EXPLORING NEW DYNAMICS IN GLOBAL ENVIRONMENTAL GOVERNANCE

Literature review

Background Report

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PBL

PBL Netherlands Environmental Assessment Agency is the national institute for strategic policy analysis in the fields of the environment, nature and spatial planning. We contribute to improving the quality of political and administrative decision-making by conducting outlook studies, analyses and evaluations in which an integrated approach is considered paramount. Policy relevance is the prime concern in all of our studies. We conduct solicited and unsolicited research that is both independent and scientifically sound.

This background study is part of a larger research effort at PBL Netherlands Environmental Assessment Agency that focuses on new dynamics in global biodiversity governance where non-state actors play an increasingly important role and where the role of governments and international organisations is renegotiated. In addition to this literature review, a number of case studies were performed, analysing new and innovative approaches to global biodiversity governance and, together with academic partners, also more quantitative approaches were explored. For more information on the project, please contact marcel.kok@pbl.nl.

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1 Summary

In the face of urgency of addressing global sustainability challenges and limited political will and capacity at national and international governmental levels to take effective action, new non-state actors have entered the international stage. New agents of change and new forms of transnational governance have emerged. Business and the civil society sector, but also local and regional governments and engaged citizens organise themselves in international collaborative initiatives. While in the 1990s, these actors were still considered as outsiders that had a role as lobbyist or observer, they progressively have taken a more active role in global environmental governance. Recent studies confirm the trend towards bottom-up governance, while also international agreements start to reflect this trend, as for example can be seen in the Paris Climate Agreement and the 2030 Agenda with the Sustainable Development Goals. Altogether, this has resulted in an international governance landscape in which new forms of transnational governance coexist next to traditional multilateral governmental policies and public-private partnerships in which power and steering capacity is dispersed between a plethora of public and private actors and initiatives. This landscape has been characterised as a 'distributed global governance landscape' or a 'polycentric' governance landscape.

The goal of this paper is to provide a better understanding of the new dynamics of global environmental governance. For this purpose, we explored various theoretical perspectives (see Table 2 for a summary). This review illustrates the vast amount of academic research that deals with bottom-up and non-state governance for sustainability. The literature review indeed points to the increased role of various non-state actors in global governance and provides a large variety of insights on the new dynamics of global governance.

Based on this literature review, we identified five key factors that may help to understand the workings and performance from new, non-state, transnational governance arrangements:
- *building on co-benefits*, non-state governance arrangements are essentially based on collaboration between various actors and build on co-benefits;
- *disclosure and accountability*, through disclosure, actors and institutions can be held accountable by stakeholders and this becomes a self-steering mechanism;
- *clumsiness and experimentation*, this expresses a readiness to fail with the aim to capture new forms of learning and experience to address a problem;
- *upscaling potential*, the enabling environment, mechanisms and strategies through which initiatives can expand their impact;
- *directionality*, this relates to a need to bring guidance and coherence in a polycentric governance domain with a plethora of (bottom-up) initiatives in view of public goals.

This study briefly addresses the question of what the role of governments and inter-governmental organisations can be in such a polycentric governance landscape, and how governments may enable the performance of non-state action. Many new governance arrangements operate in the shadow of hierarchical state action, which reflects that transnational and state-led governance are often tightly interconnected. The literature on transnational governance has traditionally focused mostly on non-state actors and less on the governmental response. But this is slowly changing now. Without delving much deeper, we suggest three elements that can be seen as enabling conditions for ICIs that governments can provide to support a pragmatic policy approach at the international level: creating convergence and providing vision, reframing, and orchestration.

2 Introduction

Trust in the capacity of the multilateral system and the effectiveness of intergovernmental environmental agreements to respond to the problems of global environmental change is dwindling. While the Paris Climate Agreement and the 2030 Development Agenda, including the Sustainable Development Goals, have been heralded as milestones for multilateralism, there is still a massive implementation gap between current socio-economic development pathways and ambitions and goals of these, as well as other environmental agreements. The United Nations Environment Programme (UNEP) concluded that despite some notable successes, the international community has made very uneven progress in improving the state of the environment by achieving the many environmental goals that they have put in place (United Nations Environment Programme, 2012).

Projections show that current policies and business-as-usual practices will not be enough to avoid threshold changes in the Earth system functioning with potentially detrimental consequences for human livelihoods. The lack of progress in resolving issues of climate change and biodiversity loss may be understandable given the nature of these problems, which are sometimes referred to as complex or wicked or super-wicked problems (Levin et al., 2012). Characteristics of global environmental problems that make them challenging to resolve by collective action include time lags between actions and effects, high stakes and uncertainties involved, the global public goods character, lack of information, distributional aspects and the costs of addressing the problem in question (Dellas et al., 2011; Levin et al., 2012; Underdal, 2010).

With respect to climate change, it has been argued that the complexity of the climate problem has frustrated international agreements and instead triggered the emergences of international collaborative initiatives (Andonova, Betsill and Bulkeley, 2009; Bulkeley and Jordan, 2012). In the face of urgency of addressing global sustainability challenges and limited political will and capacity at national and international levels to take effective action, new actors have entered the stage as agents of change and new forms of transnational governance have emerged. The business and civil society sectors as well as local and regional governments and engaged citizens are organising themselves in international collaborative initiatives.

Over the past 10 to 15 years, non-state actors have started to fill the implementation gap (the extent to which they have filled that gap is an empirical question still to be addressed), left by the slow pace of tedious and often fruitless intergovernmental negotiations. While in the 1990s, these actors were still considered as outsiders that had a role as lobbyists or observers, they progressively have taken a more active role in global environmental governance, both within and outside international environmental negotiations to become 'new agents of change'. Recent studies confirm the trend towards bottom-up governance (Jordan et al., 2015; Ostrom, 2010b), while also international agreements start to reflect this trend, as for example can be seen in the Paris Climate Agreement. Altogether, this has resulted in an international governance landscape in which new forms of transnational governance coexist next to traditional multilateral governmental policies and in which power and steering capacity is dispersed between a plethora of public and private actors and initiatives. This landscape has been characterised as a 'distributed global governance landscape' or a 'polycentric' governance landscape (Ostrom, 2010a, b). We take this situation of transnational and multilateral governance in our research as a given (see also Betsill et al., 2015).

The goal of this paper is to better understand the new dynamics of global environmental governance, in this context. For this purpose, the report explores various theoretical perspectives to identify key factors (actor-centred and steering mechanisms) that help to understand the workings and performance of new, non-state governance arrangements, and starts to explore implications for intergovernmental and multilateral policy-making. Research on 'bottom-up' governance has pointed out the benefits of this emerging new governance landscape, such as providing room for experimentation and more tailored solutions for the local context (Dobson, 2007).

Following the 'the energetic society' argument (Hajer, 2011), we argue that international collaborative initiatives hold transformative potential that is not yet sufficiently recognised by governments (Hajer et al., 2015). The climate regime and the Paris Climate Agreement under the UNFCCC may be a notable exception; however, also UNEP (2016; p. 24) argues in its Emissions Gap Report that it remains an open question how the international process can best recognise, support, and catalyse non-state actor actions. As non-state initiatives are often taken in 'the shadow of hierarchy' (Mayntz and Scharpf, 1995), governments need to be aware of this trend and may want to consider how they can best relate and better take advantage of the initiatives taken by new agents of change in solving global environmental problems. This may require a more flexible and pragmatic governmental approach for the short and medium term that will need to go beyond the traditional mode of hierarchical governance, and beyond the constructed distinctions between bottom-up and top-down, public and private, global and local.

While pleas for smart or smarter governance are widespread (Rayner, 2010), understanding is still limited of how these new international collaborative initiatives function and interact. And what their contribution is to global sustainability governance through the governance functions they perform, as well as how productive linkages between the multilateral system and transnational initiatives can be best built (Betsill et al., 2015; Jordan et al., 2015). To understand the dynamics of transnational governance arrangements better insight is needed in the actual efforts, innovations and initiatives that are currently taken by new agents of change operating at the fringes and outside multilateral processes (also see Kornet, 2016).

In this report, we explore these new dynamics in global environmental governance from a theoretical perspective. Based on a review of the literature on transnational governance, we identified possible factors that may help better understand the workings and performance of international collaborative initiatives. In parallel work we empirically explore these dynamics further through case studies, analysis of large n-databases and exploring the possible impacts of international collaborative initiatives. This report unfolds as follows. Chapter 3 introduces key concepts in global environmental governance. Chapter 4 reviews the literature on non-state global environmental governance and the various innovative aspects emphasised in the literature. Based on the literature review, Chapter 5 identifies a number of factors that may increase the understanding about the workings and performance of international collaborative initiatives. Chapter 6 explores the implications for intergovernmental policy-making.

This background study is part of a larger research effort at PBL that focuses on new dynamics in global biodiversity governance where non-state actors play an increasingly important role and the role of governments and international organisations is renegotiated. Next to this literature review, a number of case studies have been performed analysing innovative approaches to global biodiversity governance and also more quantitative approaches have been explored.

3 Key concepts

The number and type of actors that engage in governance efforts at the international level has increased over the past decades in the context of globalisation. This trend is reflected in three key concepts: global governance – describing the overall conditions for steering at the international level, modes of governance – referring to abstract, ideal typical forms of steering, usually by governments, and governance arrangements – referring to specific governance efforts that state and non-state actors engage in at various levels, either entirely private or public or mixed.

3.1 Global governance

Global governance is a widely used term which, since its proliferation in the 1970s, has triggered a plethora of definitions in the academic community and, over time, has come to mean different things across and within disciplines (Biermann and Pattberg, 2012; Overbeek et al., 2010). Both as an analytical concept and a political strategy, global governance can be understood as a response to changes in the international system through the process of globalisation and the end of the Cold War (Pattberg, 2006; Zacher, 1992).

Originally, governance refers to the exercise of power 'without government', thus steering in the absence of authority (Rosenau and Czempiel, 1992). Governance then only refers to modes of steering that take place in the absence of a state that can enforce laws and other rules. Based on this reasoning, most multilateral decision-making can be characterised as 'governance without government' because of the absence of a global authority that can enforce laws; some exceptions are the United Nations Security Council's limited authority to impose world order and peace, the European Union and to some degree, the World Health Organization and the World Trade Organization (Risse, 2004). Yet, such a narrow understanding of global governance raises the question of how the term then differs from 'international relations' or 'world politics' (Biermann and Pattberg, 2008).

Currently, most of the literature on global governance takes into account the increasing role of non-state actors in steering international policies (Dingwerth and Pattberg, 2006; Jagers and Stripple, 2003; Rosenau, 1999). In the light of the increased blurriness of the lines between public and private authority at national and international levels (Risse, 2013), global governance is thus more than the steering at the global level and includes steering at all levels of human organisation that has transnational effects. Rosenau's (1995) often cited definition takes such a broader perspective: 'global governance is conceived to include systems of rule at all levels of human activity—from the family to the international organisation—in which the pursuit of goals through the exercise of control has transnational repercussions.' The Commission on Global Governance (1995) defines global governance as 'the sum of the many ways individuals and institutions, public and private, manage their common affairs, a process through which conflicting or diverse interests may be accommodated and cooperative action may be taken'. Such broad definitions may lack analytical clarity, but they are useful to stress the multilevel and multi-actor character of world politics (Dingwerth and Pattberg, 2007).

For the purpose of this report, we rely on a broad definition of global governance which includes steering at all levels and from all types of actors that has transnational impacts, as defined by Rosenau (1995). While acknowledging the various levels of steering that Rosenau

mentions, this report focuses on the international level. We understand global governance both as a political strategy and as an analytical concept (Dingwerth and Pattberg, 2007) since we are aiming at developing a conceptual framework that can be used both analytically as well as to guide the development of strategies for action.

3.2   Governance modes

Conventionally, governance is considered to occur in three modes: governance through hierarchy, that is, through states and governmental agencies; governance through markets; and governance through networks. Governance through governments, thus, is one of several modes of governance (Cashore, 2002; Delmas and Young, 2009; Kjaer, 2004; Treib, Bähr, and Falkner, 2007). Additional governance modes that have been identified more recently are self-governance, informational governance and meta-governance (Derkx and Glasbergen, 2014; Mol, 2008). Various authors have made rather similar typologies (see Arnouts et al., 2012; Driessen et al., 2012 and Van der Steen et al., 2015)

There is a broader distinction between top-down governance, where rules are set by one group to rule over another, and bottom-up governance, where groups are self-steering. Shifts in modes of governance do not necessarily mean that one mode of governance is replaced with another (Driessen et al., 2012). Instead, a new mode of governance is added to existent governance modes. A study by Van Oorschot et al. (2014), for example, discusses such a new mode to target different types of businesses involved in sustainable supply chains, in which a market-governance approach was facilitated by, in this case, the Dutch Government, which effectively managed to reach frontrunner business. Subsequently, a discussion emerged whether this government approach needed to be complemented with more hierarchical, regulatory approaches by the government to also make laggards comply with new standards. At the city level, Broto and Bulkeley (2013) report from database findings that most climate-change-related urban experiments were initiated after the ratification of the Kyoto Protocol, suggesting that top-down governance can trigger bottom-up efforts by increasing interest in and awareness about climate change. They also find that the public-private divide is increasingly blurred and that certain actors are strongly associated with particular governance modes and the emergence of partnerships between various actors. Similar findings are reported for other climate governance experiments (Hoffmann, 2011) and for transnational climate governance, in general (Bulkeley et al., 2014).

While differing modes of governance can co-exist within a specific policy domain, they do not necessarily always complement each other; there may also be a certain amount of tension between goals, specific policy and measures. For example, market governance of natural capital with a central role for business may be at odds with regulatory approaches related to nature conservation within the same area.

3.3   Governance arrangements

While global governance refers to steering activities that have transnational repercussions and may vary per policy domain, governance arrangements are smaller analytical units that describe various types of collaborative initiatives, such as public-private partnerships, certification schemes or multi-stakeholder partnerships. Within specific policy domains that are characterised by specific modes of governance, multiple governance arrangements can be identified.

Governance arrangements can be broadly defined in terms of the types of actors involved and the approach used to reach a certain goal (Commission on Global Governance, 1995; Héritier, 2002; Risse, 2004). In the context of non-state action for climate change, international collaborations by non-state actors are referred to as International Collaborative Initiatives (Roelfsema et al., 2018) which we would define as governance arrangements.

Several ways of further distinguishing and categorising governance arrangements have been proposed in the governance literature. For instance, by governance functions distinguishing enabling, provision, regulation and self-governing functions (Biermann, 2014). Keohane and Victor (2011) distinguish climate change governance in terms of forms of governance (multilateral, club, bilateral, expert), issues (adaptation, nuclear, trade, financial) and governance functions (scientific assessment, rule-making, financial assistance, capacity building). Abbott (2012) distinguishes governance arrangements based on types of actors involved and the dominant actor type (state-led, hybrid and private-led) and operational activities (standards and commitments, information and networking, financing and operational). Governance arrangements can also be distinguished along the dimensions of discourses, actors, resources and rules (Arts and Leroy, 2006). Hysing (2009) developed a framework distinguishing new governance modes with respect to instruments, relations and levels and the distribution of governmental power and societal autonomy.

The description shows a large variety of categorisations of governance arrangements. We also take into account three other nuances that often get lost in categorisations of governance arrangements. First, we do not consider international organisations and international agreements as non-hierarchical. Instead, we consider them to be based on hierarchical forms of steering; although less so coercive than the steering of nation states or the EU institutions. Second, hierarchical steering can also involve positive incentives such as subsidies which cannot be considered as command and control usually associated with classical top down hierarchy. Third, we conceptualise public and private authority and hierarchical/less hierarchical modes of steering as continuums in order to account for the increased blurriness both between steering styles and between public and private authority.

Public authority refers to the exercise of legitimate steering power through public actors such as national and local governments, international organisations and intergovernmental agreements. Private authority refers to the legitimate steering of private actors (Hall and Biersteker, 2002). Thus, all non-governmental actors at local, national and international levels that use their expertise and/or moral legitimacy to make rules or set standards to which other relevant actors in world politics defer, changing their behaviour in some important way (Green, 2013).

3.4   Conclusion

This chapter elaborates three highly related key concepts, which together can be used to analyse the multifaceted character of the current global governance landscape with a multiplicity of actors and modes of governance in place. While the emergence of the global environmental governance landscape is often framed in terms of top-down and bottom-up steering, only a fraction of all governance arrangements can be considered clearly bottom-up or top-down. Chapter 4 reviews the literature on non-state global environmental governance and how this can contribute to effective problem solving.

4 New approaches to Global Environmental Governance

Over the past decades, various bodies of literature have emerged that looked for alternative approaches to hierarchical, governmental steering in global environmental governance. Some of these strands of literature are broad in scope, others only focus on one type of governance arrangement. Some focus more on actors, others on particular steering elements or governance styles (see Table 2), but generally the perspective is bottom-up, with ample attention for the role of non-state actors.

In this review, without aiming to be comprehensive, we focus on the following strands of literature that, in some cases, are quite related:
- *Polycentric governance* (Ostrom, 2010a) builds on research in self-organisation and collective action and explores the added value of multiple centres of decision-making for effective problem solving in complex situations;
- *Governance by orchestration* focuses on the role of government and intergovernmental organisations as orchestrators by enlisting intermediary organisations to govern third parties through soft modes of influence (Abbott et al., 2014a);
- *Network governance* (Risse-Kappen, 1995; Provan and Kenis, 2008) focuses on the role of transnational networks in information-sharing, capacity building, collaboration, learning and scaling up of efforts;
- *Private environmental governance* (Cashore, 2002; Pattberg, 2005) focuses on the role of business as an actor in global environmental governance;
- *Participatory and collaborative governance* (Bulkeley and Mol, 2003) is found in the literature and focuses on both the process of collective decision-making and the merit of including stakeholders in public and private governance;
- *Adaptive governance*, *social learning* (Folke et al., 2005; Gupta et al., 2010; Underdal, 2010) and clumsy solutions (Thompson and Verweij, 2006) focus on the capacity of institutions to respond to political, economic or environmental changes and on pragmatic problem solving stressing the need to accept failures, willingness to take risks and experiments;
- *Meta-governance* is concerned with the management of plurality and aims to increase coherence in a fragmented governance context (Derkx and Glasbergen, 2014);
- *Informational governance* and parts of the literature on transparency (Mol, 2010; Toonen, 2013) focus on the role of information as a steering element to create sustainability impacts;
- *Non-state market-driven governance* (Cashore, 2002; Pattberg, 2005) focuses on the market mechanisms in global environmental governance,
- *Deliberative governance* (Bäckstrand, 2010; Dryzek, 2000; Hajer, 1995) originates from post-positivist public-policy literature with a focus on how meaning is created in the decision-making process.

Table 1 categorises these strands of literature with respect to whether they are more actor-oriented or more focused on specific steering mechanisms. While some categorisation helps to create an overview, admittingly these distinctions are not always that straightforward and overlaps exist.

Table 1: Categorisation of non-state governance literature

Focus on actors	Focus on steering mechanism
Polycentric governance	Adaptive governance and social learning
Orchestrators	Meta-governance
Network governance	Informational governance and transparency
Private governance	Non-state market-driven governance
Participatory and collaborative governance	Deliberative governance and clumsy solutions

Based on an exploratory literature scoping and additional expert interviews (see Annex I for the list of interviews), we selected the above-mentioned strands of literature and identified some key publications which we discuss further in this chapter. Most of these strands of literature focus on a limited number of governance arrangements which relate both to the actors and the steering styles involved.

The literature review described in the following sections focuses on the insights these different strands of literature may provide into new dynamics of global environmental governance. The discussion of each strand of literature focuses on the following: general characteristics, potential for addressing specific sustainability issues, and the role of governments and intergovernmental institutions within these theoretical perspectives.

4.1 Polycentric governance

Polycentric governance sets out from the idea that action can be taken by multiple actors at various scales that have a cumulative effect (Ostrom, 2010b). Polycentric governance refers to self-organised and not formally institutionalised cooperation, coordination and steering of multiple centres of decision-making (for definitions, see Ostrom (2010a)). Self-organised, decentralised initiatives are considered to respond more adequately to interactions between planetary boundaries in the face of institutional complexity (Galaz, Crona, Österblom, Olsson and Folke, 2012). Polycentric governance research has originally focused on metropolitan areas (Ostrom, 2010b; Ostrom, Tiebout and Warren, 1961)and small-scale common pool resources such as fisheries and irrigation systems (Poteete, Janssen and Ostrom, 2010). The term is, however, increasingly applied to a wide variety of issue areas (cf. Jordan et al., 2015).

Galaz et al. (2012) identify four features or functions of polycentric governance: information-sharing, coordination of activities, problem solving and internal conflict resolution. While information-sharing constitutes a low degree of polycentricity, the presence of conflict resolution mechanisms suggests a strong degree of polycentricity.

In contrast to one size fits all top down steering, polycentric, multi-scalar approaches are therefore considered to have greater capacity to address collective action problems through reputational sanctions and reciprocity and by building trust through increased formal and informal, bilateral and multilateral interactions among parties (Cole, 2015; Galaz et al., 2012). Smaller scale approaches have more particularised knowledge which provides greater

opportunity for learning. Finally, such approaches leave more room for experimentation and innovation (Cole, 2015; Galaz et al., 2012).

Despite these theoretical claims, the actual effectiveness of polycentric governance remains contested and is context dependent. While empirical findings from 47 case studies on citizen involvement in natural resource management in Northern America and Western Europe suggest that polycentric governance arrangements with many agencies and levels of governance achieve higher environmental outputs than more monocentric governance arrangements (Newig and Fritsch, 2009). Others argue that for climate governance, it may be too early to judge the effectiveness of emerging polycentric governance (Jordan et al., 2015).

From a polycentric perspective, for instance an international climate change agreement has limited potential to successfully address these multi-scalar challenges. If global environmental problems such as climate change are the result of individual and group decisions at multiple scales, governance efforts have to address these various contexts as well as the distributive effects of climate change governance (Galaz et al., 2012). From a polycentric perspective, governments and international institutions are therefore one of many actors within global governance that play an important role but are not always best suited to address complex problems (Ostrom, 2010a).

4.2   Governance by orchestrators

Orchestration is a widely used governance strategy in the environmental domain and considered a valuable tool to enhance coherence and order in a context of polycentricism or distributed governance. Governance by orchestration can be considered a specific type of polycentric governance in which government, intergovernmental or non-state actors take the role of orchestrators through intermediary organisations and soft modes of influence (Abbott, Genschel, Snidal and Zangl, 2014a). The assumption is that orchestration will encourage ambition and scaling up and enhance the effectiveness of governance efforts (Abbott, 2014; Abbott et al., 2014a). The orchestration literature focuses on orchestration as a strategy employed by international organisations, but non-state actors can also take the role of orchestrators (e.g. see Derkx and Glasbergen, 2014).

Abbott and Bernstein (2014) describe orchestration as a governance strategy 'in which one actor (the orchestrator) enlists one or more intermediary actors (the intermediaries) to govern a third actor or set of actors (the targets) in line with the orchestrator's goals' (p.3). An orchestrator does not have direct power of intermediary actors and depends on their voluntary collaboration. Therefore, successful orchestration depends on good leadership, persuasion and incentives (ibid). In contrast to both mandatory and voluntary regulation, orchestration is an indirect mode of governance which works through intermediaries (Abbott, Genschel, Snidal and Zangl, 2014b).

Orchestrators can make use of a number of tools (Abbott et al., 2014a): agenda setting, material and ideational support, review mechanisms, endorsement, convening and coordinating actors.
Agenda setting provides cognitive and normative guidance for intermediaries. It also helps to enlist intermediaries with similar goals, inform them about policy options, shape priorities and steer activities of intermediaries. An agenda adopted by a powerful orchestrator can increase its legitimacy and increase external support. Agenda setting can increase substantive coherence and coordination.

Material support can come in the form of financial resources or through various forms of organisational support such as administrative assistance or hosting. Material support is crucial for enlisting intermediaries and increasing effectiveness and influencing actions of intermediaries. Especially, in the context of monitoring and rule implementation, material support is a powerful orchestration tool. Ideational support can come in the form of information or normative and cognitive guidance. Ideational support is provided to intermediaries in enhancing the legitimacy and effectiveness of their activities and gain competitive advantages over other organisations in their field.

Review mechanisms can improve measures of progress, accountability and enhance learning. Yet, the establishment of effective review mechanisms will always demand a certain level of financial and technical support as well as active encouragement and incentives.

Endorsement is a form of ideational or material support that enhances the authority of an intermediary or target actor and can increase their wider support.

Finally, coordination is another important orchestrating tool. Coordination is also the goal of orchestration as it reduces rules and policy overlaps, gaps and conflicts and lowers transaction costs and increases effectiveness. Convening crucial actors is central to successful coordination. It can support the recruitment of new intermediaries and enables dialogue, learning and review. Convening has thus also an empowering function for intermediaries and target actors.

Orchestration is often practiced by governmental agencies such intergovernmental organisations, treaty bodies and supranational actors in order to influence private actors such as businesses or provide civil society and other non-state actors. Intermediaries are then often businesses associations, civil society organisations or public private partnerships. Orchestration is employed as a strategy when orchestrators do not have access to hierarchical steering authority (Abbott, 2014).

4.3 Transnational network governance

The emergence of transnational networks is seen as a result of the increasingly global scale of many environmental, social, political and economic challenges and ICT developments that connect larger audiences beyond national jurisdictions. Transnational networks involve 'regular interaction across national boundaries when at least one actor is a non-state agent or does not operate on behalf of a national government or intergovernmental organisation' (Risse-Kappen, 1995, p. 3). Andonova et al. (2009) identify information-sharing, capacity building and implementation and rule-setting as the main functions of networked governance.

Scholarship has extensively studied transnational networks (Keck and Sikkink, 1998; Lipschutz and Mayer, 1996; Newell, 2000; Risse-Kappen, 1995). For instance, Betsill and Bulkeley (2004) find in their case study on transnational city networks that motivations to invest and participate in a network were financial and political incentives next to knowledge-sharing and norm generation. The authors also find that access to technical and best practice information was not an incentive to participate in a network. In a study about a multi-country fisheries co-management project, Wilson, Ahmed, Siar, and Kanagaratnam (2006) found that partnerships between NGOs and the public sector at various levels of organisation formed cross-scale networks. Government and NGO participation and support were critical factors for the success of fisheries co-management. The authors also found that successful co-management programmes, tended to expand their activities and included broader sustainability issues, such as ecotourism (Wilson et al., 2006).

Networks that link multiple levels of organisation and knowledge systems require coordinators and facilitators (Berkes, 2009; Mahanty, 2002; Olsson, Folke, Galaz, Hahn and Schultz, 2007) (see also previous section on orchestrators). In the case of organic cotton production in western Africa, intermediate stakeholders (i.e. transnational and local environmental NGO networks) were instrumental in the construction, maintenance and transformation of the organic cotton network (Glin, Mol, Oosterveer and Vodouhê, 2012). Networks can help to scale up local efforts. For example, cities organised in networks, such as C40 and ICLEI, are scaling up their efforts from local to transnational levels. When adding up and scaling up efforts, networking and information-sharing schemes are highly important for actors to learn from each other, collaborate and benchmark their strengths and weaknesses. However, despite the added value of synergies between multiple actors, governmental and intergovernmental rules are needed to control for free-rider problems and leakages (Abbott, 2012).

4.4 Private environmental governance

Private governance (Cashore, 2002; Pattberg, 2005) focuses on the role of business as an actor in global environmental governance. Authority is exercised though global markets, rather than though hierarchical, regulatory systems, and granted though value chains, external audiences and consumer preferences. Private governance arrangements nowadays engage in rule-making, promotion and implementation of norms and standards, monitoring and verification, compliance and sanction mechanisms, and operate alongside public governance systems (Pattberg and Isailovic, 2015).

Private arrangements can be governed by business and/or NGOs or other civil society groups and by combinations of the two. Business arrangements can be considered a form of self-regulation, while NGOs try to govern business from the outside or sometimes opt for collaboration in partnerships, as can be seen in standards and certification of agro-commodities and forests. One can distinguish two forms of private authority: 'delegated' and 'entrepreneurial' private authority. In the former states have delegated a problem-solving authority to private actors, while in the latter private actors have created their own authority to govern without backing of governments. Entrepreneurial private authority is closely related to the energetic society idea (Hajer, 2011).

The emergence and proliferation of private governance raises questions about the effectiveness and legitimacy of global governance systems, which also needs to be seen in the context of lack of effectiveness of the multilateral system. On the effectiveness of private governance as a useful complement to public governance to reduce environmental impacts, various positions can be recognised in the literature. The increasing prominence of private actors then raises questions of about responsibility, democratic oversight, checks and balances and accountability that governments may have to take into account.

4.5 Participatory and collaborative governance

For participatory governance, stakeholders and their inclusion in the decision-making process are crucial. Participatory processes of decision-making that include a wider range of stakeholders and publics are increasingly seen as the norm and examples of good governance while non-participatory forms of policy-making are increasingly seen as illegitimate, ineffective and undemocratic (Bulkeley and Mol, 2003). The degree and form of participatory governance varies greatly. Fung (2006) distinguishes between three dimensions

of participation: who participates, how participants communicate with one another and how discussions are linked with policy or action. Participation, thus, varies on a continuum between stakeholder consultations without any voice in the actual decision-making process and the co-elaboration of policies by stakeholders.

Participatory governance can improve the effectiveness of governance initiatives by preventing implementation problems (Bulkeley and Mol, 2003). Participation is expected to bridge the gap between scientific knowledge and the experiences and values of other actors (Bulkeley and Mol, 2003). In doing so, it helps pave the way for scaling up activities. Further, participatory governance can initiate a learning process among participants which will enhance the quality of, and the support for, environmental governance (Bulkeley and Mol, 2003). In a meta-analysis of 47 case studies from North America and western Europe, Newig and Fritsch (2009) find that the preferences of participating stakeholders often determine environmental decision-making outcomes. Further, face-to-face communication seems to increase the environmental level of ambition in decision-making.

Scholarship in the sustainability sciences usually distinguishes between financial and non-financial motivations for actors to join multi-actor governance arrangements. Apart from this broad distinction a number of subcategories for motivation have been identified including moral concerns, anticipating new regulation or securing first-mover advantages by shaping it, the pursuit of direct financial rewards, indirect benefits such as reputation gains, and response to consumer demands (Jordan et al., 2015).

Based on a review of 137 cases of collaborative governance across a range of policy sectors, Ansell and Gash (2008) identify variables for successful collaboration. These variables include the prior history of conflict or cooperation, the incentives for stakeholders to participate, power and resources imbalances, leadership, and institutional design. The authors also identify factors that are important for the procedural dimension of collaborative governance such as face-to-face dialogue, trust building, and the development of commitment and shared understanding. Collaboration tends to grow stronger when the decision-making process focuses 'on ''small wins'' that deepen trust, commitment, and shared understanding' (Ansell and Gash, 2008).

4.6   Adaptive governance and social learning

Adaptive governance is based on a dynamic, ongoing, self-organised process of learning by doing to test and revise governance arrangements and stresses the value of multi stakeholder participation (Folke et al., 2005). Adaptive governance refers to networks of actors that draw on various knowledge systems and experiences in order to develop a common understanding and policies (Folke et al., 2005). Similar to polycentric governance, diversity in governance initiatives, it is argued, can strengthen adaptive capacity by increasing response options. In contrast to top-down governance, adaptive governance focuses not only on the institutional scale but also on spatial, temporal and ecological scales (Termeer, Dewulf and Van Lieshout, 2010).

Adaptive governance deals with changing circumstances and therefore requires the right links at the right time around the right issues. Bridging organisations and network leadership can help to link actors and knowledge effectively across levels (Olsson et al., 2007) and facilitate trust building (Folke et al., 2005). Similar to bridging organisations, boundary organisations (Cash, 2001; Guston, 2001) can respond to new challenges and link various levels of governance as well as resource and knowledge systems.

For scaling up, bridging organisations can facilitate learning and vertical and horizontal collaboration (Folke et al., 2005). Bridging organisations and leadership are also key to addressing conflicts, accessing needed resources, building a common vision and shared goals (Folke et al., 2005). Scheffer et al. (2003) argue that a clear and convincing vision, comprehensive stories and meaning, and good social links and trust with other actors can mobilise larger coalitions of the willing and start a process of learning and trust building for adaptive management.

Complex problems require adequate actions strategies, purposeful ways of observing complexity and enabling conditions for action strategies. Termeer et al. (2012) identify governance capacities that combine these three aspects of complex problems: (1) reflexivity, or the capacity to deal with multiple frames in society and policy; (2) resilience, or the capacity to flexibly adapt to frequently occurring and uncertain changes; (3) responsiveness, or the capacity to respond wisely to changing agendas and public demands; (4) revitalisation, or the capacity to unblock deadlocks and stagnations in policy processes; and (5) rescaling, or the capacity to address mismatches between the scale of a problem and the scale at which it is governed. According to Termeer et al., actors involved in governing complex problems need these capabilities. Governments can provide the enabling conditions for the development of these capacities. In focusing on both action strategies and enabling conditions, governance capacities link more centralised, state-led governance with bottom-up approaches.

Participatory approaches, social learning, and trust building seem to reinforce one another and eventually facilitate collaboration (Plummer and FitzGibbon, 2007). Learning processes, it is argued are crucial for collaboration, joint decision-making, and co-management (Folke et al., 2005). Participatory approaches are considered central for learning within groups because they allow for sharing individual learning (Sims and Sinclair, 2008).
Social learning is considered to enhance the adaptive capacity of stakeholders through involvement in decision-making (Folke et al., 2005). Certain literature on organisational learning and communities of practice argues that institutions, organisations, or communities of practice may be capable of learning as social units, instead of as a group of individuals learning separately (Wals, 2007; Armitage et al., 2008; Reed et al., 2010). Social learning focuses on the dynamic learning processes in groups and emphasises learning by doing through iterative practice, evaluation and action modification. Social learning is facilitated through joint problem solving and reflection within learning networks (Berkes, 2009).

Experiments aim to capture new forms of learning and experience to address an environmental problem (Broto and Bulkeley, 2013). For urban responses to climate change, experimentation is a reoccurring feature across regions and sectors that does not seem to depend on specific types of economic or social conditions (Broto and Bulkeley, 2013, p. 93).

4.7 Meta-governance

Meta-governance describes a governance mode similar to governance by orchestration. Meta-governance is concerned with the management of plurality and aims to increase coherence in a fragmented governance context (Derkx and Glasbergen, 2014). It refers to an 'indirect form of governing that is exercised by influencing various processes of self-governance' with the aim of 'enhancing coordinated governance in a fragmented system based on a high degree of autonomy for a plurality of self-governing networks and institutions' (Jessop, 1998).

Meta-governance can be carried out by public and private actors. Private meta-governance may take different forms: self-organised arrangements by private actors or collaborations of public (UN) and private actors can play the role of a meta-governor, e.g. the Global Reporting Initiative for company sustainability reporting (Brown, De Jong and Levy, 2009), ISEAL for standard setting. Meta-governance efforts in voluntary sustainability initiatives emerged out of the collaboration of a number of front running schemes and the organisations backing them in the attempt to address the challenges they are facing with private standard setting and produce greater coherence between schemes (Brown, De Jong and Levy, 2009).

Meta-governance in standard setting is a reaction to the challenges associated with the current global standard setting landscape. Global voluntary standards can lead to unnecessary duplication, undermine stringency, confuse consumers and challenge the legitimacy and credibility of standards (Glasbergen, 2013). In responses to the challenges of such a fragmented governance landscape, meta-governance holds potential for creating more coherence in the governance of an issue area (Derkx and Glasbergen, 2014).
In the context of private meta-governance for fair labour conditions, institutional design features are important for success and conflicting aims can stifle its effectiveness (Derkx and Glasbergen, 2014).

Further, constituencies and regulatory approach of the actors and organisations that set up the governance arrangement should not differ too much. Practical difficulties to schedule meetings and geographical distances can also work against successful meta-governance. Meta-governance arrangements appear to be particularly successful if they are run by highly skilled personnel with vast expertise in the field and if they have secretariats which enable them to function as autonomous organisations. Broad meta-governance initiatives such as ISEAL may also benefit from the fact that they bring together very different types of organisations that do not always compete with one another. This enables ISEAL to take more autonomous actions without triggering political negotiations between competitors (Derkx and Glasbergen, 2014).

For meta-governance initiatives in private standard setting, meta-governance standards were rather stringent in the cases studied by Derkx and Glasbergen (2014). Meta-governance focuses often on improving vested standards rather than on highlighting the insufficiencies of less successful schemes and anti-competitive practices. Meta-governance initiatives also have an important trust- and relationship-building function that becomes especially important in fields of high governance fragmentation.
The success of a meta-governance initiative also depends on whether participants perceive that they win rather than lose by more coherence in their field (Derkx and Glasbergen 2014). As long as fragmentation fulfils a function with different initiatives working on different aspects in a field, the costs for initiatives may be higher than the gains. Meta-governance then only becomes necessary when fragmentation becomes a problem (Derkx and Glasbergen 2014).

Meta-governance in private standard setting is often supported by governments and intergovernmental agencies. Their involvement seems to contribute to the effectiveness of these initiatives. Meta-governance can help scale up sustainability efforts in a field by, for instance, increasing the number of certified operators (Derkx and Glasbergen, 2014).

4.8 Informational governance and transparency

The production, use, flow, control and access to information plays a central role in environmental governance. (Mol, 2010) argues that the increased role of transparency and

information is the result of larger societal transformations such as globalisation, new modes of governance and uncertainties.

Proponents of informational governance hold that information-based modes of governance are at least partially replacing regulatory-based forms (Mol, 2006). Mol (2008, pp. 80–81) defines informational governance as the 'institutions and practices of —in our case, environmental— governance that are to a significant extent structured and 'ruled' by information, informational processes, informational technologies and struggles around access to, control over, and production and use of environmental information'.

Various activities can be subsumed under the label of informational governance: certification schemes, company reporting systems, verification and auditing systems, monitoring and disclosure, online dissemination of information by civil society, and the availability of up-to-date online information to citizens. Many of these activities can also be carried out by governments or intergovernmental bodies.

The transparency literature focuses on two policy goals (Mitchell, 2011): the 'transparency *of* governance' literature concentrates on policies and institutions that are aimed at providing information and oversight over the actions of public or private actors in society (Auld and Gulbrandsen, 2010; Dingwerth and Eichinger, 2010; Florini, 2010; and Heald, 2006). The 'transparency *for* governance' literature focuses on policies and institutions that use transparency as a means to enhance the environmental performance of actors within society (Fung et al., 2007; Hamilton, 2005; Heald, 2006; and Stephan, 2002).
Reputation mechanisms can facilitate a change in behaviour through naming and shaming (Héritier, 2002). The assumption is that naming underperformers will shame them into doing better. Benchmarking is such a reputation mechanism and has been predominantly applied to organisations or companies. Benchmarking refers to comparing the performances of organisations with respect to a specific target. Target definition and benchmarking can be initiated by the organisation itself (non-hierarchical) or imposed by governments or an association the organisation is part of (hierarchical) (De la Porte, Pochet, and Room, 2001). Benchmarking aims at finding 'best practices, organizsational learning and continuous improvement' (De la Porte et al., 2001, p. 2) .

Organisations have an interest in applying the proposed instruments because of social control through others and the competitive dimension of benchmarking. Best practices are likely to contribute to problem-solving. In this sense, benchmarking can induce a race to the top in which actors aim to reach the set targets before others. Finally, disseminating and exchanging information about various practices is hoped to contribute to social learning.

4.9   Non-state, market-driven governance

The emergence of market-driven governance reflects a world in which states are no longer the exclusive source of global regulatory authority, but in which authority is dispersed across various settings. It fits in liberal environmentalism (Bernstein, 2015), not as an ideology of neoliberalism, but as norms and practices institutionalised in practice. It is also closely related to governance through markets, as a mode of governance and informational governance. It includes retailers, producers, business associations, insurance companies, accounting and reporting firms, certifiers and standard setters as well as civil society groups that create pressure from outside.

Often, market-driven governance takes the form of transnational partnerships. The inclusion of a broad range of actors can increase effectiveness in policy formulation (Schäfferhoff et

al., 2009). Including stakeholders brings in the 'necessary technical, regional, social, and political information' into the policymaking process and enhance the problem-solving capacity of governance (Brinkerhoff, 2002). Further, including norm targets in the policy-making process contributes to compliance by creating ownership of the process outcomes (Schäfferhoff et al., 2009; Bernstein, 2005). The network structure of transnational partnerships opens up space for deliberation and communication which can lead to a reasoned consensus rather than on compromise that is based on negotiations and bargaining (Risse, 2000:15; Schäfferhoff et al., 2009).

The emergence and proliferation of private governance raises questions about the effectiveness and legitimacy of global governance systems, which also needs to be seen in the context of lack of effectiveness of the multilateral system. On the effectiveness of private governance as a useful complement to public governance to reduce environmental impacts, various positions can be recognised in the literature. The increasing prominence of private actors then raises questions of about responsibility, democratic oversight, checks and balances and accountability that governments may have to take into account.

4.10 Deliberative governance and clumsy solutions

While participatory and collaborative governance focus on actors and their cooperation, deliberative governance emphasises language and argumentation. Deliberative governance is defined as a non-hierarchical means of steering that is based on argumentation and persuasion in order to 'achieve a reasoned consensus rather than a bargaining compromise' (Risse, 2004). It is assumed that reasoned argument without manipulation or exercise of power will yield better and more legitimate decisions (Bäckstrand, 2010). Deliberative decisions are legitimate because they are based on what Habermas (1984) calls 'rationally motivated consensus' in which individuals endorse a decision because of reasons that everyone can accept (Dryzek, 2000). 'Arguing' processes are considered to foster more effective regulation, because they emerge from a reasoned consensus rather than a bargained compromise (Habermas, 1992; Risse, 2000).

Deliberative governance can enhance trust through 'interactive', 'consensus building' and 'roundtable' initiatives (Hajer and Wagenaar, 2003). The spaces in which deliberations take place are often the first instances where stakeholders meet each other personally. Active participation in collective action and problem solving generates trust among stakeholders (Forester, 1999; Lave and Wenger, 1991; Sabel, Fung and Karkkainen, 2000). Deliberative capacity denotes the extent to which governance arrangements allow for deliberation that is inclusive, authentic, and consequential (Dryzek, 2009). Inclusiveness refers to the variety of interests and perspectives that are present in the decision-making process and in the policy outcome. With respect to interests, inclusiveness is therefore linked to the intensity of stakeholder participation. Authenticity refers to the non-manipulative, non-coercive character of a decision-making process. Consequentiality is the direct or indirect impact deliberation has on the decision-making outcome.

Thompson and Verweij (2006) discuss several case studies on clumsy solutions which emphasise the importance of deliberative processes. The idea of clumsy solutions was coined by Shapiro (1987). Clumsy solutions are responses that reject the idea that in a situation with contradictory problem definitions and responses, one of these has to be chosen while rejecting the other. Verweij et al. (2006a) argue that clumsy institutions are institutions which harness contestation between individualistic, egalitarian, hierarchical and fatalist lines of argumentation. These perspectives are based on various assumptions with respect to the adequate distribution of responsibilities, risks, costs and benefits. Essentially, clumsiness

refers to a more pragmatic approach which accepts the existence of contradictory problem perception and solving and tries to make the best of it by focusing on the synergies while simultaneously taking into account the differences. Verweij et al. (2006a) conclude that the appropriate institutional arrangements that can foster clumsy solutions are highly context dependent.

In the case of climate change, Verweij et al. (2006b) argue that the Kyoto Protocol was never equipped to produce the emission cuts necessary to contain dangerous climate change. He proposes to focus on the development on new, climate smart technologies. International cooperation would be mostly concerned with stimulating technological development and less with formal and complicated consensus searching. A clumsy approach would make use of differing policy styles, mixing market dynamics with governmental and local action. This allows for flexibility and strategy switching in contrast to the monolithic Kyoto Protocol. Linnerooth-Bayer, Vari and Thompson (2006) describe another clumsy solution for which a policy or decision is endorsed by various stakeholder groups but for different reasons. In Hungary, a clumsy policy option was formulated after several rounds of stakeholder consultations regarding flood insurance and compensation. The characteristics of the proposed clumsy solution were that it was not based on a single rationale or set of values and they created win-win elements.

4.11 Summary

This review illustrates the vast amount of academic research that dealing with bottom-up and non-state governance efforts for sustainability (see Table 2 for a summary). The literature review also points to the increased role of various non-state actors in global governance including businesses, civil society organisations, cities and local governments and citizens.

The role of facilitators, bridging organisations, meta-governors and orchestrators is repeatedly emphasised throughout various perspectives for successful cooperation, knowledge co-production, trust building and learning. Following the logic of the bottom-up argument, many perspectives see added value in collaboration between different types of actors.

Further, trust-building as well as situations that generate co-benefits (win-win outcomes) are essential stepping stones to enable collaboration and eventually scaling up. Yet, several perspectives also stress the context dependent character of many bottom-up initiatives which makes identifying factors that enhance effectiveness difficult.

Overall, the literature discussed in this chapter suggests that multi-actor approaches hold great potential to address collective action problems by building trust and relying on reputational sanctions and reciprocity. They leave more room for experimentation and innovation. Smaller scale approaches are likely to have more particularised knowledge and a greater opportunity for learning.

Table 2: Summary of different strands of literature included in review

	General characteristics	Potential	Role of governments and intergovernmental institutions
Focus on actors			
Polycentric governance	Multiple centres of decision-making at various scales. Self-organised, decentralised initiatives.	Considered to respond more adequately to problems in the face of institutional complexity	One of many actors within global governance that play an important role, but are not always best suited to address complex problems
Orchestrators	(Inter)governmental or non-state actors take role of orchestrators through intermediary organisations and soft modes of influence	Assumption is that orchestration will encourage ambition and scaling up to enhance the effectiveness of governance efforts	In absence of hierarchical steering authority, intermediary organisations are created
Transnational network governance	Transnational networks regular interaction across national boundaries when at least one actor is a non-state agent or does not operate on behalf of a national government or intergovernmental organisation	Main functions of networked governance include information-sharing, capacity building and implementation and rule-setting	Governmental and intergovernmental rules are needed to control for free-riders and leakages
Private governance	Rule-making, promotion and implementation of norms, monitoring and verification, and in compliance and sanction mechanisms by private actors	Complement to public governance to reduce environmental impacts in an efficient manner	Increasing prominence of private actors then raises questions of about legitimacy and asks for democratic oversight, checks and balances and accountability
Participatory and collaborative governance	Participatory processes of decision-making that include a wide range of stakeholders and publics collaboration amongst a broad	Improve effectiveness of governance initiatives by preventing implementation problems and	Increasingly seen as the norm and example of good governance, while non-participatory forms of policy-making are

	range of actors in transnational networks	enhance quality of, and support for, environmental governance	considered illegitimate and ineffective
Focus on steering mechanism			
Adaptive governance and social learning	Adaptive governance refers to networks of actors that draw on various knowledge systems and experiences in order to develop a common understanding and policies	Dynamic, diverse ongoing, self-organised process of learning by doing to test and revise governance arrangements and stresses the value of multi stakeholder participation	In contrast to top-down governance, adaptive governance focuses not only on the institutional scale, but also on spatial, temporal, ecological and scales
Meta-governance	Indirect form of governing exercised by influencing various processes of self-governance	Enhancing coordinated governance in a fragmented system with a plurality of self-governing networks and institutions	Governments can support intermediary organisations
Informational governance and transparency	Information, informational processes, informational technologies and struggles around access to, control over, and production and use of information	'Transparency OF governance': providing information and oversight over actions of actors 'Transparency FOR governance': means to enhance performance of actors	Reputation mechanisms, such as benchmarking, can facilitate a change in behaviour through naming and shaming
Non-state, market-driven governance	Market mechanisms	Complement to public governance to reduce environmental impacts in an efficient manner	Governments to ensure the realisation of public goods through markets.
Deliberative governance and clumsy solutions	Non-hierarchical means of steering based on argumentation and persuasion to achieve a reasoned consensus rather than a bargaining compromise	Reasoned argument without manipulation or exercise of power will yield better and more legitimate decisions	Clumsiness refers to existence of contradictory problem perception and solving and emphasises need for experimentation and deliberation.

5 Understanding the performance of International Collaborative Initiatives

Building on the literature review in the previous chapter, we suggest five factors that may help understanding the workings and performance of international governance arrangements:

- *building on co-benefits*, non-state governance arrangements are essentially based on collaboration between different actors and build on co-benefits;
- *disclosure and accountability*, through disclosure, actors and institutions can be held accountable by stakeholders and becomes a self-steering mechanism;
- *clumsiness and experimentation*, this expresses a readiness to fail with the aim to capture new forms of learning and experience to address a problem;
- *upscaling potential*, the enabling environment and strategies through which initiatives can expand their impact;
- *directionality*, this relates to a need to bring guidance and coherence in a polycentric governance domain with a plethora of (bottom--up) initiatives in view of public goals.

5.1 Building on co-benefits

Co-benefits are crucial, especially in the beginning stages of setting up and developing governance arrangements. They are the basis of any form of collaboration and non-state governance arrangements are essentially based on collaboration between actors. To enable collaboration, especially if costs are involved, all participating actors will need to see opportunities in collaboration to realise own interests. Collaboration is costly not only in terms of time and personnel, but also bears risks for the collaborating actors. For instance, the activities of one actor may lose importance in the process of collaboration.

Co-benefits can be built in various ways. They can be reached when the varying goals of actors can be fulfilled through a common means. This means that actor groups may join a governance arrangement for various reasons (Linnerooth-Bayer et al., 2006). Linnerooth-Bayer et al. (2006) describe how several rounds of actor consultations in Hungary regarding flood insurance and compensation led actors to find agreement on a policy that entailed win-win elements for various actor groups. Other examples of such win-win constellations are governance arrangements that address both environmental and social concerns or initiatives in the forestry sector including PES or REDD that both mitigate climate change and

biodiversity loss. By searching for such win-win elements across topics, synergies are created making governance more efficient with respect to investing time and resources. Co-benefits can also occur when actors are all confronted with the same problems and, therefore, see a collective need for action, as for instance Lach et al. (2006) describe in the case of accumulating problems around water in California. If the long-term survival of all actors is at stake, actors are more willing to move away from their original positions. Concessions to each position were just big enough to be labelled as progress and concessions were fairly equal to those of other stakeholders. Further, actors' experience with collaboration facilitates finding compromises and dispensing original policy positions. Additionally, in the face of loss, actors may collaborate and reach a compromise when they conclude that their own position could not be realised (Lach et al. (2006). Across a range of policy sectors, successful collaboration depends on the prior history of conflict or cooperation, the incentives for stakeholders to participate, power and resources imbalances, leadership, and institutional design (Ansell and Gash, 2008). Successful collaboration is also facilitated by face-to-face dialogue, trust building, and the development of commitment and shared understanding. Collaboration tends to grow stronger when the decision-making process focuses 'on "small wins" that deepen trust, commitment, and shared understanding' (Ansell and Gash, 2008).

Networks or collaborative initiatives are successful in governing complex problems if they build on partnerships and participation. For instance, Wilson et al. (2006) found that for fisheries co-management, multi-stakeholder participation and support as well as an expansion of activities to broader sustainability issues were critical factors for success. Participatory processes make decision-making more legitimate, democratic and effective because multi-stakeholder participation can initiate a learning process which enhances the quality of, and the support for, environmental governance (Bulkeley and Mol, 2003). Participation can further improve the effectiveness of a governance arrangement by preventing implementation problems (Bulkeley and Mol, 2003).
The participation of various stakeholders in collaborative initiatives can also help to scale up local efforts and help reach larger impacts, for instance by bridging the gap between scientific knowledge and the experiences and values of other actors (Bulkeley and Mol, 2003). Networks that operate across scales, linking multiple levels of organisation and knowledge systems require coordinators and facilitators.

5.2 Disclosure and accountability

Disclosure and accountability are key to a broad range of activities that form part of a non-state actions: certification schemes, company reporting systems, verification and auditing systems, monitoring and disclosure, online dissemination of information by civil society, and the availability of up-to-date online information to citizens (Mol, 2010). Transparency and disclosure is increasingly becoming a new norm which forces especially businesses, but also NGOs and public agencies to reveal their respective supply chain management and investment practices (Van Oorschot et al., 2018). Through disclosure, actors and institutions can be held accountable by stakeholders. This way, disclosure becomes a self-steering mechanism that nudges actors guided by reputational concerns to adopt more sustainable practices.

Reputation mechanisms can facilitate a change in behaviour through naming and shaming (Héritier, 2002). The assumption is that naming underperformers will shame them into doing better because they can be held accountable. Benchmarking is such a reputation mechanism and has been predominantly applied to organisations or companies. Benchmarking refers to comparing the performances of various organisations or businesses with respect to a specific

target. Target definition and benchmarking can be initiated by the organisation or business itself (non-hierarchical) or imposed from governments or an association the organisation is part of (hierarchical) (De la Porte et al., 2001). Organisations have an interest in applying the proposed instruments because of social control through others and the competitive dimension of benchmarking. In this sense, benchmarking can induce a race to the top in which actors aim to reach the set targets before others. Finally, disseminating and exchanging information about various practices may contribute to social learning.

5.3 Clumsiness and experimentation

Clumsiness accepts the existence of contradictory problem perceptions and solving and tries to make the best of it by focusing on the synergies while simultaneously taking into account the differences in problem perception. Experimentation is a form of clumsiness that especially stresses the need to accept failures, both as a necessary risk in search of an adequate solution and as an opportunity to learn.

Since appropriate institutional arrangements for clumsy solutions are highly context dependent (Verweij et al., 2006a), the following examples of clumsy solutions can be understood as guiding examples, but not as blueprints. While these guiding examples are mostly from the subnational context, they also harness value in an international context. In a setting of diverse interests and values among stakeholders, clumsy solutions can also be achieved by creating co-benefits. Various stakeholder groups can then endorse a policy option but for different reasons.
In the case of climate change, (Verweij et al., 2006b) argue that the Kyoto Protocol was never equipped to produce the emission cuts necessary to contain dangerous climate change. International cooperation would be mostly concerned with stimulating technological development and less with formal and complicated consensus searching. A clumsy approach would make use of differing policy styles, mixing market dynamics with governmental and local action. This allows for flexibility and switching strategies, in contrast to the monolithic Kyoto Protocol.

Experimentation is an element of clumsiness as it usually involves taking risks (Verweij et al., 2006a). Experiments are based on a readiness to fail. They aim to capture new forms of learning and experience to address an environmental problem (Broto and Bulkeley, 2013). For urban responses to climate change, experimentation is a reoccurring feature across regions and sectors that does not seem to depend on specific types of economic or social conditions (Broto and Bulkeley, 2013, p. 93). Clumsy solutions can also depend on the willingness of leaders to take risks and engage in experiments, as in the case of water management in California (Lach et al., 2006). Clumsy leadership is not determined primarily by strategic positions or access to resources, but willingness to take the risk of potentially antagonising constituents.

5.4 Up-scaling potential

Up-scaling potential can be understood as the enabling environment in which initiatives can expand their impact (Uvin, 2000). It is an efficient and cost-effective way to increase impact and enhance effectiveness (Hartmann and Linn, 2008).

Although scaling up is a broad concept (Franzel et al., 2001), four general types of scaling up can be identified. Governance initiatives can scale up their impact by expanding their coverage and size (quantitative scaling up); taking on new activities (functional scaling up);

influencing other organisations (indirect scaling up); and assuring their own organisational sustainability (organisational scaling up).

Governance initiatives practice quantitative scaling-up when they expand their coverage and size by becoming a larger organisation, managing more funds, hiring more staff, covering more beneficiaries and by covering a larger geographical area. Initiatives realise functional scaling up activities by raising the number and diversity of the activities (horizontal integration) or by adding upstream or downstream activities that complement the original programme with the aim of increasing impact (vertical integration). Indirect scaling up refers to the influencing of other governmental and non-governmental organisations and companies through advocacy and knowledge-sharing with the purpose of shaping their behaviour in a way beneficial to the goals of the initiative. Finally, organisational scaling up refers to measures taken that ensure the institutional robustness and longevity of an initiative. Related to indirect scaling, scaling-up potential is also based on an initiative's ability to replicate its activities (Jowett and Dyer, 2012). Replication is defined as 'the process of moving a tested prototype programme to additional sites in keeping with the hard (invariable) and soft (variable) aspects of that particular programme's components while remaining sensitive to the local context of each additional site' (RPS, 1994, p. 1). Replication can be achieved through franchising (transferring an initiative programme guidelines to another organisation based on a contractual agreement to adhere to certain performance standards and maintain the initiative's integrity), staged replication (an initiative retains ownership, with the assistance of independent agents with an initiative usually passing through three stages), concept replication (a flexible form of replication, in which only the most necessary aspects of the original initiative are replicated at new sites) (Jowett and Dyer, 2012).

5.5 Directionality

Directionality can be provided in various ways in a polycentric governance context: via goal setting and vision building, meta-governance and via orchestration. Orchestrators and meta-governors can be bridging organisations within governance networks, such as the ISEAL Alliance, or (inter)governmental agencies. Orchestration is a widely used governance strategy in the environmental domain and considered a valuable tool to enhance coherence and order in a context of polycentricism (Abbott et al., 2014a). In contrast to both mandatory and voluntary regulation, orchestration is an indirect mode of governance which works through intermediaries (Abbott et al., 2014b). Leadership, agenda setting and review are key features of orchestration (Abbott and Bernstein, 2014) which renders orchestration a highly relevant governance mode for providing directionality. Directionality can thus be provided by public and private non-state actors including governmental agencies, business associations, NGOs or think tanks. For instance, the city network C40 functions as an orchestrator by providing leadership and guidance to major cities around the world, with respect to climate change mitigation and adaptation.

6 Discussion: implications for governments?

Having analysed various strands of literature on non-state action and identified a number of key factors we hypothesise are necessary to understand the workings of non-state governance, the question can also be raised what the role of governments and inter-governmental organisations is in such a polycentric governance landscape and how can they enable the performance of non-state action. Many governance arrangements operate in the shadow of hierarchical state action, which reflects that transnational and state-led governance are often tightly interconnected. Governments will always play an important role in sustainability governance. Even with a more decentralised approach, it is argued, climate negotiations will require close international coordination (Green et al., 2011).

At the national level, especially in developed countries, the role of governments in a decentralised context is both to enable and to regulate the energetic society if we are to be able to deal with the sustainability challenges ahead of us (Hajer, 2011). But what is the role of governmental actors in an international anarchic context in the absence of any higher governmental power? The literature on transnational governance has traditionally focused mostly on non-state actors and less on governments. But this is slowly changing now. An important role of governmental actors is, for instance, creating complementarity and synergies between environmental policies and its implementation at local, national, regional and global levels (AIV, 2013).

Without delving much deeper, we suggest three elements that can be seen as enabling conditions for ICIs that governments can provide to support a pragmatic policy approach at the international level: creating convergence and providing vision, reframing, and orchestration.

Creating convergence and providing vision. Ruggie (2014) points out strategic elements that illustrate how the UN General Principles on Business and Human Rights came to serve as the basis for similar business principles for the OECD, ISO20000, the EU, the US Dodd-Frank Wall Street Reform Act. In doing so the UN General Principles created some convergence of norms, policies and practices for business guidelines in the international arena. First, working towards a common understanding of the problem constitutes an initial step towards endorsing General Principles or a policy. Second, a polycentric approach in the development of the Principles helped to 'create thick stakeholder consensus' which was effective in securing compliance and maybe more so than the 'thin state consent' associated with international law (Pauwelyn et al., 2011).

Goal setting is a useful and increasingly practiced way of providing vision (see Kanie and Bierman, 2016). The Millennium Development Goals for poverty eradication, the Sustainable Development Goals for sustainable development and the Aichi targets for reducing

biodiversity loss can be a powerful and effective way to direct efforts in the intended direction.

Framing/reframing. In order to escape lock-ins, reframing of issues and decision-making situations is crucial to allow for new angles and a fresh perspective. For instance, it is usually argued that a lack of long term perspective is the reason for why environmental costs are perceived as externalities. Yet, despite increasing uncertainties, pension systems are widely accepted: people pay in for several decades before they receive returns (Benford and Snow, 2000). At the national level, governments have thus the possibility to enforce this type of long term thinking. Also, reframing at both niche and landscape levels can lead to mutual influence and 'higher level changes in social norms and values' (Upham, Kivimaa, Mickwitz and Åstrand, 2014).

According to (Benford and Snow, 2000), there are three core framing tasks:
1. Diagnostic framing: involves the problem identification and their attributions within the organisation itself.
2. Prognostic framing: involves the articulation of potential solutions to the problem and planning strategies to reach the desired solutions. At this stage, both consensus and action are enabled;
3. Motivational framing: involves the development of rational reasons for engaging in collective action and improving the action itself (Benford and Snow, 2000, pp. 614–617).

Further, the incorporation of various frames can help to overcome lock-ins: First, frame transcendence deals with the differences among frames by integrating the diverging poles into 'something that transcends the difference' (Dewulf and Bouwen, 2012).
Second, frame connection is also referred to as interpenetration and follows a connection approach in which exploration of various ways to embrace different framingprovides new insights and gives equal voice to various oppositions or frames.

Orchestration. Both governments and intergovernmental agencies can take the role of orchestrators through intermediary organisations and soft modes of influence. Orchestration is a widely used governance strategy in the environmental domain and considered a valuable tool to enhance coherence and order in a context of polycentricism (Abbott et al., 2014a). According to (Abbott and Bernstein, 2014) orchestration is often practiced by governmental agencies such intergovernmental organisations, treaty bodies and supranational actors. In contrast to both mandatory and voluntary regulation, orchestration is an indirect mode of governance which works through intermediaries (Abbott et al., 2014b). An orchestrator does not have direct power of intermediary actors and depends on their voluntary collaboration. Therefore, successful orchestration depends on good leadership, persuasion and incentives.

In a context of very limited mandatory control and a tight financial budget, (Abbott and Bernstein, 2014) illustrate how the UN High Level Political Forum can perform the role of an orchestrator for the post-2015 agenda for sustainable development by combining 'state-based multilateralism with multi-actor governance arrangement' (Abbott and Bernstein, 2014, p. 2). In fact, the authors argue that states intentionally designed the HLPF as an orchestrating actor. However, the motivation for setting up orchestrating organisations is to have little material or sovereignty costs while not delegating strong authority (Abbott and Bernstein, 2014; Abbott et al., 2014a).

Orchestrators can establish platforms to facilitate interaction among partner organisations, networks, stakeholders and to diffuse good practices, support networking and opportunities to enlist (Abbott and Bernstein, 2014). Registries of actions taken, as the Sustainable

Development in Action Registry at the UN level, are crucial for effective support, monitoring, collaboration and steering (Abbott and Bernstein, 2014).

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