Chapter 11
Sustainability: Politics and Governance

Harald Heinrichs and Frank Biermann

Abstract The article gives an overview of global sustainability policy and politics. It is shown how international policy making on sustainable development has progressed from environmental policy toward recent approaches of Earth system governance. Key challenges of international sustainability politics are discussed, and institutional and instrumental options to improve sustainability policy are presented. The article ends with an outlook of the need for cosmopolitan policy making on sustainable development.

Keywords Sustainability policy • Politics • Earth system governance • Cosmopolitanism

1 Sustainable Development as Political Challenge

Development toward a sustainable (world) society remains an ongoing challenge. Numerous global assessments on ecological, economic, and social dynamics published around the 2012 UN Conference on Sustainable Development in Rio de Janeiro ("Rio + 20")[1] indicate, among other things, that global greenhouse gas emissions are increasing, biodiversity loss is accelerating, social inequality is growing, and economic instability threatens societal cohesion and political stability (e.g., United Nations 2013; UNEP 2012; WWF 2012). Looking at long-term ecological, economic, and social developments through key indicators such as population growth, gross domestic product, declining fish stocks, nitrogen input, individual motorized mobility, or even the proliferation of McDonald's restaurants as a proxy for mass consumption, one can observe exponential growth rates from the

[1] Twenty years after the important conference on environment and development in Rio de Janeiro in 1992, the global sustainability community met again in Rio de Janeiro to take stock and look ahead: http://www.uncsd2012.org/

H. Heinrichs (✉)
Institute of Sustainability Governance (INSUGO), Leuphana University, Lüneburg, Germany
e-mail: harald.heinrichs@uni.leuphana.de

F. Biermann
Institute for Environmental Studies, VU University Amsterdam, Amsterdam, Netherlands
e-mail: Frank.biermann@vu.nl

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beginning of the industrial revolution in the eighteenth century (Steffen et al. 2004). Material wealth has globally increased, but it remains highly unequally distributed between and within countries. One key reason for the present unsustainable development is the globalization of resource-intensive economic growth and a consumerist lifestyle. As indicated by numerous data, progress in eco-technological innovations has been far outstripped by economic growth. The positive effects of economic development opened up new opportunities for hundreds of millions of people in emerging countries such as China, Indonesia, Brazil, and Mexico and contributed to economic growth in many developed countries, yet were also accompanied by adverse socioeconomic and ecological effects. Overall, the global community has not succeeded in fulfilling the goal of the 1992 Rio Conference on environment and development: to achieve sustainable development with equal optimization of economic growth, social well-being, and ecological stability.

This balance sheet indicates that the manifold actions taken by business, civil society, and policy making around the world have not managed to reverse fundamentally unsustainable dynamics. In order to better understand why only limited progress on improving sustainability has been made, we describe in the following: first, the emergence of sustainable development as a global political issue and the development from environmental policy to sustainability governance. We then introduce key conceptual perspectives for understanding, analyzing, and framing policy making for sustainable development in a globalized world. We conclude this overview by demonstrating that sustainability needs to be recognized as an essentially *political* issue, which requires policy making in a cosmopolitan perspective.

2 From Environmental Policy to Sustainable Development

The foundations of today's *sustainability policy* are rooted in environmental policy. During the 1960s, environmental problems such as air or water pollution were diagnosed as adverse side effects of industrialization (McNeill 2001). At the same time, the global character of environmental problems became visible: similar environmental problems appeared in all industrialized countries, and it also became clear that environmental pollution did not stay within borders but evolved into a transnational and increasingly global issue. In the 1970s, the first global scenario studies pointed out the limits of nonrenewable resources, as well as natural sinks, with regard to continuous (material) economic growth (Meadows et al. 1972).

The new scientific findings were accompanied by changing values – at first in smaller parts of society – and changing political appraisal, all leading to the development of environmental policies as a distinct policy domain at both national and international levels (Jänicke et al. 2003). New policy principles were formulated and concretized, new institutions were designed, and complex new instruments were developed. Since its beginnings in pioneering countries such as Sweden and

the United States, modern environmental policy has spread and developed through policy learning and diffusion of concepts and approaches around the world.

Over time, limits of first-generation environmental policy instruments and institutions became visible and led to further conceptual developments. It became apparent:

- That sectoral environmental policies were not sufficient to grasp interconnected environmental problems
- That environmental protection in the form of simply cleaning up environmental pollution has its limits
- That questions of social development, such as poverty and demography, are central

Political answers to these questions mark the renewal of environmental policy and the development of sustainable development in the 1980s. Innovations in environmental policies such as policy integration, preventive, production-integrated environmental protection, and strategic environmental policy in the context of ecological modernization (Jänicke 2008) led to more proactive environmental policy making. At the same time, social and economic development challenges gained in relevance. The so-called Brundtland Commission (1984–1987) synthesized these discourses and propagated the idea of "sustainable development," which finally led to the Agenda 21 adopted by 179 states at the 1992 UN Conference on Environment and Development.

These processes in the 1990s constitute the beginning of sustainability policy. Sustainability policy goes beyond environmental policy. Since then, sustainability policy has developed – conceptually, institutionally, and instrumentally – from the local to the national to the international level with varying degrees of ambition and success around the world. Within nation states, as well as internationally, there are significant differences and variations in values, interests, power potentials, and solution orientation regarding (un)sustainability (Meadowcroft 2008). The political debate on sustainable development is coined by heterogeneous interpretations, definitions, and controversies around its concretization (Grunwald and Kopfmüller 2006). Like any other political issues, sustainable development became an object of political struggle. The depth and breadth of societal transformation needed for sustainable development pose significant challenges to sociopolitical decision-making. Despite its complexities, fueled by uncertainty and ambivalent evaluations, a basic conceptual understanding, typical instruments, and institutional approaches have emerged.

In many countries, especially in Europe, a multidimensional understanding of sustainability has become accepted (Swanson et al. 2013). Even though policy content and arenas vary between different policy levels, there is a tendency toward working on interconnected policy issues. This perspective is accompanied by instrumental developments, including new instruments such as sustainability strategies, sustainability assessment, and communicative and cooperative approaches (Box 11.1).

Box 11.1: Analyzing Sustainability Policy: Case Study Germany
What significance does sustainability have in policy making and administration in Germany?

That was the key question asked in a cooperative study between WWF Germany and the Institute for Sustainability Governance at Leuphana University, Lüneburg. Surveys in Germany show that sustainability in policy making – in contrast to official government rhetoric – is prioritized only to a limited degree. Based on interviews within all ministries and document analysis, the study reveals that German sustainability policy is not as good as it seems. Even though there are efforts to cooperate with civil society concerning sustainability challenges, the coordination between ministries is not very developed in daily practice – despite institutions such as the state secretary commission for sustainable development, which has been established to improve the coordination between ministries. The cooperation between the national and state level within the federal German system is even less established. The main reason hereby is the fear of the states that the central government would interfere within state decision-making. The same logic holds for the parliamentary advisory board on sustainable development, where members of other parliamentary commissions fear that the sustainability advisory board could intervene in their domains. However, the cross-cutting and long-term character of sustainability requires exactly this – a higher degree of integration and coordination. Regarding public procurement, the study indicates that aspects of sustainability are partly considered, but in practice too often included only to a limited degree. In sum, all too often is sustainability superseded by more short-term, single-issue priorities in daily policy making in the German government.

(Heinrichs and Laws (2012): Mehr Macht für eine nachhaltige Zukunft. Politikbarometer zur Nachhaltigkeit in Deutschland. WWF, Berlin; Heinrichs et al. 2013) (Fig. 11.1).

Fig. 11.1 WWF study

In order to cope with integrative and long-term challenges of sustainability policy, Agenda 21 already requests all nations to develop sustainability strategies, including goals and indicator systems. Also, sustainability strategies have become a key instrument of sustainability policy around the world (Meadowcroft 2007), and sustainability assessments have gained importance (Grunwald and Kopfmüller 2007) in order to help evaluate policy decisions in advance.

Finally, participative approaches play a significant role (Heinrichs 2011). Sustainable development has been understood from the beginning as a collective search, learning, and collaborative design process. For this, a cooperative, initiating, and moderating state is needed that is willing and able to include non-state actors from business and civil society. On the other hand, more regulative policy instruments – such as mandatory sustainability reporting for the private and public – are much less used. Even though multiple policy instruments, from emission trading up to biosphere reserves, are directly relevant to sustainability, instruments addressing sustainability policy as a cross-cutting and long-term challenge are less developed and implemented and have a tendency to turn into "soft" policies.

Sustainability must be adequately institutionalized in order to become fully effective. Due to its historical links to environmental policy, sustainability policy is often integrated into existing environmental institutions. In some cases, environmental ministries simply became ministries of sustainable development. However, due to the cross-cutting and long-term character of sustainable development, it seems advisable to develop institutional mechanisms that fulfill integrative and coordinative tasks (Lafferty 2004).

In the past years, innovative approaches have been developed and implemented in this regard. On different political-administrative levels, there are coordinating entities on sustainable development, for example, state secretary commissions, parliamentary commissions, or municipal units. At the United Nations level, a "Commission on Sustainable Development" was established in 1992 to monitor and guide the implementation of Agenda 21. In 2012, governments decided to replace this commission, which was widely felt as not having achieved its goals, with a new institution within the UN system that would function at a higher level and have new competences (Biermann 2013).

Overall, institutionalization so far has been too weak and is overall insufficient to make sustainable development a top priority of policy making. The institutional architecture, as well as the existing instruments, seems to be inadequate to drive the sustainability transition as it would be necessary given the ongoing unsustainable trends.

Even though an extension of sectoral environmental policy, beyond environmental policy integration toward integrative sustainability policy, can partly be diagnosed, sustainability is still "in statu nascendi." Short-term pressures for political action pose serious challenges for long-term thinking and action. Importantly, beyond the normative requirements of a strengthened sustainability policy, a more detailed, theory-based understanding of drivers, blockages, and potential solution pathways is needed.

3 Sustainable Development and Earth System Governance

In recent years, the discourse on environmental policy and governance has been further developed into a new perspective that takes the entire Earth system as an object of political efforts: "Earth system" governance. This paradigmatic shift from environmental pollution to an Earth system perspective has been pioneered by the natural sciences. Increased scientific efforts in global research programs, generally supported by vastly increased computing power available to researchers, led to an improved understanding of both the complex interdependencies in the Earth system and the rapidly growing planetary role of the human species. Scientific research brought quickly increasing evidence concerning past developments in planetary history, including the nonlinearity of processes, potentials for rapid system turns, and complex interrelationships between components of the system. The relative stability of the global climate during the Holocene era – the last 10,000 years during which the development of human civilization was brought about – seemed almost a fortunate exception. The Earth system appeared more and more as being marked by interconnectedness and fragility (see, in more detail, Biermann 2014).

Equally visible became the vast and global impact of the human species. The first mass extinctions of larger mammals might be related to early hunter societies. Human influence has grown since the Neolithic revolution with the development of agriculture and husbandry. Today, at the height of industrialization, humanity has fully evolved as a geological force, able to influence global geobiophysical systems (Steffen et al. 2011). This development has been aptly symbolized by Paul Crutzen and Eugene Stoermer's call to declare the end of Holocene and the beginning of a new epoch in planetary history – the Anthropocene.

Earth system governance as a social science paradigm is a response and a reaction to these developments. The notion of Earth system governance accepts the core tenet of these new approaches in science, that is, the understanding of the Earth as an integrated, interdependent system transformed by the interplay of human and nonhuman agency. Yet the focus of Earth system governance is not "governing the Earth," or the management of the entire process of planetary evolution. Earth system governance is different from technocratic visions of what is sometimes referred to as "Earth system management" or even Earth system "engineering."

Instead, Earth system governance is about the human impact on planetary systems. It is about the societal steering of human activities with regard to the long-term stability of geobiophysical systems. As such, Earth system governance is essentially a social science research program within the larger strand of governance theory in the social sciences. Cooperation and, at times, integration with natural science programs are useful and important. Yet the foundation of Earth system governance is firmly within the social sciences.

The notion of Earth system governance now underpins a 10-year global research initiative under the auspices of the International Human Dimensions Programme on Global Environmental Change (IHDP). This initiative – the Earth System Governance Project – was launched in 2009 and is scheduled to last until 2018. The

Project has evolved into a broad, vibrant, and global community of researchers who share an interest in the analysis of Earth system governance and in the exploration of how to reform the ways in which human societies (fail to) steer their coevolution with nature at the planetary scale. More than 2500 colleagues are subscribed to the Earth System Governance newsletter, and about 200 researchers belong to the group of lead faculty and research fellows closely affiliated with the Project. The term "Earth system governance" generates about 400,000 Google hits today.

The Earth system governance research alliance has put forward a science plan that shall help guide research in this domain based on a joint analytical framework (Biermann et al. 2009). This analytical framework revolves around five dimensions of effective governance, which are interrelated yet can be studied apart as well: the analytical problem of *agency* in Earth system governance, including agency that reaches beyond traditional state actors; the overall *architecture* of Earth system governance, from local to global levels; the *accountability* and *legitimacy* of Earth system governance; the problem of (fair) *allocation* in Earth system governance; and, finally, the overall *adaptiveness* of individual governance mechanisms and processes and of the overall governance system (see Biermann 2007; Biermann et al. 2009; Biermann 2014, in more detail).

- ***Questions:*** *What are key differences between environmental, sustainability, and Earth system governance?*
- ***Task:*** *Please investigate current developments in sustainability policy on international, regional, national, state, and municipal levels. Discuss with your fellow students to what extent the current institutions and instruments are effective or not effective in advancing sustainable development.*

4 Sustainability Policy as Cosmopolitan Challenge

Climate change, resource scarcity, volatile economic dynamics, social inequality, and demographic change are interconnected problems of (un)sustainable development. Ambitious sustainability policy is needed in order to approach the so-called great transformation (WBGU 2011).

To some extent, this transformation is happening, as evidenced by the development of environmental policy and its extension toward sustainable development over the past four decades. However, the velocity of transformation is insufficient with regard to the unsustainable trends diagnosed by (natural) sciences. Sustainability policy needs to be further developed. Conceptual approaches and empirical analysis, like the work done within the Earth system governance research alliance, and practical innovations realized in research and development projects open up new perspectives and opportunities. Sustainability policy requires as precondition the systematic institutionalization of sustainability in politics and administration. Sustainability strategies are required with monitoring and reporting systems, structural and procedural elements which allow for horizontal integration of policy fields,

the vertical coordination within the multilevel political-administrative systems, the cooperation with non-state actors as well as the management of diverging forms of knowledge and knowledge claims, as well as the consideration of short-, medium-, and long-term perspectives in decision-making. These basic institutional and instrumental elements challenge some key characteristics of democratic and bureaucratic policy making, e.g., the short-termism in election cycles or the specialization of units in administrations, yet are key to developing and implementing policies for interconnected problems of sustainable development. Even though nation states will need to continue to stand at the center of sustainability policy, it is also becoming clear that sustainability is inherently a cosmopolitan topic. With regard to our globalized and interconnected world, the social sciences also need to go further beyond methodological nationalism and open up international, transnational, and cosmopolitan perspectives.

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