

Low carbon transitions in the global South: How state-driven bottom-up initiatives might evolve into a new form of governing the global

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² See <http://www.greengrowthknowledge.org/event/moving-beyond-gdp-measuring-inclusive-green-growth-wcere> for an overview of the methodological challenges to capture „inclusive green growth“.

³ A vivid debate has since evolved that focuses on the measurement of these dimensions and that tries to identify specific indicators to assess the essence of a GE, notably in a developed country context (Hirschnitz-Garbers & Srebotnjak, 2012; OECD, 2012; UNEP, 2012c).

⁴ Various initiatives have already been undertaken to enter into policy-clarification, for example the UNDESA expert group meeting on Oceans, Seas and Sustainable Development, the work of the Global Ocean

Abstract

Global governance is in a severe “gridlock” (Hale et al. 2013), particularly when it comes to the field of climate governance. However, various players in the global South – besides much official criticism that was raised at the Rio+20 conference – are very often establishing practices of a green economy and push for low carbon transitions. This seems puzzling at first sight as those states that rank low in emissions would have no reason to take cost incentive steps to transform their economies. The proposed paper thus asks why some countries in the global South make more progress on the way towards low carbon transitions than others? And which change agents do have an impact on national green economy politics and why? What role do international and domestic actors play?

The paper draws on literature that emphasizes the impact of state actors like national bureaucracies as change agents. Work on the rise of “developmental states” has identified the following factors that have contributed to large-scale economic transformations in many countries and these will be tested for the field of environmental policy:

- A *managerial elite* spearheading a national bureaucracy that features “embedded autonomy”.
- A government that attributes a role to *civil society* as being an adjunct to realize the state's growth- and output-oriented politics.
- A *corporatist tradition* that ensures access and influence of non-state economic interests, particularly key capitalists, to national decision-making but without leading to outright capture of state bureaucracies.

The innovative contribution of the paper is that it combines the developmental state literature with perspectives on NGOs and other non-state actors into an analytical framework and applies it to the area of global environmental change.

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1. Introduction

In an attempt to tackle the challenges of global environmental change the international community has relied on the concept of 'sustainable development' (SD) since the early 1990s. It aims at integrating economic, social and environmental concerns to achieve the protection of natural resources and ecosystem services alongside poverty reduction and ensuring equity in an inter- and intra-generational way. But in the run-up to the Rio+20 conference in 2012 a new concept spurred the debate as 'Green Economy' (GE) gained prominence – especially with industrialized countries – to guide transformative action at the intersection of environmental, economic and social politics. According to a definition of the Environmental Program of the United Nations (UNEP), GE can be understood as a form of economy, “that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities. In its simplest expression, a GE can be thought of as one which is low carbon, resource efficient and socially inclusive” (UNEP, 2012a, p. 2). In another reading, low carbon development is only one of the goals of GE – but there can also be other environmental objectives involved apart from low carbon (TEEB report – EC 2008, Millennium Ecosystem Assessment, 2005).

The prominent featuring of the new concept in the final outcome of the Rio Summit indicates that GE could indeed evolve into a new paradigm in international environmental and development discourses (Bauer, Lederer, & Siemons, 2012; Brand, 2012b, p. 29). GE shares with SD the emphasis on the “triangle”-approach to sound politics including social, economic and ecologic spheres. But it is different in that GE puts stronger emphasizes on an efficient, functioning economy as a *precondition* for achieving progress. Furthermore, its proponents highlight that environmental policies can stimulate growth and help to achieve sustainability at low cost. Finally, GE emphasizes the role of public actors, notably governments and national bureaucracies while SD has relied strongly on public-private partnerships to reach its goals. Hierarchical steering by the state thus plays a much bigger role as a driver of transformation in the GE concept than in the SD discourse. This proactive role of the state, however, has been assumed rather than systematically analyzed and this is particularly true when it comes to GE approaches in the global South.

The global South – besides much official criticism that was raised at the Rio+20 conference – is very often establishing practices of a GE or pushes for low carbon development (see contributions in Held, Roger, & Nag, 2013c; Urban & Nordensvärd, 2013). This seems puzzling at first sight as those states that rank low in emissions would have no *prima facie* economic or political incentive to take cost intensive steps to transform their economies. However, low levels of economic development could make GE a priority increasing the standing of political leaders domestically and on the international level. Furthermore, various other change agents including NGOs, international donors or corporations often push for GE activities pushing e.g. for NAMA contributions (Held, Roger, & Nag, 2013a, p. 17f). Still, though, there is a gap in terms of theoretically profound comparative analyses that attempt to carve out the promises, pitfalls and interactive dynamics of this transformative development of formulating and implementing GE politics in the global South (see discussion in *ibid*, 10).

To target this lacuna, the objective of our paper is to develop a framework that would allow for analyzing to what extent and under which conditions a GE are materializing and which factors influence the shape and character of such practices. It furthermore explores how these national attempts might collectively overcome what the recent literature on global governance has identified as “gridlock” (Hale, Held, & Young, 2013). It thus contributes to a larger research effort in which low-carbon developments are explored in a broader perspective. In order to further explore whether individual countries move towards a GE approach and how this trend could be interpreted, four specific sets of research questions form the starting point of our endeavor:

1. Why do some countries in the global South make more progress on the way towards a GE than others?
2. Which change agents do have an impact on national GE politics and why? What role do international and domestic actors play? Can we see a strong role of public authorities in the set-up of GE activities and if so why?
3. Do trade-offs and tensions occur (and if so, which) between the economic, ecological and social (e.g. equity) dimensions of a GE approach but also within the single sectors (e.g. between climate change and biodiversity related policy instruments)? How are they responded to and with which consequences?
4. How can the trends towards establishing a GE be interpreted from a global perspective?

The paper will advance as follows: In the second part of the paper we will describe the cornerstones of the international debate on this concept. In the third part we will discuss the role of the state by focusing on the concept of the developmental state and how it might be made fruitful for an analysis of GE initiatives in the global South. The fourth part will discuss first steps towards an empirical analysis in terms of case selection and relevant indicators to trace transformative change towards GE politics at the national level. In the conclusion a final interpretation is offered claiming that the individual attempts within specific countries might contribute to a collective approach and thus are part of what might be labeled governing the global.

2. The Green Economy debate at the international level

2.1 Kicking-off the Green Economy spin

The GE concept became popular after UNEP launched its *Green Economy Initiative* in 2008 and the corresponding proposal for “A Global Green New Deal” in the wake of the 2008/2009 global financial crisis. The initial take off of UNEP’s GE agenda had at least partially been due to the realization that the SD agenda had been stagnating at the international level or - from an environmentalist viewpoint - even been misappropriated (Beisheim, 2012; Pallemaerts, 2003; Speth, 2003; Wapner, 2003). While the underlying concepts and ideas are all but new, the perceived triple crisis of financial breakdown, unfettered climate change and soaring food insecurity provided a window of opportunity that UNEP skillfully used. Launching its GE Initiative as a means to revive economic activity warranted considerable

attention, notably in the industrialized world and often in the context of climate policy debates and the corresponding quest to “decarbonize” economic activity (Brand, 2012b). The OECD followed suit to embrace “green growth” as a stimulus of choice to boost the world economy and even the G-20 agreed on a general need for “inclusive green growth”, thereby putting yet another shade to the conceptual paint-box to describe sustainability transformations.² Hence, in its report, ‘Towards a Green Economy – Pathways to Sustainable Development and Poverty Eradication’ that served as one of the most important inputs for the Rio+20 conference, UNEP proposed that

“[...] investments need to be catalyzed and supported by targeted public expenditure, policy reforms and regulation changes. This development path should maintain, enhance and, where necessary, rebuild natural capital as a critical economic asset and source of public benefits, especially for poor people whose livelihoods and security depend strongly on nature” (UNEP, 2012a, p. 2).

In this broad understanding, a GE thus defined seeks to combine ecological, economic and social goals through green investments and technological innovation that increase resource efficiency, reduce environmental strains, provide new opportunities for economic growth, create new “green” jobs, and contribute to eradicating poverty. While these key tenets are uncontroversial to the extent that they appear universally desirable, manifold interpretations exist (ILO, 2012; OECD, 2011; UNDESA, 2011; UNEP, 2008; UNESCAP, 2012; Urban & Nordensvärd, 2013) and the term thus serves as a “container notion” for a variety of meanings that can change and be re-interpreted according to divergent preferences (Bär, Jacob, & Werland, 2012; Hopwood, Mellor, & O'Brien, 2005). But what would be conceptual boundaries towards the traditional notion of SD, which has been the guiding normative principle of virtually all development activities of the United Nations and global environmental governance for more than two decades since it has been universally endorsed at the United Nations Conference on Environment and Development (UNCED) in Rio in 1992 (Bauer 2013)? SD, to start with, is usually defined as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987, p. 43).

2.2 Green Economy and sustainable development

While GE and SD ultimately pursue similar objectives, some differences between the two concepts can be discerned related to underlying assumptions of causal mechanisms and actor constellations: First, GE proponents emphasize an efficient, functioning and, indeed, growing economy as a precondition for achieving progress in the other two pillars of sustainability because social and environmental concerns are seen as integral parts of economic activity (Halle, 2011, p. 21). By contrast, SD proponents more explicitly highlight poverty reduction and equity as the major goals to be achieved. While in the SD debate the need to protect natural resources and ecosystem services is derived from the need to reduce

² See <http://www.greengrowthknowledge.org/event/moving-beyond-gdp-measuring-inclusive-green-growth-wcere> for an overview of the methodological challenges to capture „inclusive green growth“.

the risk of economic redress and ecological disaster, proponents of green growth additionally highlight that environmental policies can stimulate growth and help to achieve sustainability at low cost (Toman, 2012, p. 2). Second, the most striking difference between SD and GE is, however, the emphasis that is put on the role of public actors, notably governments and bureaucracies, as protagonists of the latter. Not only was this statist emphasis absent from the SD debate, but the latter was deliberately turning to public-private-partnerships to catalyze implementation, notably in the context of the 2002 World Summit on Sustainable Development (e.g. Andonova & Levy, 2003; T. G. Weiss & Thakur, 2010; Witte, Streck, & Benner, 2003). Yet, GE proposals invariably point to public actors as prospective drivers of a GE through various tasks comprising public expenditures on research and development, public investments, sustainable public procurement, accounting for negative externalities, reforming harmful subsidies, using tax instruments that put disincentives on environmental pollution, 'nudging' regulation to favor green practices over business as usual approaches and, ultimately, to establish a legal framework that facilitates GE activity and curbs harmful forms of production and consumption (UNEP, 2012b). At the same time, such action by the state is supposed to mobilize private investment to further propel economic activity that is commensurate to the notion of a GE. Hierarchical steering by a proactive state thus plays a much bigger role as a driver of transformation in the GE concept than in the established SD discourse with its strong emphasis on bottom-up processes and public-private partnerships. This proactive role of the state, however, is assumed rather than systematically analyzed. Yet, it can be read as an attempt to redress "market failures" that became increasingly visible in the wake of the World Summit on Sustainable Development in 2002. In this line of argument GE is considered as a *tool* and a flexible means for achieving the ultimate goal of SD (UNCTAD, 2011a; UNEP, 2011) and – by this – also aims at contributing to "pro-poor growth" (for a detailed overview of the similarity of the two discourses, see our discussion in Bauer et al., 2012).³

2.3 Critical voices

However, the interpretation that GE was the appropriate answer to address the implementation/effectiveness problems of SD politics is only one reading of the story. Indeed, the processes of positioning the GE concept prominently in major documents of global environmental governance have not gone about without contestation from within the inter-state community and from non-state actors. Three main lines of critique can be identified. First, one major concern was that the GE concept suggested solutions still within the conceptual boundaries of macroeconomic growth while actually a substantial transformation of global economic structures, industrial structures and Western consumption patterns in light of limited natural resources was needed to approach issues like climate change, loss of biodiversity and desertification. Hence, critics argued that what was needed was not another

³ A vivid debate has since evolved that focuses on the measurement of these dimensions and that tries to identify specific indicators to assess the essence of a GE, notably in a developed country context (Hirschnitz-Garbers & Srebotnjak, 2012; OECD, 2012; UNEP, 2012c).

twist of the economy but indeed a departure from the market liberal growth paradigm (Brand, 2012a, 2012c; Jackson, 2009, 2011; Wissen, 2012).

Second, and related to the previous aspect, it was minded that Green Economy would renunciate from the social and normative values of SD as justice, equity and human rights do not feature as prominently within this framework but it rather focuses on neutral adjustment of technological and economic parameters that are likely to be more easily achieved in industrialized countries. Critics of the concept have pointed out that - due to the prerogative that is given to the economic sector - GE would give advantage to supposedly “neutral” technological solutions. Thus, many have argued that in comparison to SD, GE discourse was giving short shrift to the equity dimension of development and the corresponding economic needs of developing countries (Brandi, 2012; Dasgupta, 2011; Khor, 2011; Ocampo, 2011; Unmüßig, 2012), proving instead instrumental to prioritize developed countries’ interests of getting out of the current recession. Correspondingly, the term “low carbon development” has been reported to develop stronger appeal with many countries of the so-called global South as compared to the “Western” GE-talk: These points of criticism were particularly raised by Latin American countries:

“Some governmental representatives (such as those from Barbados, Bolivia, Brazil, Ecuador, Nicaragua and Venezuela) opposed to the concept of green economy for various reasons, among them its recognition as an excessively economist approach and because of the rich countries’ technological advantages for the implementation of its policies, the absence of consensus and the perceived threat of privatization of social goods” (ECLAC 2011).

Finally, particularly coastal and small island states criticized the perceived narrowing of the debate to economic growth and to land-use measures that would discard for example ocean values and services. Therefore, small island states but also India strongly advocated for a 'Blue Economy' framework for SD.⁴ A distinctive feature of this rival concept is that it takes a stronger stance on areas (water areas) beyond national jurisdiction – as compared to GE that is implemented within or across national territorial borders:⁵ from this derives that Blue Economy seems to be stronger inclined to problematizing problems of over-consumption and freeriding. In this line it does explicitly target questions of valorization of environmental capital, of access to but also benefit-sharing of ecosystem services, for example in the context of fishery, bioprospecting and oil/mineral extraction. Thus, proponents of this alternative paradigm state that Blue Economy

“[...] conceptualises oceans as “Development Spaces” where spatial planning integrates conservation, sustainable use, oil and mineral wealth extraction, bio-prospecting, sustainable energy production and marine transport. The Blue Economy breaks the mould of the business as usual “brown” development model where the oceans have been perceived as a means of free resource extraction and waste dumping; with costs externalised from economic calculations” (SIDS n.d., 3).

⁴ Various initiatives have already been undertaken to enter into policy-clarification, for example the UNDESA expert group meeting on Oceans, Seas and Sustainable Development, the work of the Global Ocean Commission, the Global Partnership for Oceans and the prominence given to oceans and seas in the UN five-year Action Agenda 2012-2016 (SIDS n.d.). A Blue Economy Summit was held in Abu Dhabi in January 2014.

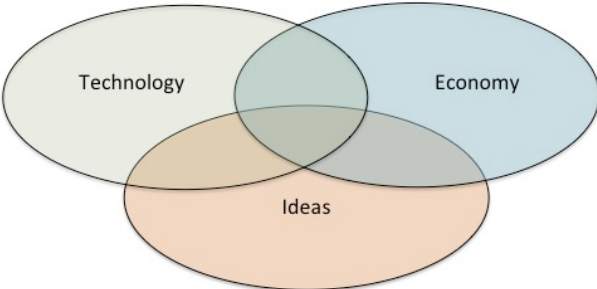
⁵ If not exerted in the High Seas or beyond Exclusive Economic Zones.

At this point it is not possible for us to make a final judgment in terms of which interpretation of the GE concept is right or wrong. Rather, what follows from these diverging assessments is the mandate to analyze which meaning is attributed to the overall issue of sustainability transformations, which understanding of GE (or Blue Economy, for that matter) dominates in a particular context (over rival understandings), and why & how these ideas materialize into specific policies and projects on the ground. Also, multilevel processes between international actors like for example UNEP and the OECD and local/national players should be analyzed in this context. In the same line of argument we argue that corresponding analyses have to be open to capture synergistic as well as trade-off processes *within* and *across* social, economic and ecological dimensions. Unless tangible action follows the GE agendas put forth by UNEP, OECD and others may prove to be mere exercises in “greenwashing” economic business as usual. If they are taken seriously, however, they ultimately call for transformative changes in the structural interactions of societal and natural systems and with profound implications for their social, economic and ecological dimensions. The question thus is whether the highflying initiatives actually meet with commensurate action on the ground. To be able to respond to this, clear-cut indicators to measure sustainability transformations are required. We will come to this in section 4. But before, we will elaborate our analytical framework that we want to employ to trace national causes, dynamics and effects of sustainability transformations. In this undertaking we will focus on the role of the state and national bureaucratic elites as they engage with technological, economic and ideational drivers of change.

3. Analytical framework: bringing the state back in

3.1 Drivers of change

Scholarly literature offers a variety of theoretically informed perspectives and analytical approaches on how transformative processes unfold (Grin, Rotmans, & Schot, 2010; WBGU, 2011). One proved and tested way of classifying transformative change is to differentiate between technological, economic and ideational drivers of change.



Graph 1: Drivers of transformative change

Technological change has often been highlighted as the driving force of large-scale transformative processes leading to post-materialist or green societies. A focus on technological change driving transformative processes have been extensively studied under different terms such as regime transformation (Berkhout, Smith, & Stirling, 2003; Van de Poel, 2003), technological transitions (Geels, 2002), system innovation (Elzen, Geels, & K., 2004) and transition management (Meadowcroft, 2009; Rotmans, Kemp, & Van Asselt, 2001). As an example, the Dutch energy transition process that was started by the government as a “transition management approach” in 2002 is often cited. It is considered remarkable because of its focus on transformative change, its reliance on bottom-up processes and enrolment of business and other non-state actors in introducing new technologies and ideas to drive forward the transformation process. Yet it is also criticized for being elitist and technocratic and for not delivering much on renewable energy and greenhouse gas reductions (Kemp, 2011). The dynamics of such approaches are comprehensively presented by Grins, Rotmans and Schot (Grin et al., 2010) who take a Multi-Level-Perspective on system innovations and transitions, looking at the transformation of dominant socio-technical “regimes” over a long time frame. However, such technological transitions have mostly been analyzed in an OECD context. To date, very little systematic knowledge is available regarding comparable socio-technological transitions in developing country contexts, with the exception of narrow and specific niches, such as the phase out of CFCs under the Montreal Protocol on substances that deplete the ozone layer.

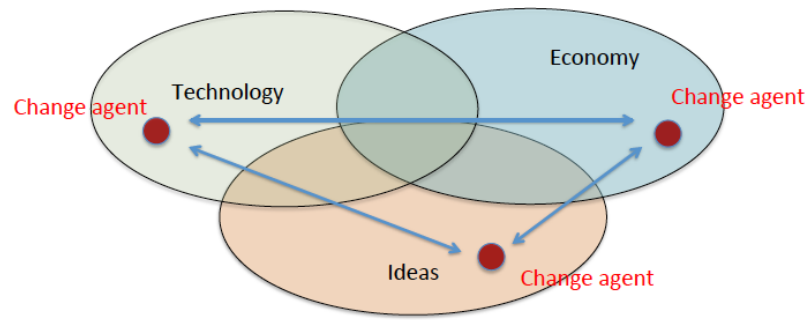
Secondly, and already dating back to the 1980s the liberal perspective of ecological modernization and green growth, being important precursors to the GE, state that transformational change develops bottom-up and stresses how **economic change** in the form of economic growth can lead to green transformations. They have been used in industrialised countries to analyze the mainstreaming of environmental goals into policy-making as a central strategy to achieve SD (Barry, 2005; Christoff, 1996; Fuchs, 2007; Hajer, 1995; Jänicke, 2011; Von Weizsäcker, Lovins, Hunter, & Lovins, 1997). These theories argue that economic growth and environmental protection are compatible and have thus nicely been described as “environmental liberalism” (Bernstein, 2002). Authors in this tradition imply that a transition to a paradigm of sufficiency will take too long in the face of the urgency of environmental problems. Growth is therefore seen as a basis for transformation and a functional necessity, notably in its relation to the build-up of adequate capacities (Jänicke & Weidner, 1997; VanDeVeer & Dabelko, 2001). Yet, it remains to be explored, to what extent this holds true in the context of developing countries and emerging economies as only a few studies debate the relevance of ecological modernization or similar concepts for developing countries and thus the chances and conditions for actual transitions remain poorly understood (Mol, 2006; Peritore, 1999; Richerzhagen & Scholz, 2008).

Thirdly, **ideological change** in terms of changing norms has been highlighted as a driving force behind transformative processes. Norm entrepreneurs have in the last decade been prominent candidates for constructivist scholarship (Finnemore & Sikkink, 1998; see also Hurrell, 2002; Risse, Ropp, & Sikkink, 1999). Recent scholarship has sought to apply the notion of norm entrepreneurship in global environmental politics and the normative influence

of non-state actors, including international bureaucracies (e.g. Biermann & Siebenhüner, 2009; Pettenger, 2007). Some proponents of radical ideological change argue for a new contract for societies which implements cultural change based on social cooperation, new forms of solidarity-based economy (e.g. cooperatives) and departs from the central paradigm of economic growth (Leggewie & Welzer, 2010; Loske, 2012; Paech, 2010). They focus on the innovative forces of the individual to function as a social entrepreneur. For example, emphasizing the necessity of ideological change, Tim Jackson formulates a post-materialist critique of economic growth and instead advocates new concepts of prosperity and well-being. Criticizing the orthodox growth-based economic thinking as well as the “solution” to only decouple resource use from economic growth, Jackson instead argues for setting clear ecological limits, fixing the economic model and changing the social logic that locks people into materialistic consumerism in order to reduce energy consumption in absolute terms (Jackson, 2009, 2011). The ideological transformation towards a GE Jackson envisages finds expression in two main goals: ‘enterprise as service’, i.e. service-based activities that don’t demand material input but mostly support local activities and employ people, and ‘sustainable investment’, meaning social and ecological investments in infrastructure to build a community and to enable ‘enterprise as service’ to function (Jackson, 2012).

3.2 Agents of change

Yet, these factors of change – technological, economic and ideational – do not take effect automatically. They must be considered, responded to, they must be related to specific problem-perceptions and molded into what is perceived as appropriate solutions. Change requires action, and change requires agents. Change agents may be defined as “strategic actors who are (sometimes unconscious) pioneers of social change, spreading an awareness of the chances it offers” (WBGU, 2011, p. 243). They can be single individuals, consumers (Dauvergne, 2008), entrepreneurs (Levy & Newell, 2005) as well as NGOs (Falkner, 2011; Pattberg, 2007), transnational multi-actor governance networks or PPPs (Bäckstrand, Khan, Kronsell, & Lövbrand, 2010; Dingwerth & Pattberg, 2007; Newell, Pattberg, & Schroeder, 2012), or international organizations and their bureaucracies (Bauer, 2006; Biermann & Siebenhüner, 2009) or government officials within states (see below). Recently also subnational entities like communities or cities (Bulkeley, 2012) have been identified as such policy entrepreneurs. Thus, those approaches focusing on technological innovation emphasize the role of individual actors, small groups, organizations and entrepreneurs as decisive change agents introducing and promoting new ideas at the local level while those for those relying more on economic change, private business plays a more decisive role. Still, though, a bias exists in the corresponding literature on ecological transformation, which still focuses to a large extent on the change-inducing capacities of change agents from the OECD world, while only few attempts have been made to systematically capture the drivers or change agents in the global South (exceptions that focus on particular countries are: S. Evans, 1999 for Costa Rica; Sowers, 2012 for Egypt).



Graph 2: Drivers of transformative change and the interaction of change agents

3.3 Reintroducing the (developmental) state as an agent of change

More specifically, also the role of the state and its representatives has rather been neglected in the approaches discussed above. With research focusing on analyses of “governance without government” (Rosenau 1992), by and large the state has not been perceived as having a particularly active role or as being a change agent in its own right. To the contrary, the state is typically assumed to maintain a stable status quo. On the one hand state structures have thus been seen as given and it has been argued, for example, within the literature on ecological modernization that ecological strategies are easier to pursue in social democratic welfare states than in neoliberal ones (Dryzek, Downes, Hunold, Schlosberg, & with Hernes, 2003; MacNeil & Paterson, 2012; Mol & Spaargaren, 2002). On the other hand, the state and its agents have only been analyzed as providing an appropriate ecological framework that the market is unable to create. These weak arguments about a potential contributing role of the state is, however, in contrast to the above discussions about a GE where the state is supposed to play a central role not only in environmental politics.

One major reason for this neglect of the state has been that current state structures are traditionally perceived to be one of the greatest environmental problems, particularly due to their close ties with capitalist development. Only more recently has the ecological transformation literature started to discuss the state as being part of the solution. This new focus mirrors a general new interest in the role of the state as a coordinator that has gained influence in political science and particularly in international relations (Beisheim, Börzel, Genschel, & Zangl, 2011; Börzel, 2010; more recent contributions are Genschel & Zangl, 2008; for a very early perspective, see Skocpol, 1985).

One positive active contribution of the state is its high potential to democratically legitimize green reforms and to thus evolve into a “green state” (Barry, 2008; Christoff, 2005; de Geus, 1996; Eckersley, 2004, 2006; Paehlke, 2005; Paehlke & Torgerson, 2005). Particularly Meadowcroft has furthermore highlighted the strong similarities between the development of welfare states and green reforms in many OECD countries (Gough & Meadowcroft, 2011; Meadowcroft, 2005, 2012). Thus, the state has been highlighted as an important change agent in steering political processes in the environmental realm in OECD countries. So far, research on the role of the state in environmental transformations in the global South is scarce, except when it comes to the exploration of the effectiveness of environmental

authoritarianism as an approach to achieve environmental goals, particularly in China (Beeson, 2010; Gilley, 2012; Schreurs, 2011). An exception are the contributions in Held et al.'s edited volume on *Climate Governance in the Developing World* where the role of state has been identified as one cross-cutting issue (Held et al., 2013a, p. 11). Thus, overall no systematic or comparative investigation on the conditions that enable developing countries to make a difference and driving transformation processes forward is available (exceptions that focus on individual countries are Bryant & Lawrence, 2005 for the Philippines; for Costa Rica, see Lederer, 2014).

While the concept of the “green state” has mainly been applied to developed countries, the idea of the “developmental state” has been used to investigate the role of the state in steering processes of economic development in the global South. The concept of the “developmental state” has been introduced by Johnson who initially investigated the role of the Ministry of Planning in Japan (Johnson, 1982). Others have taken up the term analyzing different countries of South East Asia (Amsden, 1989; P. B. Evans, 1995; Haggard, 1990; Johnson, 1982; Stubbs, 2009; Wade, 2004). The defining feature of a developmental state is not economic success per se but the presence of the following factors (this list draws primarily on Leftwich, 1995, p. 405f; Routley, 2012; Taylor, 2012, p. 466f):

- An *elite* – represented in the government of the respective state – that is pushing for development and a general rise of welfare, i.e. not primarily or exclusively interested in enriching itself. This is, however, typically accompanied by a low level of attention towards redistributive questions (Trubek, 2010).
- A *bureaucracy* that is competent, powerful and above all autonomous from domestic pressures. Evans identified an “embedded autonomy” of the bureaucrats who are capable of steering growth-enhancing policy interventions, e.g. as “custodians” or “midwives” (P. B. Evans, 1995). These interventions include inter alia control over capital allocation, promotion of technological capability building, infant industry protection and preferential access to infrastructure for national champions (Angel & Rock, 2009, p. 232).
- Effective management of *non-state economic interests* and access of economic players, particular key capitalists to the state without complete capture (Johnson, 1982). This has generally left to an export orientation and a selective opening towards foreign direct investments.
- A weak civil society, but high *output-based legitimacy* of the government within the population.

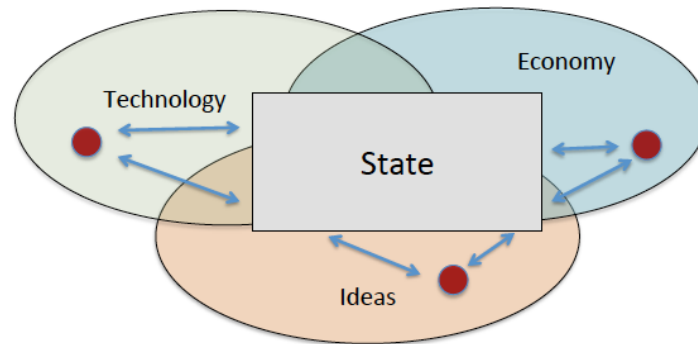
In more recent treatments, Evans (P. B. Evans, 2008) has argued that one of the major challenges for the developmental state will be to engage more with “bottom-up” processes and societal influences on the state.⁶ This would open up the developmental state discussion to older sociological approaches that differentiate between weak and strong states – also in regard to transnational pressure groups – and the resulting (missing) capabilities of its elites also in the global South (Migdal, 1988; for a more recent contribution, see Schlichte, 2005).

⁶ This would bring the literature on developmental states closer to those who analyze the growing role of the “regulatory state” in the global South (Dubash & Bronwen, 2012; Jordana, 2011). The strong focus of this literature almost exclusively on regulatory agencies and their role in the setting-up of infrastructure like water, telecommunication or electricity is, however, too narrow for our analysis of a GE.

In such a perspective state agents might have a more catalytic role and should be less seen as the only ones initiating change – nevertheless governmental change agents are still central. We will therefore investigate whether states – that have the above characteristics and thus have historically been able not only to grow but also to push economic development onto certain paths – are also inclined and able to emerge as a change agent towards a GE.

What can be said in general, though, is that the debate on the developmental state has mirrored a general discussion within the social sciences of whether to bring “the state back in” (Skocpol, 1985; Tilly, 1990) and was most prominently directed against the idea of market liberalism as for example pushed by the World Bank (for an overview of the debate, see Wade, 2004). The role of the state has also been assessed specifically with view to sustainability processes. Thus, elements of a developmental state have been discussed as contributing negatively to Singapore’s (Neo, 2007) and positively to the US’ (MacNeil & Paterson, 2012) environmental policy. Angel and Rock have to our knowledge been the only ones so far who have systematically applied the term of the developmental state to a range of countries’ environmental policies (Angel & Rock, 2009). In particular they argue that not only “effective environmental regulatory capability” comparable to that in the OECD has been set-up in China, Singapore, Taiwan and Thailand but also that more recently “technological learning and industrial upgrading” for environmental purposes compatible with the developmental state tradition has also occurred (Angel & Rock, 2009, p. 231). They also contend that integration of environmental priorities in mainstream institutions of economic development has taken place in developmental states (Angel & Rock, 2009, p. 236).

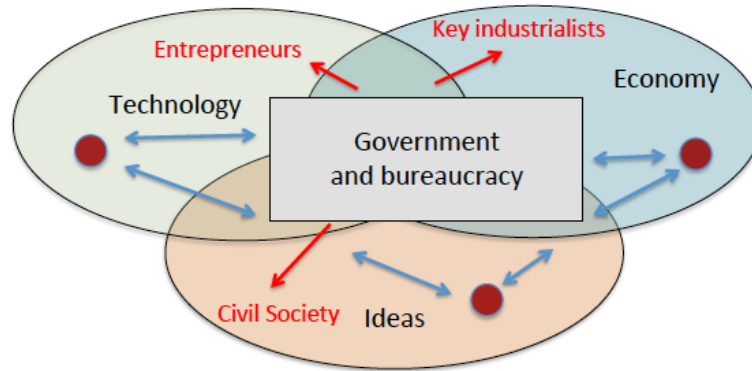
However, so far nobody has related the more encompassing GE concept to the developmental state thus focusing on changes on the policy level regarding e.g. subsidies to environmentally harmful practices, investments in the energy sector etc. Also social achievements such as poverty reduction or the improvement of the education or health system – thus a more holistic perspective on a GE – have not been part of the analysis. Finally, neither have processes around the development state been analyzed with view to the normative and discursive dynamics that might come with them (for example in terms of negotiating different meaning structure in the course of adapting/localizing what has previously been perceived an international or even global norm). Hence, we seek to combine the more recent literature on GE and its call for more state involvement with the literature on ecological transformation that has been rather reluctant to perceive the state as an active change agent by probing whether the state plays indeed a more active role in developmental states of the global South. We will analyze in particular, whether the state takes on a potentially more active role in this process relative to other potential change agents. Accordingly, we focus particularly on assessing the interactions and relationships between the state and other actors in promoting (or encumbering) sustainability transformations. We thus differentiate our approach from liberal approaches that consider the state as an arena of societal preferences (Moravcsik, 1997) as well as from Neo-gramscian perspectives that refer to the state as a condensation of hegemonic power that is derived from the consensus about certain norms and modes of governance among key forces in the economy and society (Gill, 1993: 39).



Graph 3: Drivers of transformative change, the interaction of change agents, and the central role of the state

From our perspective it is plausible to assume that if we find even "developmental states" to be unable to make a difference in transforming the respective countries, then it will be highly unlikely that other states can be decisive drivers in their respective countries. From our preliminary analysis we have already established cases where the government and has explicitly declared that establishing a GE is a major objective for their state. In our empirical analysis we will investigate, which steps are actually undertaken and analyze the following questions that broadly reflect the four functions of the developmental state identified above:

- Does the government and the elites within the country share a vision of a GE? Is there a discussion about potentials and pitfalls to achieve a GE and corresponding incentives? If there are rival concepts, how do deliberations take place and how/which meaning is attributed?
- Does the bureaucracy share the government's vision and is it able to act as a catalyst promoting structures conducive to a GE? Does it intervene to steer the economy into a GE direction and if so, how? To what extent do government agencies "green" their developmental agenda? Do they promote the set-up of "green" infrastructure?
- Are state and bureaucracy open to GE entrepreneurs and do they foster investments, technological innovation, research etc.? How does the state's GE agenda relate to foreign direct investments, export orientation and the role of multi-national firms?
- What role does civil society have? Does it have an alternative agenda or does it support the government's objectives and actions? In how far can state agents act independently from civil society influence and vice versa?



Graph 4: Drivers of transformative change, the interaction of change agents, the central role of the state and motivations for state actors

Providing answers to these questions will allow us to generate more specific hypotheses about the role of the state in bringing about sustainability transformations in the global South.

4. First steps towards an empirical analysis

4.1 Examples of GE activities in countries of the global South

In identifying relevant cases for our project we face two particular challenges: On the one hand, a quantitative approach is at currently not feasible as the data for possible indicators is not comparable. On the other hand, there is only anecdotal but no systematic evidence on existing GE initiatives in developing countries and emerging economies. Various success stories of how developing countries have established GE segments in practice are presented (Held et al., 2013c; UNEP, 2010; Urban & Nordensvärd, 2013). The examples cover a broad range of sectors in a variety of countries, e.g. solar energy in Tunisia, organic agriculture in Uganda or city planning in Brazil. In a report by UNCTAD, Morocco is selected as a showcase for a GE transition (UNCTAD, 2011b). Mulugetta and Urban have also identified various countries that are inclined to pursue a green transformation and observe that various countries of the South have been enthusiastic about low carbon development, e.g. the Maldives or Ethiopia (Mulugetta & Urban, 2010, p. 2). Although all these examples provide interesting insights, they are not selected in a systematic fashion.

We will therefore focus only on the two sectors renewable energy and land-use change to obtain comparable empirical data. As a preliminary step we have gathered available data on what is happening on the ground in these sectors in all those states that are considered developmental states (based on the list of Routley, 2012, p. 8f)⁷. In order to be able to compare countries on a global scale, we identify one developmental state each from the major developing regions Latin America & the Caribbean, Africa and Asia & Pacific. Thus far we have selected Chile, Costa Rica, China and Ethiopia.

⁷ We have eliminated Hong Kong, Isreal, Japan, Singapore and Turkey from Routley's list as they are either too small (Hong Kong, Singapore) or do not have any association with the global South (Isreal, Japan, Turkey).

Regarding Africa an interesting debate has been launched whether it might even be impossible to install a developmental state on the continent. Yet, we have selected Ethiopia as a suitable case study country. Ethiopia is widely perceived as a state where developmental state characteristics have been visible and seem to have become more significant within the last couple of years. Land-use change, particularly resulting from deforestation, is a major issue and Ethiopia is actively involved in REDD+, a member of the World Bank's FCPF and a partner country of UN REDD. The country has also been strongly involved in setting up renewable energy projects and has very explicitly claimed to use "green strategies" for development and to strive for a zero-emissions policy in its domestic energy production (Held, Roger, & Nag, 2013b).

Considering "developmental states" in Latin America also requires careful differentiation and justification. Evans (P. B. Evans, 1995) mentions Brazil and Sandbrook et al. identify Costa Rica and Chile as social democratic developmental states (Sandbrook, Edelman, Heller, & Teichman, 2007). Amsden points to Argentina as a failed attempt to set-up a developmental state (Amsden, 2001). We have selected Chile and Costa Rica as most suitable to our purpose. Notably, both have been very active promoters of the GE discourse. Chilean governments – from right to left – have also been quite activist in promoting economic development starting in the phase of "radical mobilization" under Frei and Allende (1964-1973) through the military dictatorship under Pinochet (1973-1989) up to the more recent phase of "concertación". Sandbrook et al. show quite convincingly that even "during the free-market heyday of military rule" the state had an "important role" to play in "state-led industrial transformation", in particular the promotion of exports, e.g. in the forestry sector (see also Kurtz, 2001; Sandbrook et al., 2007, p. 153f). After the fall of Pinochet and the country's democratization, all governments continued to privilege export-led growth and to support the business community while taking social aspects more into account (Sandbrook et al., 2007, p. 165f).

Costa Rica is an interesting case as it has set the goal of becoming the first carbon neutral in the world by 2021 (Fletcher, 2013). And indeed much has been achieved in the field of land-use as the rate of deforestation has gone down tremendously. Thus Costa Rica turned around from the state having the highest rate of deforestation in the Western hemisphere to become a role model (S. Evans, 1999). This can inter alia be explained by a mix of civil society pressure, international incentives as well as by the openness of a national bureaucracy for social and environmental pressure (Lederer, 2014). For Fletcher the explanation of why this took off is a mixture of neoliberal market approaches and the support of a strong state apparatus (Fletcher, 2013, pp. 156, 162).

Selecting an Asian country has proved particularly difficult as for many scholars the developmental state is more or less synonymous with the East Asian state (L. Weiss, 2000). Hence, considerable discussion has been ongoing which of the East Asian states is indeed a proper developmental state or maybe just a semi-developmental state (for an overview of the debate, see Stubbs, 2009, p. 6). Furthermore, some have claimed that the climax of developmental states has been in the 1950s and 60s and that with globalization, the end of the Cold War and the subsequent democratization the period of the development state is

over. While it is widely acknowledged that East Asian states from the 50-70s are almost ideal-type developmental states, we argue that the concept can indeed be broadened to include other states that share similar characteristics in the contemporary period.

In East and South-East Asia two cohorts of developmental states are usually identified. South Korea, Taiwan and Singapore early on followed the example of Japan and initiated successful economic transformations. Taiwan and South Korea are, however, no members of the G-77 and do not consider themselves as belonging to the global South. Singapore is a G-77 member but its economy is rather small and not representative for the region. We thus selected a case from the second tier of developmental states comprising China, Malaysia, Indonesia, the Philippines, Thailand and Vietnam. As China is the most important player out of this group (and beyond) and has a very active GE policy, we chose to include it although we are aware that the sheer size of the country puts it in a category of its own.

4.2 Methodological steps for identifying transformative change in the energy and the land-use sector

It is not possible to simply measure on the basis of existing compiled data whether progress towards a greening of the economy has actually taken place. A move towards GE has to include various sectors or even be cross-sectoral because a sectoral approach might come to selective conclusions that disregard broader developments concerning environmental degradation and poverty (Brand 2012b, 31). UNEP thus identifies ten key economic sectors which are “driving the defining trends of the transition to a GE including increasing human well-being and social equity, and reducing environmental risks and ecological scarcities”, namely agriculture, buildings, energy (supply), fisheries, forestry, industry, tourism, transport, waste and water (UNEP 2011). The German Advisory Council on Global Change (WBGU) speaks of three “key supporting pillars of contemporary global society” (WBGU 2011a, 3) and these are energy systems, urbanization and land-use.

In line of these assessments we assume that it is valid to focus on transformative developments in two sectors that are of relevance particularly in the global South and that are comparable across countries: (1) energy systems and (2) land-use:

1. The supply and use of energy are central to contemporary economies. For the global South the increasing need for energy supplies, large pockets of energy poverty and the massive dependence on fossil fuels, particularly coal, put energy questions at the top of the agenda. Without a change towards a more ecological and social, but still economically viable generation, allocation and use of energy no transformation towards GE is possible. To assess whether change in the energy sector is occurring, we will focus on three proxies: the expansion of renewable energy in relation to total energy production, the deployment of energy efficiency measures, and – in order to reflect the massive amount of energy that is literally fuelling the transport sector – trends in the public transport sector.

2. Land-use systems (agriculture and forestry, including deforestation) account for almost a quarter of global greenhouse gas emissions. Particularly in the global South, where per capita emissions are often comparatively high, deforestation is one of the major drivers of emissions. To map possible changes towards a greening of land-use we will again use three proxies: the expansion of protected areas, the implementation of measures to avoid deforestation,⁸ and the extensification of agriculture.

To build a bridge between international GE discourses about and empirical evidence for corresponding transformations on the ground we intend to investigate the factors shaping transformations in these sectors systematically through case studies. In what we want to see as a bigger project on sustainability transformations in the global South, we aim at identifying such changes in the energy and land-use sector through the following indicators:⁹

Table 1: Measuring progress towards a GE in two sectors across three dimensions

	Economic progress	Ecological progress	Social progress
Energy systems			
→ Renewable energy	Expansion of renewable energy overall/share of RE of total energy production	Ecological damage caused by RE projects (e.g. dams)	Degree of electrification/relative price of energy; progress on the reduction of energy poverty; negative social effects of large scale RE projects like displacement
→ Energy efficiency	Decrease of energy intensity	Decrease of overall energy use	Energy for the (rural) poor
→ Public transport	Expansion of public transport systems/relative to individual transport	Emissions from transport sector	Connection of poor areas to public transport systems
Land-use systems			
→ Areas of nature conservation	Revenue from national parks/ expansion of ecological tourism	Expansion of protected areas	Certification schemes
→ Participation in REDD+	Revenue from SFM and donor flows	Slowing degree of deforestation	Social benefits and provision of livelihoods
→ Extensification of agriculture	Share of organic agriculture	Share of organic agriculture	Social benefits and provision of livelihoods

The quantitative nature of some of the individual indicators has to be corroborated by qualitative evaluations in the local/national context. The set of indicators will then have to be adjusted accordingly to allow for meaningful cross-country analysis.

⁸ Since 2005 discussions under the UNFCCC have tried to include measures of Reducing Emissions from Deforestation and forest Degradation (REDD+) in the climate protection regime and currently more than 100 pilot or readiness projects are currently on-going in various tropical countries (Lederer, 2012).

⁹ Finding the right indicators is not an easy task and classical approaches like a Life Cycle Analysis (LCA) through which the environmental impact of products, services, and industry can be measured (Hirschnitz-Garbers & Srebotnjak, 2012, p. e.g.) is not feasible for our purposes as the material flows are too complex and can at this point not be measured in a comparable way.

5. Concluding remarks and outlook

The aim of our paper was to set the stage for future empirical comparison of transformative national/local processes towards GE activities in countries of the global South (even though the analytical framework developed might well be applied to countries of the global North as well). In doing so, the conclusions drawn from the previous sections have inevitably to be tentative and preliminary.

Above, we have revised the boundaries of a GE approach as put against the traditional approach of SD but also other ideas like low-carbon development. We have shown that the relation between these different images has not gone uncontested at the international level, where the major trend-setting negotiations of Rio+20 in 2012 resulted in the formal adoption of the GE principle as guiding global environmental governance in the future. First empirical insights into developments of actual GE activities on the ground have been presented in relation to our analytical framework that focuses on the influence of national bureaucratic elites for initiating and implementing such transformative change.

With view to further and more encompassing research we have to ask ourselves to what this might all lead up to regarding global governance. More and more scholars as well as practitioners argue that the global level is overrated in its problem-solving capacity and that both normatively and analytically we should move beyond global governance. For example, recent literature in the broader field of International Relations states that global governance faces a “gridlock” (Hale et al., 2013) and that we live in a “No one’s world” where the 21. Century “will belong to no one” (Kupchan, 2012, p. 3) or that it is a “G-Zero World” (Bremmer, 2012). In particular Hale et al.’s contribution shows that gridlock is not only visible in the environmental sector but also in the field of security and economic cooperation and that one major reason why we currently do not make substantial progress in any of these fields is the very success of the post-second World War multilateralism. They argue that bottom-up approaches, particularly including non-state initiatives are the way to go forward.

Green economy approaches in the global South are part of a bottom-up trend in climate politics (together with the official pledge-and-review mechanism and transnational experiments like city initiatives etc.) and thus an important element in how the globe is governed in this particular issue area. Contrary to what Hale et al. expect they are, however, state-driven. It is of course highly questionable whether indeed these GE initiatives mount up to a low-carbon transformation but it is exactly for this reason that we need more systematic and comparative research on what is happening on the ground.

Literature

- Amsden, A. (1989). *Asia's Next Giant: South Korea and Late Industrialization*. New York, NY: Oxford University Press.
- Amsden, A. (2001). *The Rise of 'the Rest': Challenges to the West from Late-Industrializing Economies*. Oxford: Oxford University Press.
- Andonova, L. B., & Levy, M. A. (2003). Franchising Global Governance: Making Sense of the Johannesburg Type II Partnerships. In O. Schram Stokke & O. B. Thommessen (Eds.), *Yearbook of International Co-operation on Environment and Development 2003/2004*. London: Earthscan.
- Angel, D., & Rock, M. T. (2009). Environmental rationalities and the developmental state in East Asia: prospects for a sustainability transition. *Technological Forecasting & Social Change*, 78, 229-240. doi: 10.1016/j.techfore.2008.01.004
- Bäckstrand, K., Khan, J., Kronsell, A., & Lövbrand, E. (2010). The Promise of New Modes of Environmental Governance. In K. Bäckstrand, J. Khan, A. Kronsell & E. Lövbrand (Eds.), *Environmental Politics and Deliberative Democracy: Examining the Promise of New Modes of Governance* (pp. 3-27). Cheltenham
- Edward Elgar.
- Bär, H., Jacob, K., & Werland, S. (2012). Approaching Rio+20: A Survey of Positions and Expectations of Civil Society Organisations in Six European Countries on the Green Economy. Berlin: Environmental Policy Research Centre (FFU), FU Berlin.
- Barry, J. (2005). Ecological Modernisation. In J. S. Dryzek & D. Schlosberg (Eds.), *Debating the Earth: The Environmental Politics Reader* (pp. 303-321). Oxford: Oxford University Press.
- Barry, J. (2008). Towards a Green Republicanism: Constitutionalism, Political Economy, and the Green State. *The Good Society*, 17(2), 3-11. doi: 10.1353/gso.0.0040
- Bauer, S. (2006). Does Bureaucracy Really Matter? The Authority of Intergovernmental Treaty Secretariats in Global Environmental Politics. *Global Environmental Politics*, 6(1), 23-49.
- Bauer, S., Lederer, M., & Siemons, A. (2012). *History Repeating? "Green Economy" and the Global South*. Manuscript. .
- Beeson, M. (2010). The Coming of Environmental Authoritarianism. *Environmental Politics*, 19(2), 276-294.
- Beisheim, M. (2012). *Partnerships for Sustainable Development. Why and How Rio+20 Must Improve the Framework for Multi-stakeholder Partnerships*. Berlin: Stiftung Wissenschaft und Politik.
- Beisheim, M., Börzel, T. A., Genschel, P., & Zangl, B. (2011). *Wozu Staat? Governance in Räumen begrenzter und konsolidierter Staatlichkeit*. Baden-Baden: Nomos.
- Berkhout, F., Smith, A., & Stirling, A. (2003). Socio-Technological Regimes and Transition Contexts *SPRU Electronic Working Paper Series*. Brighton: University of Sussex.
- Bernstein, S. (2002). Liberal Environmentalism and Global Environmental Governance. *Global Environmental Politics*, 2(3), 1-16.
- Biermann, F., & Siebenhüner, B. (Eds.). (2009). *Managers of Global Change. The Influence of International Environmental Bureaucracies*. Cambridge, MA: MIT Press.
- Börzel, T. A. (2010). Governance With or Without the State? In M. Loughlin & P. Dobner (Eds.), *The Twilight of Constitutionalism* (pp. 73-88). Oxford: Oxford University Press.
- Brand, U. (2012a, 15.05.2012). Das Grüne Versprechen. *taz*. Retrieved from <http://www.taz.de/1/archiv/archiv?dig=2012/05/15/a0098>
- Brand, U. (2012b). Green Economy - The Next Oxymoron? No Lessons Learned from Failures of Implementing Sustainable Development. *GAIA*, 21(1), 28-32.
- Brand, U. (2012c). Schöne Grüne Welt. Über die Mythen der Green Economy. In R. L. Stiftung (Ed.), *luxemburg argumente*. Berlin: Rosa Luxemburg Stiftung.
- Brandi, C. (2012, 6 August 2012). Green trade for sustainable development? Risks and opportunities on the road to a green economy. *The Current Column*.
- Bremmer, I. (2012). *Every Nation for Itself: Winners and Losers in a G-Zero World*. London: Pinguin.
- Bryant, R., & Lawrence, K. (2005). Penitent Destroyer? The Philippine State in Pursuit of Environmental Justice. In J. Barry & R. Eckersley (Eds.), *The State and the Global Ecological Crisis* (pp. 117-135). Cambridge, MA: MIT Press.
- Bulkeley, H. A. (2012). *Cities and Climate Change*. London: Routledge.
- Christoff, P. (1996). Ecological Modernisation, Ecological Modernities. *Environmental Politics*, 5, 476-500.

- Christoff, P. (2005). Out of Chaos, a Shinning Star? Toward a Typology of Green States. In J. Barry & R. Eckersley (Eds.), *The State and the Global Ecological Crisis* (pp. 25-52). Cambridge, MA: MIT Press.
- Dasgupta, C. (2011). Reflections on the relationship between the 'green economy' and sustainable development. In UNCTAD (Ed.), *The Road to Rio+20. For a development-led green economy* (pp. 33-35). New York, NY and Geneva: UNCTAD.
- Dauvergne, P. (2008). *The Shadows of Consumption. Consequences for the Global Environment*. Cambridge, MA: MIT Press.
- de Geus, M. (1996). The Ecological Restructuring of the State. In B. Doherty & M. De Geus (Eds.), *Democracy and Green Political Thought: Sustainability, Rights and Citizenship* (pp. 188-211). London: Routledge.
- Dingwerth, K., & Pattberg, P. (2007). Wirkungen transnationaler Umweltregime. *Politische Vierteljahresschrift, Sonderheft 39: Politik und Umwelt*, 133-156.
- Dryzek, J. S., Downes, D., Hunold, C., Schlosberg, D., & with Hernes, H.-K. (2003). *Green States and Social Movements: Environmentalism in the United States, United Kingdom, Germany, and Norway*. Oxford: Oxford University Press.
- Dubash, N. K., & Bronwen, M. (2012). Understanding the rise of regulatory state of the South. *Regulation & Governance*, 6, 261-281. doi: 10.1111/j.1748-5991.2012.01146.x
- Eckersley, R. (2004). *The Green State: Rethinking Democracy and Sovereignty*. London: MIT Press.
- Eckersley, R. (2006). From the Liberal to the Green Democratic State: Upholding Autonomy and Sustainability. *International Journal of Innovation and Sustainable Development*, 1(4), 266-283.
- Elzen, B., Geels, F. W., & K., G. (Eds.). (2004). *System Innovation and the Transition to Sustainability: Theory, Evidence and Policy*. Cheltenham: Edward Elgar.
- Evans, P. B. (1995). *Embedded Autonomy: State and Industrial Transformation*. Princeton, NJ: Princeton University Press.
- Evans, P. B. (2008). In Search of the 21st Century Developmental State. CGPE Working Paper No. 4. Brighton: Centre for Global Political Economy at the University of Sussex.
- Evans, S. (1999). *The green republic: A conservation history of Costa Rica*. Austin, Tx: University of Texas Press.
- Falkner, R. (2011). Global governance - the rise of non-state actors. EEA Report 4/2011. Copenhagen: European Environment Agency.
- Finnemore, M., & Sikkink, K. (1998). International Norm Dynamics and Political Change. *International Organization*, 52(4), 887-917.
- Fletcher, R. (2013). Making 'Peace with Nature': Costa Rica's Campaign for Climate Neutrality. In D. Held, C. Roger & E.-M. Nag (Eds.), *Climate Governance in the Developing World* (pp. 155-173). Cambridge: Polity.
- Fuchs, D. (2007). *Business Power in Global Governance*. Boulder, CO: Lynne Rienner Publishers.
- Geels, F. W. (2002). Technological Transitions as Evolutionary Reconfiguration Processes: A Multi-Level Perspective and a Case Study. *Research Policy*, 31, 1257-1274.
- Genschel, P., & Zangl, B. (2008). Metamorphosen des Staates - vom Herrschaftsmonopolisten zum Herrschaftsmanager. *Leviathan*, 36(3), 430-454.
- Gill, S. (1993). Epistemology, Ontology and the 'Italian School'. In S. Gill (Ed.), *Gramsci, Historical Materialism and International Relations* (pp. 21-48). Cambridge: Cambridge University Press.
- Gilley, B. (2012). Authoritarian Environmentalism and China's Response to Climate Change. *Environmental Politics*, 21(2), 287-307.
- Gough, I., & Meadowcroft, J. (2011). Decarbonizing the Welfare State. In J. S. Dryzek, R. B. Norgaard & D. Schlosberg (Eds.), *The Oxford Handbook of Climate Change and Society* (pp. 490-503). Oxford: Oxford University Press.
- Grin, J., Rotmans, J., & Schot, J. (2010). *Transitions to Sustainable Development. New Directions in the Study of Long Term Transformative Change*. London: Routledge.
- Haggard, S. (1990). *Pathways from the Periphery: The Politics of Growth in the Newly Developing Countries*. Ithaca, NY: Cornell University Press.
- Hajer, M. A. (1995). *The Politics of Environmental Discourses. Ecological Modernization and the Policy Process*. Oxford: Oxford University Press.
- Hale, T., Held, D., & Young, K. (2013). *Gridlock. Why Global Cooperation Is Failing When We Need It Most*. Cambridge: Polity.
- Halle, M. (2011). Accountability in the Green Economy. In H. Selin & A. Najam (Eds.), *Beyond Rio+20: Governance for a Green Economy* (pp. 19-24). Boston: Frederick S. Pardee Center, Boston University.

- Held, D., Roger, C., & Nag, E.-M. (2013a). Editors' Introduction: Climate Governance in the Developing World. In D. Held, C. Roger & E.-M. Nag (Eds.), *Climate Governance in the Developing World* (pp. 1-28). Cambridge: Polity.
- Held, D., Roger, C., & Nag, E.-M. (2013b). Ethiopia's Path to a Climate-Resilient Green Economy. In D. Held, H. Rogall & E.-M. Nag (Eds.), *Climate Governance in the Developing World* (pp. 218-237). Cambridge: Polity.
- Held, D., Roger, C., & Nag, E.-M. (Eds.). (2013c). *Climate Governance in the Developing World*. Cambridge: Polity.
- Hirschnitz-Garbers, M., & Srebotnjak, T. (2012). Integrating Resource Efficiency, Greening of Industrial Production and Green Industries - Scoping of and Recommendations for Effective Indicators. In R. A. Kraemer & S. Müller-Kraenner (Eds.), *Ecologic Briefs on International Relations and Sustainable Development*. Berlin: Ecologic Institute.
- Hopwood, B., Mellor, M., & O'Brien, G. (2005). Sustainable Development: Mapping Different Approaches. *Sustainable Development*, 13(1), 38-52.
- Hurrell, A. (2002). Norms and Ethics in International Relations. In W. Carlsnaes, T. Risse & B. A. Simmons (Eds.), *Handbook of International Relations* (pp. 137-154). Thousand Oaks, CA: Sage.
- ILO. (2012). Green Jobs. Retrieved 15.05.2012, from <http://www.ilo.org/global/topics/green-jobs/lang-en/index.htm>
- Jackson, T. (2009). *Prosperity Without Growth: Economics for a Finite Planet*. London: Earthscan.
- Jackson, T. (2011). Societal Transformations for a Sustainable Economy. *Natural Resources Forum*, 35, 155-164.
- Jackson, T. (2012, 03.12.2012). *Where is the Green Economy? Prosperity, Sustainability and Work – 'After the Crisis'*. Paper presented at the TU Berlin Climate Lecture: "Green Growth" in the Global Crisis – Fairytale or Strategy?, Berlin.
- Jänicke, M. (2011). "Green Growth": From a Growing Eco-Industry to a Sustainable Economy. Berlin: Environmental Policy Research Centre (FFU), FU Berlin.
- Jänicke, M., & Weidner, H. (Eds.). (1997). *National Environmental Policies: A Comparative Study of Capacity-Building*. Berlin: Springer.
- Johnson, C. (1982). *MITI and the Japanese Miracle: The Growth of Industry Policy 1925-1975*. Stanford, Ca: Stanford University Press.
- Jordana, J. (2011). The Institutional Development of the Latin American Regulatory State. In D. Levi-Faur (Ed.), *Handbook on Regulation* (pp. 156-170). Manchester: Edward Elgar Press.
- Kemp, R. (2011). The Dutch Energy Transition Approach. In R. Bleischwitz, P. J. J. Welfens & Z. Zhang (Eds.), *International Economics of Resource Efficiency. Eco-Innovation Policies for a Green Economy* (pp. 187-214). Berlin/Heidelberg: Springer-Verlag.
- Khor, M. (2011). Risks and Uses of the Green Economy Concept in the Context of Sustainable Development, Poverty and Equity. Geneva: South Centre.
- Kupchan, C. A. (2012). *No One's World. The West, the Rising Rest, and the Coming Global Turn*. New York: Oxford University Press.
- Kurtz, M. (2001). State Developmentalism without a Developmental State: The Public Foundations of the "Free Market Miracle" in Chile. *Latin American Politics and Society*, 43(2), 1-25. doi: 10.2307/3176969
- Lederer, M. (2012). REDD+ governance. *Wiley Interdisciplinary Reviews: Climate Change*, 3(1), 107-113. doi: 10.1002/wcc.155
- Lederer, M. (2014). *Green and social? Social and green? Exploring the link of the welfare state/ green state in non-OECD countries*. Unpublished Manuscript.
- Leftwich, A. (1995). Bringing politics back in: Towards a model of the developmental state. *The Journal of Development Studies*, 31(3), 400-427. doi: 10.1080/00220389508422370
- Leggewie, C., & Welzer, H. (2010). Another "Great Transformation"? Social and cultural consequences of climate change. *Journal of Renewable and Sustainable Energy*, 2(031009), 1-13. doi: 10.1063/1.3384314
- Levy, D. L., & Newell, P. (2005). *The Business of Global Environmental Governance*. Cambridge, MA: Massachusetts Institute of Technology.
- Loske, R. (2012). *Wie weiter mit der Wachstumsfrage?* Marburg: Basiliken-Presse/Natur & Text.
- MacNeil, R., & Paterson, M. (2012). Neoliberal Climate Policy: From Market Fetishism to the Developmental State. *Environmental Politics*, 21(2), 230-247.
- Meadowcroft, J. (2005). From Welfare State to Ecostate. In J. Barry & R. Eckersley (Eds.), *The State and Global Ecological Crisis* (pp. 3-24). London: MIT Press.
- Meadowcroft, J. (2009). What About the Politics? Sustainable Development, Transition Management, and Long Term Energy Transitions. *Policy Sci*, 42, 323-340.

- Meadowcroft, J. (2012). Greening the State? In P. F. Steinberg & S. D. VanDeveer (Eds.), *Comparative Environmental Politics. Theory, Practice, and Prospects* (pp. 63-87). Cambridge, MA: MIT Press.
- Migdal, J. S. (1988). *Strong Societies and Weak States: State-Society Relations and State Capabilities in the Third World*. Princeton, NJ: Princeton University Press.
- Mol, A. P. J. (2006). Environment and Modernity in Transitional China: Frontiers of Ecological Modernization. *Development & Change*, 37(1), 29-56.
- Mol, A. P. J., & Spaargaren, G. (2002). Ecological Modernisation and the Modern State. In A. Mol & F. Buttel (Eds.), *The Environmental State Under Pressure* (pp. 33-52). Amsterdam: Elsevier.
- Moravcsik, A. (1997). Taking Preferences Seriously: A Liberal Theory of International Politics. *International Organization*, 51(4), 513-553.
- Mulugetta, Y., & Urban, F. (2010). Deliberating on Low Carbon Development. *Energy Policy*, 38(12), 7546-7549.
- Neo, H. (2007). Challenging the developmental state: Nature conservation in Singapore. *Asia Pacific Viewpoint*, 48(2).
- Newell, P., Pattberg, P., & Schroeder, H. (2012). Multiactor Governance and the Environment. *Annual Review of Environment and Resources*, 37, 365-387. doi: 10.1146/annurev-environ-020911-0945659
- Ocampo, J. A. (2011). The Transition to a Green Economy: Benefits, Challenges and Risks from a Sustainable Development Perspective. Summary of Background Papers *Report by a Panel of Experts to Second Preparatory Committee Meeting for United Nations Conference on Sustainable Development* (pp. 3-15).
- OECD. (2011). *Towards Green Growth*: OECD.
- OECD. (2012). *Energy*, OECD Green Growth Studies. Paris: OECD.
- Paech, N. (2010). Die Legende vom nachhaltigen Wachstum. *Le Monde diplomatique*, pp. 12-13. Retrieved from http://www.monde-diplomatique.de/pm/2010/09/10/a0065.text.name.n_0
- Paehlke, R. (2005). Democracy and Environmentalism: Opening a Door to the Administrative State. In J. S. Dryzek & D. Schlosberg (Eds.), *Debating the Earth: The Environmental Politics Reader* (2nd ed., pp. 163-179). Oxford: Oxford University Press.
- Paehlke, R., & Torgerson, D. (Eds.). (2005). *Managing Leviathan: Environmental Politics and the Administrative State*. Toronto: University of Toronto Press.
- Pallemaerts, M. (2003). International Law and Sustainable Development: Any Progress in Johannesburg? *Review of European Community and International Environmental Law*, 12(1), 1-11.
- Pattberg, P. (2007). *Private Institutions and Global Governance: The New Politics of Environmental Sustainability*. Cheltenham: Edward Elgar Publishing.
- Peritore, N. P. (1999). *Third World Environmentalism: Case Studies from the Global South*. Gainesville: University Press of Florida.
- Pettenger, M. (Ed.). (2007). *The Social Construction of Climate Change: Power, Knowledge, Norms, Discourses*. Hampshire, : Ashgate.
- Richerzhagen, C., & Scholz, I. (2008). China's capacities for mitigating climate change. *World Development*, 36(2), 308-324.
- Risse, T., Ropp, S. C., & Sikkink, K. (Eds.). (1999). *The Power of Human Rights: International Norms and Domestic Change*. Cambridge: Cambridge University Press.
- Rotmans, J., Kemp, R., & Van Asselt, M. (2001). More Evolution Than Revolution: Transition Management in Public Policy. *Foresight*, 3(1), 15-31.
- Routley, L. (2012). *Developmental states: a review of the literature*. Manchester: Effective States and Inclusive Development Research Centre (ESID); University of Manchester.
- Sandbrook, R., Edelman, M., Heller, P., & Teichman, J. (2007). *Social Democracy in the Global Periphery*. Cambridge: Cambridge University Press.
- Schlichte, K. (2005). *Der Staat in der Weltgesellschaft. Politische Herrschaft in Asien, Afrika und Lateinamerika*. Frankfurt a.M.: Campus Verlag.
- Schreurs, M. A. (2011). Climate Change Politics in an Authoritarian State: The Ambivalent Case of China. In J. S. Dryzek, R. B. Norgaard & D. Schlosberg (Eds.), *The Oxford Handbook of Climate Change and Society* (pp. 449-463). New York: Oxford University Press.
- Skocpol, T. (1985). Bringing the State Back In: Strategies of Analysis in Current Research. In P. B. Evans, D. Rueschemeyer & T. Skocpol (Eds.), *Bringing the State Back In* (pp. 3-43). Cambridge: Cambridge University Press.
- Sowers, J. (2012). *Environmental Politics in Egypt. Activists, Experts and the State*. London: Routledge.
- Speth, J. G. (2003). Perspectives on the Johannesburg Summit. *Environment*, 45(1), 24-29.

- Stubbs, R. (2009). What ever happened to the East Asian Developmental State? The unfolding debate. *The Pacific Review*, 22(1), 1-22. doi: 10.1080/09512740802650971
- Taylor, I. (2012). Botswana as a 'Development-Oriented Gate-Keeping State': A Response. *African Affairs*, 111(444), 466-476. doi: 10.1093/afraf/ads031
- Tilly, C. (1990). *Coercion, Capital and European States, 990-1990*. Cambridge: Blackwell.
- Toman, M. (2012). "Green Growth": An Exploratory Review *Policy Research Working Paper*. Washington: The World Bank, Development Research Group.
- Trubek, D. M. (2010). *Developmental States and the Legal Order. Towards a New Political Economy of Development*. University of Wisconsin-Madison.
- UNCTAD. (2011a). Building a development-led green economy. Policy brief 23. Geneva: UNCTAD.
- UNCTAD. (2011b). The Road to Rio+20. For a development-led green economy. New York, NY and Geneva: UNCTAD.
- UNDESA. (2011). World Economic and Social Survey 2011: The Great Green Technological Transformation. New York: UNDESA.
- UNEP. (2008). Green Jobs: Towards Decent Work in a Sustainable, Low-Carbon World. UNEP, ILO, IOE, ITUC Green Jobs Initiative: Worldwatch Institute.
- UNEP. (2010). Green Economy. Developing Country Success Stories. Nairobi: UNEP.
- UNEP. (2011). Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication. A Synthesis for Policy Makers: UNEP.
- UNEP. (2012a). About Green Economy Initiative. Retrieved 15.05.2012, from <http://unep.org/greeneconomy/AboutGEI/WhatisGEI/tabid/29784/Default.aspx>
- UNEP. (2012b). Green Economy - Frequently Asked Questions. Retrieved 15.05.2012, from <http://www.unep.org/greeneconomy/AboutGEI/FrequentlyAskedQuestions/tabid/29786/Default.aspx>
- UNEP. (2012c). Green Economy Briefing Paper: Metrics & Indicators. Geneva: UNEP.
- UNESCAP. (2012). Low Carbon Green Growth Roadmap for Asia-Pacific. Retrieved 15.05.2012, from <http://www.unescap.org/esd/environment/lcgg/index.asp>
- Unmüßig, B. (2012). Grüne Ökonomie - die neue Zauberformel? *Vereinte Nationen*, 1/2012, 3-9.
- Urban, F., & Nordensvärd, J. (Eds.). (2013). *Low Carbon Development. Key Issues*. Milton Park: Routledge.
- Van de Poel, I. (2003). The Transformation of Technological Regimes. *Research Policy*, 32, 49-68.
- VanDeVeer, S. D., & Dabelko, G. D. (2001). It's Capacity, Stupid: International Assistance and National Implementation. *Global Environmental Politics*, 1(2), 18-29.
- Von Weizsäcker, E., Lovins, A., Hunter, B., & Lovins, L. (1997). *Factor Four: Doubling Wealth Having Resource Use*. London: Earthscan.
- Wade, R. H. (2004). *Governing the Market: Economic Theory and the Role of Government in East Asian Industrialization* (2nd ed. ed.). Princeton, NJ: Princeton University Press.
- Wapner, P. (2003). World Summit on Sustainable Development: Toward a Post-Jo'burg Environmentalism. *Global Environmental Politics*, 3(1), 1-10.
- WBGU. (2011). World in Transition: A Social Contract for Sustainability. Berlin: WBGU.
- WCED, W. C. o. E. a. D. (1987). *Our Common Future*. Oxford: Oxford University Press.
- Weiss, L. (2000). Developmental States in transition: adapting, dismantling, innovating, nor 'normalizing'. *The Pacific Review*, 13(1), 21-56.
- Weiss, T. G., & Thakur, R. (2010). *Global Governance and the UN. An Unfinished Journey*. Bloomington: Indiana University Press.
- Wissen, M. (2012). Post-Neoliberale Hegemonie? Zur Rolle des Green-Economy-Konzepts in der Vielfachkrise. *Kurswechsel*, 2(forthcoming).
- Witte, J. M., Streck, C., & Benner, T. (2003). The Road from Johannesburg: What Future for Partnerships in Global Environmental Governance *Progress or Peril? Partnerships and Networks in Global Environmental Governance. The Post-Johannesburg Agenda* (pp. 59-84). Berlin: Global Public Policy Institute