3).

Within the *actor dimension*, the following key features are proposed: the key actors that initiate action, the position of other stakeholders, the predominant policy level, as well as the power base of the key actors. Within the *institutional dimension*, the model of representation, the rules of exchange and interaction, as well as the mechanisms of social interaction are explored. Finally, with regard to *content*, the following features are studied: the types of goals that are pursued, the policy instruments used, the extent to which policies are integrated or not, as well as the type of knowledge that is used for policy-making. Driessen *et al.* have deduced these key features together with their framing dimensions by distilling governance literature in general.

Clearly, all three frameworks share the same starting point: the degree of state and non-state actor's participation in governing. In general, governance modes where public actors are predominant are differentiated from modes characterized by public–private interaction and private actor dominated modes. Within this continuum different ideal-typical governance modes are located. However, instead of choosing the degree of public and private actor involvement as a major distinguishing factor (which could be assigned to the politics dimension), it would also be conceivable to arrange governance modes by means of key features from the polity or policy dimension (e.g. according to policy instruments used). In principle, aspects within any of the three dimensions could serve as a starting point for classifying modes of governance.

Furthermore, all authors highlight that a nuanced picture is needed to capture the variety of phenomena governance is concerned with. Accordingly, they all

Table 2. Ideal-typical governance modes according to Hysing (2009)

Dimensions	State intervention					Societal autonomy
Public–private relationships	Hierarchic relationship	Institutionalized public-private relations (state domination)	Facilitation and enabling of networks	Mutual dependency of networks between private and public actors		Private self-governing
Policy levels	National state governing	Delegation of authority and responsibility to other levels	Gatekeeping (governing in implementation)	Multilevel governance (circumventing the national level)		Governing by a global civil society
Governing instruments and styles	Command and control (legal sanctions)	Incentive-based instruments (taxes and grants)	Delegated public functions	Information instruments		Voluntary instruments (agreements and labelling)

Table 3. Ideal-typical governance modes according to Driessen *et al.* (2012); S = central state; s = decentralized state; M = market; CS = civil society; -> = dominant role; < - > = equivalent role; - - - = background role

	Centralized governance 	Decentralized governance 	Public-private governance 	Interactive governance 	Self-governance 
<i>Actor features</i>					
Initiating actors	Central gov't agencies (or supra national bodies)	Gov't at its various levels of aggregation (subsidiarity)	Central gov't agencies; private sector is granted a preconditioned role also	Multiple actors: gov't, private sector and civil society	Private sector and/or civil society
Stakeholder position	Stakeholder autonomy determined by principal agency	High likelihood of stakeholder involvement	Autonomy of market stakeholders within predetermined boundaries	Equal roles for all network partners	Self-governing entities determine the involvement of other stakeholders
Policy level	(Supra) national level	Lower levels of gov't	Local to international level	Multiple levels	Local to international level
Power base	Coercion, authority and legitimacy (democratic representation at the national level)	Coercion, authority and legitimacy (democratic representation at lower levels)	Competitiveness (prices), contracts and legal recourse, legitimacy (agreement on relations and procedures)	Legitimacy (agreement on roles, positions, procedures and process), trust, knowledge	Autonomy, leadership, group size, social capital and legitimacy (agreement on relations and procedures)
<i>Institutional features</i>					
Model of representation	Pluralist (popular (supra) national election and lobbying)	Pluralist (popular local election and lobbying)	Corporatist (formalized public-private governing arrangements)	Partnership (Participatory public-private governing arrangements)	Partnership (Participatory private-private governing arrangements)
Rules of interaction	Formal rules (rule of law, fixed and clear procedures)	Formal rules (rule of law, fixed and clear procedures)	Formal and informal exchange rules	Institutions in its broadest form (Formal and informal rules)	Informal rules (norms, culture), Self-crafted (non-imposed) formal rules

(Continued)

Table 3. Continued

	Centralized governance	Decentralized governance	Public–private governance	Interactive governance	Self-governance
					
Mechanisms of social interaction	Top-down, command-and-control	Sub-national governments decide autonomously about collaborations within top-down determined boundaries	Private actors decide autonomously about collaborations within top-down determined boundaries	Interactive: social learning, deliberations and negotiations	Bottom-up: social learning, deliberations and negotiations
<i>Features concerning content</i>					
Goals and targets	Uniform goals and targets	Uniform and level specific goals and targets	Uniform goals, targets actor specific	Tailor-made and integrated goals and targets	Tailor-made goals and targets
Instruments	Legislations, permits, norms and standards	Public covenants and performance contracts	Incentive based instruments like taxes and grants, performance contracts	Negotiated agreements, trading mechanisms, covenants and entitlements	Voluntary instruments, private contracts, entitlements, labelling and reporting
Policy Integration	Sectorial (policy sectors and levels separated)	Sectorial (policy sectors separated)	Sectorial (branches and industries separated)	Integrated (policy sectors and policy levels integrated)	Sectorial to integrated (depends on problem framing by communities of interest)
Policy-science interface	Primacy of generic, expert knowledge	Primacy of generic expert knowledge. Room for issue and time- and place-specific knowledge	Dominance of issue and time- and place-specific knowledge, expert and lay (procedures and consumers)	Transdisciplinarity: expert and lay knowledge in networks. Emphasis on integrated and time- and place-specific knowledge	Dominance of issue and time- and place-specific: expert and lay (citizens)

operationalize governance modes with the help of distinct dimensions. Yet, the rationale for choosing the respective dimensions is not explicitly demonstrated. Using our dimensions of politics, polity and policy to compare the frameworks, it becomes apparent that elements from all dimensions can be found among them. However, the authors emphasize different dimensions. Arnouts *et al.* focus on the politics and polity dimension and neglect the policy dimension, arguing that governance is mainly an organizational matter (cf. also Arnouts, 2010). This exclusion stands in contrast to the approach we argue for in this paper. We hold that the policy dimension should be considered as part of governance modes because it is constitutive for realizing collective action. In line with this, both Hysing and Driessen *et al.* incorporate this dimension in their approaches. Within Hysing's scheme, however, the polity dimension is neglected. Only within the framework of Driessen *et al.* are all three dimensions of politics, polity and policy represented. Accordingly, this operationalization is consistent with our argument in Section 3.

In terms of key features used to distinguish among governance modes in detail, both Arnouts *et al.* and Hysing use a single feature per dimension. Driessen *et al.*, in contrast, use a range of features inside each of the dimensions (Tables 1–3). They also add features that are hitherto discussed to a lesser extent within (SD) governance literature (such as the policy-science interface within the policy dimension). However, none of the authors explicitly justify why they consider the specific features chosen in their schemes. As we have argued above, the rationale for the choice of features should be explicitly demonstrated in future work depending on the research question of interest. Also, the potential and limitations that go along with the selection of certain features should specifically be revealed. Moreover, an expansion, as well as a reduction in terms of key features might be necessary with respect to all three presented schemes, for example, if empirical testing should reveal that certain aspects are underrepresented or negligible. Although all of the frameworks have indeed been applied in empirical research that has proven their respective value for analyzing governance modes, further empirical scrutiny is required (cf. Arnouts *et al.*, 2012; Driessen *et al.*, 2012; Hysing, 2009).

Furthermore, we particularly want to stress that a clear distinction has to be made between ideal-typical governance modes and complex real-world modes. The latter could well be hybrids, that is, mixes of different archetypical modes combining features of each other. The grouping of theoretical ideal types has the virtue of providing a standard against which real-world systems can be compared. However, as it is unlikely that empirical modes generally match these ideal types, they must not be seen as fixed and inflexible.

In line with this, the *a priori* fixed connection between key features from different dimensions within a certain governance mode should be approached with caution. Some features might go hand-in-hand as they are functionally related to each other. For instance, modes of governance that depend on the exercise of sovereign authority by states tend to involve vertical relations and a formal governing structure based on institutionalized and hierarchical interactions. Conversely, governance modes where governments play a minor role are likely to be characterized by politics across state-market-civil society domains in which horizontal relations among the actors (who share power and act in a more cooperative way) are predominant. This relationship rests on an informal polity and a network structure that is based on resource interdependency and trust. However, even in terms of these key features, a simple generalization does not do justice to the

variety and complexity of governance modes. This becomes more apparent with regard to the clustering of features that are not as closely connected. For instance, it is not as clear that a specific actor model necessarily entails a certain set of steering tools (see also Hillman *et al.*, 2011). Hence, we conclude that a certain governance mode at one point in time might contain key features that are usually associated with another mode. We therefore suggest that conceptualizing governance modes by means of dimensional instead of ideal-typical approaches should be considered in further work.

5. Relevance for the SD Discourse

Having disclosed the usefulness of our meta-framework as an analytic instrument, we will now show its relevance for the SD discourse. Generally speaking, 'modes of governance' are the central issue of debate when it comes to the question of how to govern society in a way that fosters SD. This can be studied by means of theoretical and empirical approaches, while ideally the two should be combined. As our paper claims to inform both, we will specify its impact on theoretical and empirical research in the following section.

5.1 *Implications for Theoretical Research*

Important theoretical issues regarding suitable governance for SD can be exposed by referring to the classical 'form-follows-function' debate. As governance is never established in a societal vacuum, 'forms' of governance tend to reflect the dominant 'functions' of the system to be governed (e.g. basic values and goals or interests of actors). Applying this logic of functional interdependence to the realm of SD, a fundamental argument arises, as introduced by Lafferty (2004). In order to be effective, governance for SD requires an adjustment of the 'form' of governance according to stipulated SD 'functions', that is, the 'form' of governance has to reflect and serve the functional prerequisites of SD.

Following a similar line of argument, several normative principles for improving governance for SD have been formulated (see, e.g. OECD, 2002; Steurer, 2010). Moreover, within the sustainability governance literature we can find various claims on the suitability of certain governance modes for fostering SD. According to the mainstream normative literature, the promotion of SD especially calls for collaborative, deliberative and polycentric governance modes (frequently labelled as 'new' modes) that emphasize partnership among multiple actors and relations among various policy levels. These modes are regarded as being able to handle the complex, multi-scale, cross-sectoral and long-term temporal aspects of SD in a more adequate manner than hierarchical ones. Commonly mentioned key terms associated with suitable sustainability governance are reflexivity, participation, adaptability and social learning processes (cf. e.g. Biermann, 2007; Dedeurwaerdere, 2005; Kemp *et al.*, 2005; Meadowcroft, 2007; Shirayama *et al.*, 2012; Voss *et al.*, 2007). Scholars argue that in the light of uncertainty, ambivalence about goals and distributed power, governance for SD should be a reflexive and interactive process of dialogue (Loorbach, 2010; Voss *et al.*, 2006). However, Meadowcroft (2011, p. 5) states that 'while one can't make progress towards sustainability without new governance mechanisms, there is also a critical place for good old-fashioned [...] state action'. Huh (2011), accordingly, speaks of a new configuration among state, market and civil

society that is indispensable for the realization of SD. In line with this, Baker (2009) calls for a situational mixture of networked, market and hierarchical forms of governance (cf. also, e.g. Meuleman & In't Veld, 2010).

Our meta-framework supplements the 'form-follows-function' argument by providing greater analytic clarification. The framework allows for developing a more differentiated picture of what a suitable form of governance for SD might look like since it draws attention to the three constitutive and interdependent dimensions of governance. Questions regarding the concrete design of the politics, polity and policy dimension, including their relationships, can then be addressed: Which designs of key features among political processes, institutional structures and policy content are detrimental to SD and how should the dimensions develop in order to foster SD? While the politics dimension thereby addresses issues such as the appropriate representation of interests, the polity dimension, for example, raises questions of a suitable form of democracy for SD. Finally, the policy dimension touches on issues of suitable policy integration and the appropriate use of knowledge. Hence, our meta-framework allows for explicating suitable governance for SD in a more differentiated and comprehensive way. This will ultimately provide a differentiated theoretical basis for the empirical assessment of governance modes with regard to SD.

5.2 *Implications for Empirical Research*

According to the literature referred to in the previous paragraphs, there are various normative claims on the merits of certain governance modes with regard to SD. However, there is a lack of reliable empirical evidence for these claims (cf. e.g. Adger & Jordan, 2009; Griffin, 2010; Koontz & Thomas, 2006; Newig & Fritsch, 2009). Our meta-framework—together with the options suggested by the three frameworks discussed above—provides a profound conceptual basis for guiding empirical research. It facilitates a meaningful differentiation of real-world governance modes and an understanding of their inherent complexity (disclosed by the interplay of the politics, polity and policy dimension). This paves the way for scrutinizing the merits of certain governance modes with respect to SD.

Crucial for this endeavour would be, without doubt, capturing the outcomes of governance, that is, the effects on environmental and socio-economic conditions characterizing the actual contribution to SD in practice. Current thinking in sustainability governance literature clearly reflects the corresponding background assumption that the form of governance matters for its outcomes. Yet, studies exploring linkages between governance modes and (un)sustainable outcomes are rare. Griffin (2010, p. 366) points to that knowledge gap in noticing that 'many governance and sustainability scholars have argued that governance work is short on studies that assess the sustainability potential along with the actual outcomes'. Accordingly, Adger and Jordan (2009, p. 20) demand with regard to SD that 'we need to know what forms of governing lead to what sorts of outcomes'.

However, when the notion of SD is taken seriously in its broad societal meaning, the direct sustainability assessment of (macro-level) governance outcomes represents an enormously ambitious undertaking. SD represents a complex challenge with a multitude of interdependencies and calls for considering numerous environmental and socio-economic goals in different sectors across

multiple temporal scales. Assessing sustainability thus means more than evaluating environmental effectiveness. Empirically revealing (un)sustainable outcomes in a comprehensive fashion accordingly raises notable research challenges, particularly with regard to data availability, long time horizons and multiple interacting variables (see also, e.g. Koontz & Thomas, 2006).

We argue though, that there is an alternative to exploring outcomes directly, namely investigating governance outputs and their impacts (goals actors agreed on and their according collective actions) in order to derive insights on (un)sustainable outcomes. More precisely, we argue that the sustainability potential of governance modes can be empirically explored as follows. A governance mode must fulfill two requirements in order to contribute to SD: (i) its content has to be consistent with the goals coming from the pursuit of SD, that is, reflecting the functional and normative prerequisites of SD; and (ii) some form of transformative collective action must be induced (like changes in infrastructure management or consumer behaviour), as only then does governance have an actual influence on sustainability in practice.

Exploring these two features, one can scrutinize whether certain modes of governance are generally better suited to *lead* to sustainable outcomes. Whereas directly exploring outcomes provokes the aforementioned difficulties, our meta-framework facilitates analyzing governance outputs and their impacts as characterized above since it discloses the interactions of political processes, institutional structures and policy content. Consequently, the framework is not only generally suited to study governance phenomena but also particularly well suited as a basis for empirically scrutinizing the relationship between governance modes and SD.

6. Conclusions and Aspects for Further Research

The lively debate on how to govern societies toward more sustainable tracks reflects the demand for suitable SD governance and for understanding which mode of governance (or mix of modes) is best suited for promoting SD. However, so far no agreement on ways to meaningfully distinguish and understand such modes has been achieved. Moreover, no foundation of the aspects to be chosen for this endeavour has been established. We argued for filling this gap by developing a meta-framework as a rationale for a sound conceptualization of governance modes.

To achieve this goal, we first identified requirements for such a framework by reconsidering the discourse 'from government to governance' along the two axes of direction and objects of changes. Thereby, we were confronted with the task of finding a comprehensive approach that captures the diversity of changes in governing and allows the detection of interdependencies among them. As we demonstrated above, the triad of politics, polity and policy meets these demands. Since all three dimensions are constitutive for realizing collective goals via collective action (i.e. governance) they provide the basic structure of our meta-framework. Further specified by key features, the meta-framework offers a sound conceptual basis for differentiating modes of governance and understanding their inherent complexity in terms of dynamic relations among political processes, institutional structures and policy content.

We have demonstrated the potential of the meta-framework as an analytic instrument by comparing three recently published frameworks for modes of governance. Our analysis shows that the frameworks have similarities but that different dimensions and key features are emphasized. This implies that they have

distinctive potentials and limitations. Concerning their respective usefulness, empirical fertility and context adequacy should serve as criteria revealing the assets and limitations of approaches exhibiting varying complexity.

However, there are still several open theoretical questions to be addressed. We particularly stress the following ones: First, the difference between theoretical ideal types and real-world governance modes should be made more explicit, emphasizing the potential hybridity of the latter. In line with this, the *a priori* connection between key features from different dimensions within a certain governance mode should be further questioned. Second, the question of which key features are ultimately chosen within each dimension to distinguish among governance modes in detail should be given special consideration. We presented a spectrum of relevant features and highlighted possible options for their selection. We further argued that the rationale behind the choice of features should be explicated. Third, normative and functional implications of SD regarding the concrete design of the features within the dimensions, as well as their relationships, have to be seriously discussed. This paves the way for a more differentiated and comprehensive picture of suitable forms of governance for SD and thus contributes to the 'form-follows-function' debate.

Notwithstanding these open theoretical questions, we argue that the focus of future research—especially regarding SD—should be on a better empirical understanding of governance modes. Empirical research will not only inform the theoretical debate but will also help to address further questions such as when, why and how governance changes, that is, to identify and explain shifts among modes of governance (see, e.g. Arnouts *et al.*, 2012; Driessen *et al.*, 2012). Regarding the endeavour of empirically scrutinizing the relationship between governance modes and SD, we suggest exploring governance outputs and their impacts to derive insights on (un)sustainable outcomes. By offering a sound conceptual clarification of governance modes, this paper provides the basis for this endeavour and further work on governance for SD.

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Notes

1. Like governance literature in general, literature on sustainability governance can be distinguished according to whether it is oriented towards normative or empirical-analytical contributions.
2. This is in line with Jordan (2008), who argued that it would be mutually beneficial if the broader governance literature and SD governance literature engaged in a deeper manner.
3. In terms of the predominant institutional level and the interaction patterns among actors, there is a certain interference with the politics dimension. Depending on the point of view, these features thus could be assigned to this dimension as well.
4. Frameworks that perceive governance modes at a general societal level or elaborate modes within the dimensions of politics, polity and policy separately (Treib *et al.*, 2007) are not taken into account.

References

- Adger, W. N. & Jordan, A. J. (Eds) (2009) *Governing Sustainability* (Cambridge: Cambridge University Press).
- Arnouts, R. (2010) *Regional Nature Governance in the Netherlands: Four Decades of Governance Modes and Shifts in the Utrechtse Heuvelrug and Midden-Brabant* (Wageningen: Wageningen University).
- Arnouts, R., Van der Zouwen, M. & Arts, B. (2012) Analysing governance modes and shifts – Governance arrangements in Dutch nature policy, *Forest Policy and Economics*, 16, pp. 43–50. doi:10.1016/j.forpol.2011.04.001
- Arts, B., Leroy, P. & Van Tatenhove, J. P. M. (2006) Political modernisation and policy arrangements: A framework for understanding environmental policy change, *Public Organization Review*, 6, pp. 93–106. doi:10.1007/s11115-006-0001-4
- Ayre, G. & Callway, R. (Eds) (2005) *Governance for Sustainable Development* (London: Earthscan).
- Bache, I. & Flinders, M. (Eds) (2004) *Multi-Level Governance* (Oxford: Oxford University Press).
- Bäckstrand, K., Khan, J., Kronsell, A. & Lövbrand, E. (Eds) (2010) *Environmental Politics and Deliberative Democracy: Examining the Promise of New Modes of Governance* (Cheltenham: Edward Elgar Publishing Ltd).
- Baker, S. (2009) In Pursuit of Sustainable Development: A Governance Perspective. *8th International Conference of the European Society for Ecological Economics*, Conference Proceedings, Ljubljana, Slovenia.
- Bell, S. & Hindmoor, A. (2009) *Rethinking Governance: The Centrality of the State in Modern Society* (Cambridge: Cambridge University Press).
- Bellamy, R. (2011) Symposium on democracy and new modes of governance, *Government and Opposition*, 46, pp. 56–57. doi:10.1111/j.1477-7053.2010.01329.x
- Bevir, M. (Ed.) (2011) *The Sage Handbook of Governance* (Thousand Oaks, CA: Sage).
- Biermann, F. (2007) Earth system governance as a crosscutting theme of global change research, *Global Environmental Change*, 17, pp. 326–337. doi:10.1016/j.gloenvcha.2006.11.010
- Boerzel, T. A. & Risse, T. (2010) Governance without a state: Can it work? *Regulation & Governance*, 4, pp. 113–134. doi:10.1111/j.1748-5991.2010.01076.x
- Burger, P. & Christen, M. (2011) Towards a capability approach of sustainability, *Journal of Cleaner Production*, 19, pp. 787–795. doi:10.1016/j.jclepro.2010.06.019
- Christen, M. & Schmidt, S. (2011) A Formal Framework for Conceptions of Sustainability – A Theoretical Contribution to the Discourse in Sustainable Development, Sustainable Development. Advance online publication. doi:10.1002/sd.518
- Christou, G. & Simpson, S. (2009) New governance, the internet, and country code top-level domains in Europe, *Governance*, 22, pp. 599–624. doi:10.1111/j.1468-0491.2009.01455.x
- Dedeurwaerdere, T. (2005) The contribution of network governance to sustainable development, *Les séminaires de l'IDDRI*, 13, pp. 1–15.
- Diedrichs, U., Reiners, W. & Wessels, W. (Eds) (2011) The dynamics of change in EU governance, *The Dynamics of Change in EU Governance*, pp. 1–21 (Cheltenham: Edward Elgar).
- Driessen, P. P. J., Dieperink, C., Van Laerhoven, F., Runhaar, H. A. C. & Vermeulen, W. J. V. (2012) Towards a conceptual framework for The study of shifts in modes of environmental governance – experiences from The Netherlands, *Environmental Policy and Governance*, 22, pp. 143–160. doi:10.1002/eet.1580
- European Commission (2009) *Mainstreaming Sustainable Development into EU Policies: 2009 Review of the EU Strategy for Sustainable Development*. COM (2009) 400 final (Brussels: European Commission).
- Farrell, K., Kemp, R., Hinterberger, F., Rammel, C. & Ziegler, R. (2005) From *for* to governance for sustainable development in Europe: What is at stake for further research, *International Journal of Sustainable Development*, 8, pp. 127–150.
- Fiorino, D. J. (2006) *The New Environmental Regulation* (Cambridge: MIT Press).
- Glasbergen, P. (1992) Seven steps towards an instrumentation theory for environmental policy, *Policy and Politics*, 20, pp. 191–200. doi:dx.doi.org/10.1332/030557392782718698
- Griffin, L. (2010) Governance innovation for sustainability: Exploring the tensions and dilemmas, *Environmental Policy and Governance*, 20, pp. 365–369. doi:10.1002/eet.555
- Gunningham, N. & Grabosky, P. (1998) *Smart Regulation: Designing Environmental Policy* (Oxford: Oxford University Press).
- Hajer, M. A. & Wagenaar, H. (Eds) (2003) *Deliberative Policy Analysis: Understanding Governance in the Network Society* (Cambridge: Cambridge University Press).

- Héritier, A. (Ed.) (2002) New modes of governance in Europe: Policy-making without legislating? *Common Goods: Reinventing European and International Governance*, pp. 185–206 (Lanham: Rowman & Littlefield).
- Héritier, A. & Rhodes, M. (Eds) (2011) *New Modes of Governance in Europe: Governing in the Shadow of Hierarchy* (Houndmills: Palgrave).
- Hill, M. (2005) *The Public Policy Process* (Prentice-Hall: Pearson/Longman).
- Hillman, K., Nilsson, M., Rickne, A. & Magnusson, T. (2011) Fostering sustainable technologies – a framework for analysing the governance of innovation systems, *Science and Public Policy*, 38, pp. 403–415.
- Homeyer, I. (2006) EPIGOV Common Framework. *EPIGOV Paper No.1*. Ecologic – Institute for International and European Environmental Policy, Berlin.
- Hooghe, L. & Marks, G. (2001) *Multi-Level Governance and European Integration* (Lanham, MD: Rowman & Littlefield).
- Howlett, M., Rayner, J. & Tollefson, C. (2009) From government to governance in forest planning? Lessons from the case of the British Columbia Great Bear Rainforest initiative, *Forest Policy and Economics*, 11, pp. 383–391. doi:10.1016/j.forpol.2009.01.003
- Huh, T. (2011) Exploring the principles and criteria for governance for sustainable development, *International Review of Public Administration*, 15, pp. 67–78.
- Hysing, E. (2009) From government to governance? A comparison of environmental governing in Swedish forestry and transport, *Governance*, 22, pp. 547–672. doi:dx.doi.org/10.1016/j.forpol.2009.01.003
- Hysing, E. (2010) *Governing towards Sustainability – Environmental Governance and Policy Change in Swedish Forestry and Transport* (Örebro: Örebro University).
- Jordan, A. (2008) The governance of sustainable development: Taking stock and looking forwards, *Environment and Planning C: Government and Policy*, 26, pp. 17–33. doi:10.1068/cav6
- Jordan, A. & Lenschow, A. (Eds) (2008) *Innovation in Environmental Policy? Integrating the Environment for Sustainability* (Edward Elgar: Cheltenham).
- Jordan, A., Wurzel, R. K. W. & Zito, A. R. (2005) The rise of ‘new’ policy instruments in comparative perspective: Has governance eclipsed government? *Political Studies*, 53, pp. 477–496. doi:10.1111/j.1467-9248.2005.00540.x
- Kates, R. W., Parris, T. M. & Leiserowitz, A. A. (2005) What is sustainable development? Goals, indicators, values, and practice, *Environment: Science and Policy for Sustainable Development*, 47, pp. 8–21.
- Kemp, R., Parto, S. & Gibson, R. B. (2005) Governance for sustainable development: Moving from theory to practice, *International Journal of Sustainable Development*, 8, pp. 12–30.
- Kickert, W. J. M., Klijn, E.-H. & Koppenjan, J. F. M. (Eds) (1997) *Managing Complex Networks: Strategies for the Public Sector* (London: Sage).
- Kjær, A. M. (2004) *Governance* (Cambridge: Polity Press).
- Knill, C. (2004) Modes of governance and their evaluation, *Trames*, 8, pp. 352–371.
- Kohler-Koch, B. (1999) The evolution and transformation of European governance, in: B. Kohler-Koch & R. Eising (Eds), *The Transformation of Governance in the European Union*, pp. 14–35 (London: Routledge).
- Kooiman, J. (Ed.) (1993) *Modern Governance: New Government-Society Interactions* (London: Sage).
- Kooiman, J. (2003) *Governing as Governance* (London: Sage).
- Koontz, T. M. & Thomas, C. W. (2006) What do we know and need to know about the environmental outcomes of collaborative management? *Public Administration Review*, 66, pp. 111–121. doi:10.1111/j.1540-6210.2006.00671.x
- Kritzinger, S. & Pülzl, H. (2008) Governance modes and interest: Higher education and innovation policy in Austria, *Journal of Public Policy*, 28, pp. 289–307. doi:10.1017/S0143814X08000913
- Lafferty, W. M. (2004) Introduction: Form and function in governance for sustainable development W, in: M. Lafferty (Eds), *Governance for Sustainable Development: The Challenge of Adapting Form to Function*, pp. 1–31 (Cheltenham: Edward Elgar).
- Loorbach, D. (2010) Transition management for sustainable development: A prescriptive, complexity-based governance framework, *Governance*, 23, pp. 161–183. doi:10.1111/j.1468-0491.2009.01471.x
- Lowndes, V. & Skelcher, C. (1998) The dynamics of multi-organizational partnerships: An analysis of changing modes of governance, *Public Administration*, 76, pp. 313–333. doi:10.1111/1467-9299.00103
- Mayntz, R. & Scharpf, F. W. (Eds) (1995) *Der Ansatz des akteurzentrierten Institutionalismus, Gesellschaftliche Selbstregelung und politische Steuerung*, pp. 39–72 (Frankfurt: Campus).
- Meadowcroft, J. (2007) Who is in charge here? Governance for sustainable development in a complex world, *Journal of Environmental Policy and Planning*, 9, pp. 299–314. doi:10.1080/15239080701631544

- Meadowcroft, J. (2011) Sustainable development, in: M. Bevir (Eds), *The SAGE Handbook of Governance*, pp. 535–551 (Los Angeles, CA: Sage).
- Meuleman, L. & In't Veld, R. J. (2010) Sustainable development and the governance of long-term decisions, in: R. J. In't Veld (Ed), *Knowledge Democracy: Consequences for Science, Politics, and Media*, pp. 255–283 (Heidelberg: Springer).
- Newell, P., Jenner, N. & Baker, L. (2009) Governing clean development: A framework for analysis, *Development Policy Review*, 27, pp. 717–739. doi:10.1111/j.1467-7679.2009.00467.x
- Newig, J. & Fritsch, O. (2009) Environmental governance: Participatory, multi-level and effective? *Environmental Policy and Governance*, 19, pp. 197–214. doi:10.1002/eet.509
- North, D. C. (1990) *Institutions, Institutional Change and Economic Performance* (Cambridge: Cambridge University Press).
- OECD (2002) *Improving Policy Coherence and Integration for Sustainable Development: A Checklist* (Paris: OECD).
- Ostrom, E. (2005) *Understanding Institutional Diversity* (Princeton: Princeton University Press).
- Pahl-Wostl, C. (2009) A conceptual framework for analysing adaptive capacity and multi-level learning processes in resource governance regimes, *Global Environmental Change: Human and Policy Dimensions*, 19, pp. 354–365. doi:10.1016/j.gloenvcha.2009.06.001
- Pierre, J. (Ed.) (2000) *Debating Governance: Authority, Steering, and Democracy* (Oxford: Oxford University Press).
- Pierre, J. & Peters, B. G. (2000) *Governance, Politics and the State* (London: Macmillan).
- Rhodes, R. A. W. (1997) *Understanding Governance: Policy Networks, Governance, Reflexivity and Accountability* (Buckingham: Open University Press).
- Robichau, R. W. (2011) The Mosaic of Governance: Creating a Picture with Definitions, *Theories, and Debates*, *Policy Studies Journal*, 39, pp. 113–131. doi:10.1111/j.1541-0072.2010.00389_8.x
- Rosenau, J. N. (1995) Governance in the 21st Century, *Global Governance*, 1, pp. 13–43.
- Scott, R. W. (2001) *Institutions and Organizations*, 2nd ed. (Thousand Oaks, CA: Sage).
- Shiroyama, H., Yarime, M., Matsuo, M., Schroeder, H., Scholz, R. & Ulrich, A. (2012) Governance for sustainability: Knowledge integration and multi actor dimensions, *Sustainability Science*, 7, pp. 45–55. doi:10.1007/s11625-011-0155-z
- Smismans, S. (2006) New modes of governance and the participatory myth, *West European Politics*, 31, pp. 874–895. doi:10.1080/01402380802234540
- Steuer, R. (2010) Sustainable development as a governance reform agenda: Principles and challenges, in: R. Steuer & R. Trattnigg (Eds) *Nachhaltigkeit regieren: Eine Bilanz zu Governance-Prinzipien und -Praktiken*, pp. 33–54 (München: Oekom).
- Stoker, G. (1998) Governance as theory: Five propositions, *International Social Science Journal*, 50, pp. 17–28. doi:10.1111/1468-2451.00106
- Stoker, G. (2006) *Why Politics Matter: Making Democracy Work* (Basingstoke: Palgrave MacMillan).
- Toemmel, I. (2009) Modes of governance and the institutional structure of the European union, in: I. Tömmel & A. Verdun (Eds), *Innovative Governance in the European Union: The Politics of Multilevel Policymaking*, pp. 9–26 (Boulder, CO: Lynne Rienner).
- Tollefson, C., Gale, F. & Haley, D. (2008) *Setting the Standard: Certification, Governance and the Forest Stewardship Council* (Vancouver: UBC Press).
- Treib, O., Bähr, H. & Falkner, G. (2007) Modes of Governance: Towards a Conceptual Clarification, *Journal of European Public Policy*, 14, pp. 1–20. doi:10.1080/135017606061071406
- Treib, O., Bähr, H. & Falkner, G. (2011) Social policy and environmental policy: Comparing modes of governance, in: U. Diedrichs & W. Wessels (Eds) *The Dynamics of Change in EU Governance: Policy-making and System Evolution*, pp. 103–131 (Cheltenham: Edward Elgar).
- Van de Meene, S. J., Brown, R. R. & Farrelly, M. A. (2011) Towards understanding governance for sustainable urban water management: A practice-oriented perspective, *Global Environmental Change*, 21, pp. 1117–1127. doi:10.1016/j.gloenvcha.2011.04.003
- Van Kersbergen, K. & Van Waarden, F. (2004) Governance as a bridge between disciplines: Crossdisciplinary inspiration regarding shifts in governance and problems of governability, accountability and legitimacy, *European Journal of Political Research*, 43, pp. 143–171. doi:10.1111/j.1475-6765.2004.00149.x
- Van Leeuwen, J. & Van Tatenhove, J. (2010) The triangle of marine governance in the environmental governance of Dutch offshore platforms, *Marine Policy*, 34, pp. 590–597. doi:10.1016/j.marpol.2009.11.006
- Van Zeijl-Rozema, A., Cörvers, R., Kemp, R. & Martens, P. (2008) Governance for sustainable development: A framework, *Sustainable Development*, 16, pp. 410–421. doi:10.1002/sd.367
- Voss, J. P., Bauknecht, D. & Kemp, R. (Eds) (2006) *Reflexive Governance for Sustainable Development* (Cheltenham: Edward Elgar).

- Voss, J. P., Newig, J., Kastens, B., Monstadt, J. & Nölting, B. (2007) Steering for sustainable development: A typology of problems and strategies with respect to ambivalence, uncertainty and distributed power, *Journal of Environmental Policy & Planning*, 9, pp. 193–212. doi:10.1080/15239080701622881
- Weber, M., Driessen, P. P. J. & Runhaar, H. A. C. (2011) Environmental noise policy in the Netherlands: Drivers of and barriers to shifts from government to governance, *Journal of Environmental Policy and Planning*, 13, pp. 119–137. doi:10.1080/1523908X.2011.572657