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EDITORIAL

## Editorial

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**Abstract** This special issue addresses the analytical problem of agency in earth system governance, an analytical problem that begins with the assumption that the credibility, stability, adaptiveness, and inclusiveness of earth system governance is affected by a wide range of actors, including national governments and their bureaucracies as well as the growing population of non-state actors such as environmental organizations, expert networks, and corporations. The articles included in this special issue engage with questions of agency in earth system governance from several different theoretical perspectives, complemented by unique empirical cases and/or methodological approaches. Along the way, the authors confront some of the conceptual challenges associated with the study of agency and advance our understanding of this important governance challenge.

**Keywords** Agency · Earth system governance · Social entrepreneurs · Clean development mechanism · Global environmental consultancies

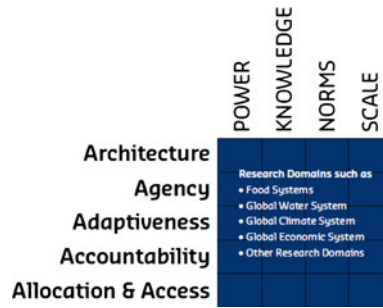
Nearly a decade ago, the international scientific community acknowledged that the earth system now operates “well outside the normal state exhibited over the past 500,000 years” and that “human activity is generating change that extends well beyond natural variability—in some cases alarmingly so—and at rates that continue to accelerate” (ESSP 2001). There is an urgent need to establish effective strategies for mediating the relationship between humans and the natural world. Existing institutions, organizations, and

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**Fig. 1** Earth System Governance Project's Conceptual Framework

governance mechanisms are insufficient and/or have contributed to unprecedented global environmental problems, such as climate change and biodiversity loss. The perennial question from a social science perspective is how to organize the co-evolution of societies and their surrounding environment and, in other words, how to develop effective and equitable governance solutions for today's most pressing global problems.

This is the rationale for the Earth System Governance Project, a new long-term research program developed under the auspices of the International Human Dimensions Programme on Global Environmental Change.<sup>1</sup> In this project, "earth system governance" is defined as "the interrelated and increasingly integrated system of formal and informal rules, rule-making systems, and actor-networks at all levels of human society (from local to global) that are set up to steer societies toward preventing, mitigating, and adapting to global and local environmental change and, in particular, earth system transformation, within the normative context of sustainable development" (Biermann et al. 2009, p. 4). The project's science plan is organized around five analytical problems (Fig. 1). *Architecture* relates to the emergence, design, and effectiveness of governance arrangements. *Agency* addresses questions of authority, in short, who governs the earth system and how. *Adaptiveness* research explores the ability of governance systems to change in the face of new knowledge and challenges as well as to enhance adaptiveness of social–ecological systems in the face of major disturbances. *Accountability* refers to the democratic quality of environmental governance arrangements, while *allocation and access* concern justice, equity, and fairness. These analytical problems are united by the crosscutting themes of power, knowledge, norms, and scale, which reflect broader theoretical concerns within the social sciences.<sup>2</sup>

This special issue of *International Environmental Agreements: Politics, Law and Economics* addresses the analytical problem of *agency* and is among the very first publications that explicitly responds to the science plan of the Earth System Governance Project. The articles included in this special issue were originally presented at the Amsterdam Conference on the Human Dimensions of Global Environmental Change in December 2009 and were subsequently discussed and reviewed at an author workshop held in May 2010. The authors engage questions of agency in earth system governance from several different theoretical perspectives, complemented by unique empirical cases and/or

<sup>1</sup> See <http://www.earthsystemgovernance.org/>.

<sup>2</sup> See the Special Issue on Earth System Governance in *International Environmental Agreements: Politics, Law and Economics* (Biermann et al. 2010).

methodological approaches. We have opted for a broad empirical representation of agents and agency in earth system governance, giving equal room to novel cases and established agents/agency. In this short editorial, we provide the context for these diverse contributions by introducing the analytical problem of agency while briefly discussing previous research that touches upon agency in global environmental politics.

## 1 Agency in earth system governance

The analytical problem of agency begins with the assumption that credible, stable, adaptive, and inclusive earth system governance is affected by a wide range of actors including national governments and their bureaucracies as well as the growing population of non-state actors such as environmental organizations, expert networks, and corporations.

In this context, some of the key questions addressed by existing research on agency concern the implications of environmental change for the roles of public as well as private actors. Accelerating environmental change may challenge the state's capacity to govern (Biermann and Dingwerth 2004; Bulkeley and Newell 2010; Marauhn 2007), while private and civil society actors are increasingly recognized as agents in their own right with significant potential influence on decision-making, but also independent rule-making (Betsill and Corell 2008; Pattberg and Stripple 2008; Okereke et al. 2009). Furthermore, such changes inevitably have implications for the basis on which agents become authoritative, their legitimacy, and what is considered effective agency (Bäckstrand 2006; Dingwerth and Pattberg 2007; Fuchs and Kalfagianni 2009; Gulbrandsen 2009). The contributions to this special issue build on these and other examples of existing research in this field but offer a number of interesting new insights and avenues for future research.

## 2 Overview of contributions

Contributions to this special issue address the several empirical manifestations of agency in earth system governance. Along the way, the authors confront some of the conceptual challenges associated with the study of agency and advance our understanding of this important governance challenge.

First, Rindeljäll and colleagues (2011) analyze the Clean Development Mechanism (CDM) of the Kyoto Protocol, which enables a developed country to use emission reductions from a project implemented in a developing country to count toward its own binding target. With regard to agency, the CDM is often framed as a shift in environmental policy making toward market liberalism, where the governance of the CDM involves 'agency beyond the state' at different political levels and across various jurisdictions. However, as the authors point out, while such a perspective highlights important characteristics of the CDM, it also disregards the many ways in which states are involved in the CDM, both domestically and at the international level. As a result, in the case of the CDM in Chile, which forms the empirical focus of this contribution, agency is understood to rest with the public domain.

Second, Benecke (2011) also takes climate change governance as the empirical starting point. However, rather than focusing on the state's role in implementing the renewable energy transition in India, Benecke's contribution highlights the shared public-private nature of local stakeholder networks for effective CDM implementation. New modes of agency arise out of the dilemma that both the public sector (i.e., government) and the

private sector (i.e., markets) alone fail to adequately address climate change and human welfare. The case of the Indian wind sector consequently demonstrates that ultimately state-market relations and interactions in evolving stakeholder networks are determinants of how the double challenge of climate change and development is tackled.

Third, Bouteligier (2011) focuses on a new type of agent in global environmental politics: environmental consultancy firms. This contribution theorizes the emergence of novel agency by analyzing how the Information Age makes a knowledge-intensive sector like environmental consultancy gain in strategic importance. Today, private companies are both recipients of, as well as contributors to, the development and spread of environmental practices, norms, standards, and legislation. One sector that seems to be of particular significance is the environmental services industry, as it enables public and private actors to deliver environmental solutions by providing the necessary technology and expertise. On this account, environmental consultancies as key strategic players have gained agency in the area of corporate environmental performance.

In the fourth contribution, Partzsch and Ziegler (2011) focus on a novel type of agent in earth system governance that seems to fit neither in the for-profit nor in the non-profit realm: social entrepreneurs. Consequently, social entrepreneurs are understood as hybrids of business and non-governmental organizations (NGOs) that tackle social and ecological problems with entrepreneurial means. Partzsch and Ziegler (2011) consider them as agents that perform functions and provide services that are traditionally considered to be within the realm of state authority, such as water provision. The study of social entrepreneurship in the water sector demonstrates how these agents become authoritative by implementing alternative or revised approaches to water provision.

In the final contribution, we discuss the ways in which the contributors address some of the key questions about agency as identified in the Earth System Governance Science Plan (Dellas et al. 2011): first, what is agency for earth system governance? Second, who are the agents of earth system governance? Third, how is agency exercised in earth system governance? And fourth, how can we evaluate agents and agency? These questions are closely related to broader interests in the social sciences in general: inquiry concerned with the role of non-state actors in global governance (Okereke et al. 2009; Sending and Neumann 2006); the means by which actors become authoritative (e.g., Barnett and Finnemore 2004; Dimaggio and Powell 1991; Fearon and Wendt 2002; Hawkins et al. 2006); the “structure-agent” debate (Giddens 1984; Wendt 1999); and multi-level governance (e.g. Betsill and Bulkeley 2006; Hooghe and Marks 2003). This special issue concludes by reflecting on how these articles advance our conceptual and empirical understanding of this important governance challenge and what question has emerged as the future research frontier in earth system governance research.

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