

CURTAIN DOWN AND NOTHING SETTLED

*Global Sustainability Governance after the 'Rio+20'
Earth Summit*

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ABSTRACT

The United Nations Conference on Sustainable Development, held in June 2012 in Rio de Janeiro, was probably the largest event in a long series of mega-summits on environmental protection and sustainable development. Roughly 44000 participants descended on Rio de Janeiro to take part in ten days of preparatory committee meetings, informal consultations, side events, and the actual conference. Yet despite this unprecedented high attendance by participants from governments and civil society, the outcome of the conference is less than what many had hoped for. In this paper, I review the outcomes of the 2012 Rio Conference in detail, with a special focus on its contributions towards the reform of the institutional framework for sustainable development. Following this review, I discuss the way ahead, including whether mega-conferences will continue to play a major role in the governance of our planet.

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SERIES FOREWORD

This working paper was written as part of the Earth System Governance Project, a ten-year research initiative launched in October 2008 by the International Human Dimensions Programme on Global Environmental Change under the overall auspices of the Earth System Science Partnership.

Earth system governance is defined in this Project as the system of formal and informal rules, rule-making mechanisms and actor-networks at all levels of human society (from local to global) that are set up to prevent, mitigate and adapt to environmental change and earth system transformation. The science plan of the Project focuses on five analytical problems: the problems of the overall *architecture* of earth system governance, of *agency* of and beyond the state, of the *adaptiveness* of governance mechanisms and processes, of their *accountability* and legitimacy, and of modes of *allocation and access* in earth system governance. In addition, the Project emphasizes four crosscutting research themes that are crucial for the study of each analytical problem: the role of power, of knowledge, of norms, and of scale. Finally, the Earth System Governance Project advances the integrated analysis of case study domains in which researchers combine analysis of the analytical problems and crosscutting themes. The main case study domains are at present the global water system, global food systems, the global climate system, and the global economic system.

The Earth System Governance Project is designed as the nodal point within the global change research programmes to guide, organize and evaluate research on these questions. The Project is implemented through a Global Alliance of Earth System Governance Research Centres, a network of lead faculty members and research fellows, a global conference series, and various research projects undertaken at multiple levels (see www.earthsystemgovernance.org).

Earth System Governance Working Papers are peer-reviewed online publications that broadly address questions raised by the Project's Science and Implementation Plan. The series is open to all colleagues who seek to contribute to this research agenda, and submissions are welcome at any time at workingpapers@earthsystemgovernance.org. While most members of our network publish their research in the English language, we accept also submissions in other major languages. The Earth System Governance Project does not assume the copyright for working papers, and we expect that most working papers will eventually find their way into scientific journals or become chapters in edited volumes compiled by the Project and its members.

Comments on this working paper, as well as on the other activities of the Earth System Governance Project, are highly welcome. We believe that understanding earth system governance is only feasible through joint effort of colleagues from various backgrounds and from all regions of the world. We look forward to your response.

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*You're thinking, aren't you, that this is no right
 Conclusion to the play you've seen tonight?
 After a tale, exotic, fabulous,
 A nasty ending has slipped up on us.
 We feel deflated too. We too are nettled
 To see the curtain down and nothing settled.
 How could a better ending be arranged?
 Could one change people? Can the world be changed?
 Would new gods do the trick? Will atheism?
 Moral rearmament? Materialism?
 It is for you to find a way, my friends,
 To help good men arrive at happy ends.
 You write the happy ending to the play!
 There must, there must, there's got to be a way!*

BERTOLT BRECHT, *The Good Person from Szechwan* (transl. by Eric Bentley)

1. INTRODUCTION

American industrialist Henry Ford reportedly claimed that it is often our failures that are in the end more successful than our successes. Hopefully this holds as well for the United Nations Conference on Sustainable Development, which was held in June 2012 in Rio de Janeiro. The official outcomes of the conference were welcomed by most observers simply for the fact that a breakdown of negotiations had been prevented. Yet as Zhou Enlai quipped over the French revolution, it is possibly too early to fully assess the long-term impacts of what happened in Rio de Janeiro.

Expectations in many quarters were surely high. Not the least, the 2012 conference in Rio de Janeiro was one in a long line of similar mega-summits that started in 1972 with the Stockholm Conference on the Human Environment, which many see as the starting date of global environmental governance (JORDAN, 2008; BIERMANN AND PATTBURG, 2012; VIEIRA, 2012). Twenty years after Stockholm, governments gathered in Rio de Janeiro for the 1992 United Nations Conference on Environment and

Development (the 'Rio Earth Summit'), which brought about the three 'Rio conventions' on climate and biodiversity and (with a two year delay) on desertification, along with the comprehensive programme of action 'Agenda 21' and the Rio principles. Again ten years later, the 2002 World Summit on Sustainable Development in Johannesburg led to the agreement on over 300 multisectoral partnerships for sustainable development (PATTBERG ET AL., 2012). The 2012 conference stands in this line, forty years after Stockholm and twenty years after the first Rio conference—and hence often referred to as 'Rio+20'.

In terms of sheer numbers, 'Rio+20' was probably the largest event in this long chain of mega-conferences on environmental protection and sustainable development. Roughly 44000 participants descended on Rio de Janeiro to take part in the ten days of preparatory committee meetings, informal consultations, side events, and the actual conference. The intergovernmental part of the mega-gathering attracted representatives of 191 UN member states, including 79 heads of state and government. Five hundred side events were held within the confines of the conference programme, along with about 3000 unofficial events that were organized throughout the city. In light of the vast number of participants, the Brazilian president of the conference, Dilma Rousseff, declared the event to be the most participatory conference in history (ENB 2012). The conference brought about numerous outcomes, from dozens of declarations and statements from civil society organizations to a number of financial pledges from richer countries, such as a U.S. pledge to contribute 20 million U.S. dollars to a new partnership between the United States and African countries, and a pledge by the European Union to mobilize 400 million Euros for sustainable energy projects.

The formal diplomatic outcome of the Rio conference is a non-binding document, titled 'The Future We Want', which was accepted by all governments. This document runs through all areas of sustainable development, from energy to sustainable tourism, sustainable cities and human settlements, health, oceans, the needs of least developed countries, climate change, mountains, mining, gender equality and women's empowerment, and finally the means of implementation. The two main themes of the conference were the 'green economy in the context of sustainable development and poverty eradication' and the 'institutional framework for sustainable development'. It is here that most reform hopes were placed, and probably also where most disappointment can be found.

Overall, despite the unprecedented high level of attendance by participants from governments and civil society, the outcome of the Rio conference is less than what many had hoped for. In the run-up to the Rio+20 conference, together with 31 colleagues I had expressed our hope that governments would 'seize the opportunity in Rio to develop a clear and ambitious roadmap for institutional change and effective sustainability governance within the next decade' (BIERMANN ET AL. 2012, 1306). The outcomes of Rio fell well below these high expectations.

Already the road to Rio was marked with many signposts that did not bode well. To start with, in early 2012 the conference had to be postponed because of a diary-conflict of sorts: the crown jubilee in the United Kingdom, which was highest priority for the

UK prime minister and many heads of state in the Commonwealth. A few weeks later, several leaders of industrialized countries declared their decision not to attend the Rio+20 conference. For example, Germany, Italy, the Netherlands and others decided to send only ministers and not their heads of state or government. Also Canada, Japan, and the United States had only ministers leading their delegations. The British prime minister did not come despite the postponement of the conference due to the crown jubilee of his monarch. And there were reports that the European Parliament would not send representatives because of the high hotel costs in Rio de Janeiro. This lack of interest among OECD countries was not uniform, however. From the European countries, France, Spain and the Scandinavian countries were represented at highest level. From the emerging economies, China, India, and South Africa sent heads of state or government, as did many other developing countries.

After ten days of intense negotiations, the concluding document from the conference shrunk to the least common denominator that all countries could support. The Brazilian delegation, presiding as host over the negotiations, appeared to be most concerned about a breakdown of negotiations and the re-emergence of highly publicized back-room deals, for which the 2009 climate negotiations in Copenhagen had become notorious. Some very controversial paragraphs on trade and environment, for example, were simply deleted from the final document, since no compromise was in sight. The Brazilian strategy worked inasmuch as the final document was accepted by consensus. A complete breakdown of negotiations, or a final declaration that would not find the support of all countries, was thus prevented. The price for this minimalistic approach, however, is that *The Future We Want* is in many ways not more than a reconfirmation of the status quo. It might lead to a future that is disastrous for many, especially in poorer countries. Much-needed major reforms were clearly not on the agenda in Rio.

Has the summit then been in vain? A more positive assessment of the conference would include the preparatory process, especially the two years leading to Rio+20. At many preparatory conferences and dialogues, governments, non-governmental organizations, the science community, the business communities and others were working towards agreement on key issues. There has been progress on the degree of consensus regarding the state of the planet, as well as increasing consensus on the core agenda to be further negotiated by governments. This process itself can be seen as an important element in furthering a reform agenda towards sustainable development. Yet this is clearly not enough.

In this paper, I first review the outcomes of the 2012 Rio Conference, with a special focus on its contributions towards the reform of the institutional framework for sustainable development. In the second part of the paper, I discuss the way ahead, including whether mega-summits will continue to play a major role in earth system governance.

2. A VIEW FROM THE SUMMIT: OUTCOMES OF THE RIO+20 CONFERENCE

2.1 RECREATING AGENCY: THE SNAIL PATH TOWARDS A WORLD ENVIRONMENT ORGANIZATION

An area of intense debate since the 1972 Stockholm Conference has been the institutionalization of the ‘environmental pillar’ of the United Nations system (ELLIOTT, 2005; GUPTA, 2005). In 1972, governments created a specialized programme within the UN organization, the United Nations Environment Programme (UNEP). UNEP is based in Nairobi with a modest budget and limited mandate. Originally it was conceived as the environmental consciousness and as a catalyst for environmental action within the United Nations system. Yet, many observers have argued that the small programme has not been able to live up to these expectations (ANDRESEN AND ROSENDAL, 2009; IVANOVA, 2010; BAUER, 2009, 2013). According to a recent analysis by the UN Joint Inspection Unit, international environmental governance is ineffective because it lacks ‘a common mechanism to resolve contradictions among MEAs [multilateral environmental agreements] ... [and] a framework for common administrative, financial, and technical support services to promote synergies between UN agencies and MEAs’ (JOINT INSPECTION UNIT, 2008, AT 15). Most international environmental treaties that are administered by the United Nations have their own secretariats—a practice that has been judged by the UN Joint Inspection Unit (2008) ‘rather exceptional under existing institutional arrangements for multilateral conventions within the United Nations system’. Just as within countries, where environmental policy was strengthened through establishment of specialized environmental ministries, also global environmental governance could be made stronger through a ‘world environment organization’ that helps to contain the special interests of individual programmes and organizations and to limit duplication, overlap and inconsistencies.

Since the 1980s, calls for the replacement of UNEP by a full-fledged international environmental agency have been repeatedly made in the academic literature and policy debates (see for overviews of the debate BIERMANN, 2000; BIERMANN AND BAUER, 2005; VIJGE, 2012). Today there seems to be wide support among experts for a world environment organization (BIERMANN ET AL., 2012, P. 1306). This proposal is backed by over fifty countries, including all members of the European Union (EUROPEAN UNION, 2011). In 2010, a Consultative Group of Ministers or High-level Representatives on International Environmental Governance (PARA. 13) identified ‘a specialized UN agency such as a world environment organization’ as one of three ‘potential options for strengthening the form of the environmental pillar in the context of sustainable development and achieving effective international environmental governance’ (the others being merely ‘enhancing UNEP’ and ‘enhanced institutional reforms and streamlining’). A more recent High Level Dialogue on Institutional

Framework for Sustainable Development, hosted by Indonesia on 19-21 July 2011 in Solo, concluded that there is now ‘a greater willingness by all groups of countries to explore the question of a specialized agency status [for UNEP]’ (HIGH LEVEL DIALOGUE ON INSTITUTIONAL FRAMEWORK FOR SUSTAINABLE DEVELOPMENT, 2011, PARA. 13). At Rio+20, this specialized agency status was supported by the member states of the European Union as well as the African Union and a number of other developing countries. However, resistance remained strong from the United States, Japan, Russia and even Brazil, which had earlier been a supporter of a world environment organization but now seemed afraid of an imbalance in favour of the environmental pillar of sustainable development (BASTOS LIMA, 2012). These countries argued that this question requires further debate and analysis.

In the concluding document, governments in Rio merely committed ‘to strengthening the role of the United Nations Environment Programme as the leading global environmental authority that sets the global environmental agenda, that promotes the coherent implementation of the environmental dimension of sustainable development within the United Nations system and that serves as an authoritative advocate for the global environment’ (THE FUTURE WE WANT, 2012, PARA. 88). ‘Within the United Nations system’ was inserted here upon request by the United States to block interference of UNEP beyond the UN. The United States also insisted on describing UNEP’s role as ‘an authoritative advocate’ instead of ‘the authoritative advocate’ (BASTOS LIMA, 2012). Governments agreed that UNEP should have ‘secure, stable, adequate and increased financial resources’, yet added the qualifier ‘from the regular budget of the UN and voluntary contributions to fulfil its mandate’. In practice, this wording is unlikely to grant UNEP a stronger mandate or additional financial resources. One concrete reform agreed upon in Rio is universal membership in the governing council of UNEP, which reports through the Economic and Social Council to the General Assembly. So far, 58 governments are represented in this council, elected by the General Assembly based on regional representation. From now on all countries will be represented in the council, similar to UN specialized agencies that include all member states in their general assemblies. Yet this universal membership for the UNEP governing council is only a rather small step that consolidates reforms that had been agreed upon over a decade ago. Already in 1999, governments had established the Global Ministerial Environment Forum, with universal membership, to meet annually for important and emerging policy issues, and decided that the UNEP governing council would constitute this forum. In other words, this reform of 1999 has now merely been formalized and further institutionalized.

UNEP also received in Rio the mandate to develop a system-wide environmental strategy, yet not to effectively coordinate the activities of the multilateral environmental agreements, notably the climate, biodiversity and desertification conventions. Progress in Rio, in sum, has been modest. And yet, the two-year preparations have helped to further advance this debate, making more fundamental reforms and the creation of a world environment organization in the years to come more likely.

2.2 TOWARDS A CONSISTENT ARCHITECTURE FOR SUSTAINABLE DEVELOPMENT GOVERNANCE: INTEGRATING ECONOMIC, SOCIAL AND ENVIRONMENTAL POLICIES

A second main reform concern regarding the institutional framework for sustainable development is the integration of environmental concerns in non-environmental policy domains, as well as the development of an overarching institutional framework that brings together different sectors, agencies and programmes. In particular, the integration of UN environmental activities and global economic governance remains rather limited so far.

To further the integration of the economic, social and environmental pillars of global governance, governments agreed at the first Rio conference in 1992 on creating a Commission on Sustainable Development (CSD) in the United Nations system. This commission functions under the UN Economic and Social Council (ECOSOC). ECOSOC is a principal organ of the United Nations, created in 1945 to coordinate economic and social activities of the UN specialized agencies, functional commissions and regional commissions. The drafters of the UN Charter envisioned ECOSOC as the central forum to coordinate international economic and social policies and issue policy recommendations for both governments and UN agencies. Even though environmental policy is not mentioned in the UN Charter owing to the time of its negotiation in 1944/45, environmental policies and sustainable development fall today under the purview of ECOSOC. The ECOSOC is based on regional representation: its 54 members include 14 governments from Africa, 11 from Asia, 6 from Eastern Europe, 10 from Latin America and the Caribbean, and 13 from Western European and other industrialized countries. While some larger countries are often re-elected as members of ECOSOC, the Council includes a large number of smaller countries with equal voting rights, unlike the governing bodies of the Bretton Woods institutions (which are based on financial contributions and hence economic relevance) or the Group of 20 major economies.

Neither the CSD nor the ECOSOC have managed to influence the development of global governance in the area of sustainable development, or of economic policy. Despite progress in some issue areas, like oceans and forests, the CSD did not have a major bearing. Its standing in the UN system and the importance given to it by governments has remained low, and its power to influence economic or social decision-making insignificant. The commission remains under the purview of the national ministries of the environment. Economic or finance ministries are hardly involved (KAASA, 2007).

For this reason, numerous observers had called before the Rio conference for a new body that would operate at a much higher level of authority and that could provide authoritative guidance on the integration of environmental, economic and social policies. One option that had been promoted before the Rio+20 conference was the creation of a Sustainable Development Council directly under the United Nations General Assembly (BIERMANN, 2012A; KANIE ET AL., 2012; HIGH-LEVEL PANEL ON GLOBAL SUSTAINABILITY, 2012; STATE OF THE PLANET DECLARATION, 2012; for an extensive overview of the options, see BERNSTEIN WITH BRUNNÉE, 2011). A model for

such a new council is the United Nations Human Rights Council, which has been established as an independent body of the United Nations General Assembly. Importantly, a new council on sustainable development would not require an amendment of the United Nations Charter. A second, more far reaching proposal was to replace ECOSOC with a UN Sustainable Development Council (at highest level, that is, heads of state or government), or to amend the functions of the ECOSOC with similar effect, expanding its mandate to cover sustainable development more comprehensively. Both replacement and amendment of the ECOSOC, however, would require amending the United Nations Charter. Such an amendment would encounter substantial resistance from many countries, also because it could get linked to other reform issues, such as a reform of the UN Security Council. Interestingly, informal meetings before the Rio+20 conference suggested that the link with the UN Security Council and other non-environmental UN reform issues might even build further support for reform: countries might back amendments of the ECOSOC exactly because this might advance debates on changes to the status of the Security Council, through issue-linkage and a general opening of the UN Charter for a major overhaul.

The final document from the Rio conference makes, however, only very modest suggestions for change in this area. According to *The Future We Want* (2012, PARA. 83), the UN Economic and Social Council shall be ‘strengthen[ed] within its Charter mandate’, with a ‘key role in achieving a balanced integration of the three dimensions of sustainable development’. No more concrete reforms could be agreed. In addition, governments decided ‘to establish a universal intergovernmental high level political forum, building on the strengths, experiences, resources and inclusive participation modalities of the Commission on Sustainable Development, and subsequently replacing the Commission’. This high level forum, which will include all UN member states, should provide leadership and recommendations for sustainable development, enhance the integration of the environmental, economic and social dimensions of sustainable development in a holistic manner, and provide a ‘dynamic platform for regular dialogue, and stocktaking and agenda setting to advance sustainable development’, along with a number of related tasks (THE FUTURE WE WANT, 2012, PARA. 85). Multilateral financial and trade institutions such as the World Bank or the World Trade Organization are ‘invited’ to participate—which is far away from the major coordinating mandate that many observers had hoped for regarding a new body in the UN system.

It is not clear what the difference between this new body and the existing CSD will be, except that the new body is meant to replace the CSD. In *The Future We Want*, the forum is spelled with small first letters, indicating its informal and inconclusive standing at present. This is a far cry from the UN Sustainable Development Council that many civil society organizations and experts had called for during the preparatory process. One difference between the CSD and the new body is the added qualifier ‘high level’, which could indicate a higher commitment from governments to participate in these discussions than has been the case in the CSD. The first high-level forum is expected to convene at the beginning of the 68th session of the General Assembly, with a negotiation process under the UN General Assembly auspices to sort out the organizational aspects of the forum.

Another reform proposal put forward in recent years, especially by non-governmental organizations, is a United Nations High Commissioner for Future Generations. Such a post is intended to protect the interest of future generations, for example by holding governments accountable to their duty to protect ‘planetary boundaries’. Here too, however, governments could not agree on substantial reform. Especially developing countries feared that a new body on future generations would place disproportional burden on the development prospects of their current generations. A related side-show of this conflict in Rio was the discussion of ‘planetary boundaries’ that followed a highly cited *Nature* article that advanced this term (ROCKSTRÖM ET AL. 2009; for a critique see E.G. BIERMANN, 2012B). Many developing countries, along with the United States, rejected this notion of planetary boundaries in Rio, which therefore did not find its way into *The Future We Want*. Governments merely decided ‘to consider the need for promoting intergenerational solidarity for the achievement of sustainable development, taking into account the needs of future generations’. The United Nations Secretary-General was invited to present a report on this issue, without any detailed guidance as to the form and scope of this report and any other institutional reforms (THE FUTURE WE WANT, 2012, PARA. 86).

2.3 DEFINING GOVERNANCE TARGETS: SUSTAINABLE DEVELOPMENT GOALS AND NEW INDICATORS FOR GREEN GROWTH

A third major outcome of Rio+20 was the agreement on a process towards ‘Sustainable Development Goals’. These goals were originally advanced by the governments of Columbia and Guatemala (COLOMBIA AND GUATEMALA, 2011) to complement the earlier Millennium Development Goals, which are to be achieved by 2015. In Rio de Janeiro, governments decided to negotiate new ‘Sustainable Development Goals’. These goals should include environmental, economic and social goals in a balanced way. They should be ‘action-oriented, concise and easy to communicate, limited in number, aspirational, global in nature and universally applicable to all countries while taking into account different national realities, capacities and levels of development and respecting national policies and priorities’ (THE FUTURE WE WANT, 2012, PARA. 246). Unlike the Millennium Development Goals, which were targeted at developing countries, the new goals will thus also cover industrialized countries and potentially set UN-agreed ‘development goals’ also for the North—an issue that the United States tried hard to prevent, yet in vain. Also some poorer developing countries were concerned about the discussion around sustainable development goals, fearing that they could divert attention and resources from the Millennium Development Goals, especially after 2015 (BASTOS LIMA, 2012). Governments further agreed that the sustainable development goals shall be measurable and probably quantified (‘Progress towards the achievement of the goals needs to be assessed and accompanied by targets and indicators’, see THE FUTURE WE WANT, 2012, PARA. 250). However, the concrete topics to be covered by such goals—sensitive issues for both North and South—are yet to be decided.

The Sustainable Development Goals shall now be developed by a group of thirty representatives of countries, drawn from the five UN regional groups. This group shall ‘ensure the full involvement of relevant stakeholders and expertise from civil society,

the scientific community and the UN system in its work in order to provide a diversity of perspectives and experience' (THE FUTURE WE WANT, 2012, PARA. 248).

A second important discussion around the measurement of progress towards sustainable development is the renewed interest in alternative indicators of (economic) growth, complementing or replacing the current main matrix of Gross Domestic Product (GDP). 'Beyond GDP' was an important element of the debate on one of the main agenda items in Rio de Janeiro, the 'green economy in the context of sustainable development and poverty eradication'. For example, a major pre-Rio congress of more than 3000 scientists had argued for a transformation 'to move away from income as the key constituent of well-being and to develop new indicators that measure actual improvements in well-being at all scales' (STATE OF THE PLANET DECLARATION, 2012). Governments eventually decided in Rio de Janeiro to 'recognize the need for broader measures of progress to complement gross domestic product in order to better inform policy decisions'. The United Nations Statistical Commission was requested, 'in consultation with relevant United Nations system entities and other relevant organizations', to launch a programme of work in this area (THE FUTURE WE WANT, 2012, PARA. 38). While the outcome of this work is still to be seen, it seems that the trend away from GDP is gaining momentum.

2.4 'SPEAKING TRUTH TO POWER' OR: IS ANYBODY LISTENING?

Rio+20 brought to light a major disconnect between science and policy. The scientific community had invested substantial resources in preparing for Rio+20. Numerous books, papers and research articles had been published with particular reference to the Rio+20 conference, bringing together the state of knowledge in the natural and social sciences in the field of sustainable development. In particular, more than 3000 scientists gathered in March 2012 in London for a major science congress, called *Planet under Pressure*, which was meant to synthesize the state of debate in the sciences and to forward this knowledge to the Rio+20 conference. The *State of the Planet Declaration*, adopted at this conference, reflects an increasingly sober assessment of the state of the planet, arguing among others that '[h]umanity's impact on the Earth system has become comparable to planetary-scale geological processes such as ice ages. ... That the Earth has experienced large-scale, abrupt changes in the past indicates that it could experience similar changes in the future' (STATE OF THE PLANET DECLARATION, 2012, 2).

Yet this growing concern among scientists is not reflected in governmental discussions. Environmental politics often follow disaster, for example in international marine environmental law that advances with a new treaty or policy after each major shipwreck. From the perspective of many scientists, we are now approaching a threatening global disaster, indicated for example by unprecedented rates of meltdown of Arctic ice shields or unexpectedly steep increases in sea level rise. Yet adequate political responses are lacking.

It would be simplistic to explain this lack of political action purely by inadequacies in 'speaking truth to power'. Yet still, the integration of scientific knowledge into

intergovernmental decision-making needs to be improved. Most existing scientific assessment institutions, such as the Intergovernmental Panel on Climate Change, are issue-specific and tied to governmental mandates. In addition, many areas of concern are not covered by such assessment institutions nor are interlinkages between issue areas. Smaller expert commissions have been temporary—such as the commissions headed by Brandt or Brundtland or the recent High-Level Panel on Global Sustainability—or remained technical commissions, such as the specialized commissions that determine the safety of food or medicine. The overall integration of existing knowledge on the environmental security of the planet on a stable basis and with a high authority in the UN system is missing.

In the preparations for the Rio+20 conference, the High-Level Panel on Global Sustainability recommended that ‘[t]he Secretary-general should lead a joint effort with the heads of relevant international organizations, including relevant United Nations agencies, international financial institutions, the private sector and other relevant stakeholders, to prepare a regular global sustainable development outlook report that brings together information and assessments currently dispersed across institutions, and analyses them in an integrated way’ (HIGH-LEVEL PANEL ON GLOBAL SUSTAINABILITY, 2012, 75). The panel also suggested that ‘the Secretary-general should consider naming a chief scientific adviser or establishing a scientific advisory board with diverse knowledge and experience to advise him or her and other organs of the United Nations’ (HIGH-LEVEL PANEL ON GLOBAL SUSTAINABILITY, 2012, 75). Two months after the panel’s report, the major science congress *Planet under Pressure* concluded similarly that ‘[t]he international scientific community calls for a framework for regular global sustainability analyses that link existing assessments that build on the foundations of the Intergovernmental Panel on Climate Change, Intergovernmental Platform on Biodiversity and Ecosystem Services and other ongoing efforts. Such analyses can be designed to bring coherence to the science-policy interface’ (STATE OF THE PLANET DECLARATION, 2012).

Before the Rio conference, I had argued to go one step further and to create an authoritative voice of the science community in the UN system in the form of a permanent Global Environmental Assessment Commission (BIERMANN, 2012A). The commission would consist of a limited number of experts of high esteem. Its function would be to synthesize the state of scientific knowledge on vital planetary systems with a particular view to the effectiveness of policy-making. The commission would operate independently from governments as an autonomous (warning) voice with a view to planetary stability and security. The decisions by the Global Environmental Assessment Commission would remain largely hortatory. They would have to weigh on political processes through the scientific and moral standing of its members, as well as the underlying evidence. This function would need to be supported by giving the Commission a strong functional role in the UN system, for instance by allowing the Commission to place items on the agenda of functional UN commissions and in special cases even of the UN General Assembly, and to request international bodies to respond to its conclusions. Also, members of the Commission could become, as chief scientists, part of the bureau or executive boards of international institutions, conferences, and agencies. Formalized rights of expert commissions in public policy raise important problems of accountability and legitimacy. For this reason, the

mandate of the UN Global Environmental Assessment Commission would need to be clearly defined. It would not be prescriptive policy advice, but would focus on the identification of scientific knowledge about the planetary boundaries and the ‘operational space’ for humanity.

Rio+20 made some progress in strengthening scientific input into policy processes. For instance, the ‘universal intergovernmental high level political forum’ to replace the current UN Commission on Sustainable Development shall also serve to ‘strengthen the science-policy interface through review of documentation bringing together dispersed information and assessments, including in the form of a global sustainable development report, building on existing assessments’ (THE FUTURE WE WANT, 2012, PARA. 85.K). Yet this is not enough. Much will depend on the institutionalization of the high-level forum and the breadth and quality of the assessment system that will produce the global sustainable development report mentioned in *The Future We Want*.

3. LOW TIDE FOR HIGH SUMMITS: WHITHER MULTILATERALISM?

Overall, the results of ‘Rio+20’ are meagre, surely if compared to the first Rio conference in 1992. This unsatisfactory outcome has raised new questions about the ability of the international political system to adequately deal with global environmental change.

3.1 WHITHER MULTILATERALISM?

One concern is the future of multilateralism. After the near breakdown of negotiations at the 2009 climate conference in Copenhagen, many observers saw this as an indication that multilateral intergovernmentalism would not bring about the reforms that were needed. Hopes are now increasingly placed instead on ‘minilateralism’, that is, negotiations among a few countries with particular interests and particular resources, such as the ‘Group of Eight’, the ‘Group of 20’ or even, as some argue, the ‘Group of 2’ (United States and China).

The Brazilian delegation in Rio de Janeiro viewed the Rio+20 conference instead as a vindication of the strength of multilateralism (and their own leadership). Brazil’s President Dilma Rousseff viewed the conference as evidence that multilateralism was not dead but rather proved to be a legitimate pathway to build solutions for global problems (ENB 2012, P. 19). The modest outcomes of Rio+20 probably do not justify this enthusiasm.

However, alternatives to global regimes and multilateral negotiations also do not seem promising. ‘Minilateralism’ is hardly likely to achieve the much-needed legitimacy

among countries that are not invited to participate; the long-term effectiveness of solutions agreed upon at 'Group of 8' or 'Group of 20' meetings is open to debate, especially when it comes to broad questions of sustainability governance. More than 150 nations are not represented in the 'Group of 20'. On the other hand, also the current setup in international negotiations does not reflect the realities and the exigencies of the 21st century. In the Rio negotiations, for example, the Prince of Monaco and the representative of the Prince of Liechtenstein were sitting next to the leaders of China or India, each with a population of more than a billion. The current system grants each country one vote, thus giving a theoretical majority of votes in the UN General Assembly to countries that represent altogether less than ten percent of human population. It is difficult to expect large countries such as China, or major OECD countries, to accept binding decisions by such a gathering.

One way forward is to accept the vast differences in population size among countries and explore novel systems of qualified majority voting in international negotiations. Majority voting addresses the core problem of consensus-based decision-making, that is, that the country that is least interested in reform will determine the outcome of negotiations. Majority voting allows international negotiations to advance more quickly and to adopt more demanding decisions.

Yet majority-based decision-making must also be combined with a weighting of votes in order to find support of larger countries. In the International Maritime Organization, for example, countries with large shipping fleets and trading interests have a permanent seat in decision-making bodies. Similar weighted voting mechanisms are also conceivable for sustainable development issues. As a proxy for increased representation of larger countries, I have proposed earlier with colleagues to give the current members of the 'Group of 20' a primary seat in international decision-making, for example in the proposed UN Sustainable Development Council (BIERMANN, 2012A; BIERMANN ET AL., 2012; KANIE ET AL., 2012). This was not meant as a long-term solution, given that the selection of members of the 'Group of 20' at present is not based on clear and universally agreed criteria. It is based rather on a mix of wealth, population size, and general perception of importance and geographic representation. Integrating the 'Group of 20' into United Nations decision-making, for example by granting its members fifty percent of the votes in a decision-making body, would require a stronger agreement as well as transparency in the selection of the 20 countries. Considerations of equity, specifically equality of the human person, might require that weighted voting in international negotiations will eventually have to be related to population size, granting each person the same right to be represented in global environmental decision-making.

In the current international system, however, voting rights of countries on a per capita basis would give a theoretical majority to only seven countries: China, India, the United States, Indonesia, Brazil, Pakistan and Nigeria. This is hardly acceptable for the many smaller countries. Various compromise proposals exist, such as Schwartzberg's (2009) method for weighted voting in a reformed United Nations that calculates the vote of countries based on the average of three factors: population, expressed as a percentage of the world total; contributions to the UN budget, expressed as a percentage of the whole; and membership, expressed as a percentage of the whole

(which is a constant, today 1/192 or 0.52%), reflecting the equality of nations. This system would at present give the largest vote to the United States, with 12.1%, but could be complemented by equally strong regional votes of blocks of countries. In all of these reform models for weighted voting, however, special care must be taken to provide viable safeguards for smaller countries and those with particular interests to not be overrun by the dictates of the majority. Domestic federal systems that combine majority voting with representation of sub-national units such as states or provinces, can provide models for how to combine fair representation of every global citizen with safeguards for smaller and less populated countries. More research and debate in this area is essential and timely.

3.2 A NEW ROLE FOR CIVIL SOCIETY?

Many argue that the answer to effective sustainability governance does not lie with the United Nations system, even if reformed, but in stronger reliance on bottom-up approaches driven by the private sector and civil society, including through non-governmental agreements, transnational movements, and non-binding multisectoral partnerships. Dutch political scientist Maarten Hajer, for example, has argued forcefully for an ‘energetic society’ that would bring about change that governments are no longer able to foster, and has advised participants at the Rio+20 conference to focus on the side events, not the main negotiations (HAJER, 2011). Also Mark Halle of the International Institute for Sustainable Development, in his scathing review of Rio+20, claims that ‘the principal problem lies with national governments, and particular the groupings in which they congregate to negotiate’ (HALLE, 2012, P. 4) and that the last hope hence lies with cities, the private sector and civil society. This call for an ‘energetic society’ is important and justified. However, it would mean throwing out the baby with the bathwater if intergovernmental institutions were totally discarded and replaced by a reliance on non-governmental institutions, partnerships and societal movements. The UN system and international negotiations do not stand in an antagonistic relationship with local action and non-state movements. The one needs to strengthen the other. Both are not alternatives but complements.

For this reason, civil society must also have a more meaningful voice in international decision-making. So far, civil society organizations in the UN system have the right to speak, to be informed, and to voice their opinion. Yet there is no formalized way for civil society organizations to influence decision-making above and beyond the mere right to voice their views. With 44000 participants and 3500 official and unofficial events, the Rio+20 conference was in terms of size surely well beyond past landmarks, such as the legendary ‘Woodstockholm’ in 1972 or the first Rio Earth Summit in 1992. Brazilian President Dilma Rousseff hailed the 2012 Rio Conference even as a ‘global expression of democracy’ (ENB 2012, 25) and as a triumph of participatory democracy by bringing in more non-governmental representatives than any other international summit to date (ENB 2012, P. 19). And yet, political decision-making was left to the realm of governmental bureaucrats, without any formal input from civil society.

Various options exist to strengthen civil society representation in UN decision-making. The UN High Commissioner for Future Generations proposed by civil society

organizations before the Rio conference could have been an institution to bring in civil society views, which are quite often supposed to represent the interest of future generations. Another example, frequently discussed, is the decision-making model of the International Labour Organization, which grants voting rights to representatives of unions and employers associations. The Commission on Global Governance, which was active in 1992-1995 to advise the United Nations, had proposed to set up a Forum of Civil Society within the United Nations with 600 representatives (COMMISSION ON GLOBAL GOVERNANCE, 1995). A related proposal is to create a United Nations parliamentary assembly of representatives of national parliaments, convening on a regular basis at the seat of the United Nations, possibly in the form of a second chamber of the United Nations to complement the chamber of state representatives (e.g., FALK AND STRAUSS, 2001; see also the CAMPAIGN FOR A UNITED NATIONS PARLIAMENTARIAN ASSEMBLY, [HTTP://EN.UNPACAMPAIGN.ORG](http://en.unpacampaign.org)). One practical option could have been to add to a reformed ECOSOC, or to a new UN Sustainable Development Council, a special chamber for representatives of civil society. This chamber could have clearly defined consultative rights in UN bodies. Its representatives could be chosen by special caucuses of a wide array of organizations, taking into account regional balance. This regional balance is crucial because the representation of non-governmental organizations from developing countries in UN settings remains low compared to the richer groups from industrialized countries (KAASA, 2007, 115-116).

Interests to be represented could include a revised form of the nine current 'major groups' in UN sustainable development politics. These nine interest groups have been listed in Agenda 21 as core elements of civil society. They include women; children and youth; indigenous people; non-governmental organizations; local authorities; workers and trade unions; business and industry; scientific and technological community; and farmers. The Major Group concept has been criticized both regarding its rather spontaneous origin around 1992 and its current interpretation (MERT, 2009, AND FORTHCOMING). For instance, while farmers are represented, fishers are not; while indigenous people are included, urban poor are not; while youth are represented, the elderly are not; and so on. Many private governance mechanisms have meanwhile invented other ways of organizing civil society and stakeholder caucuses, from the Forest Stewardship Council (PATTBERG, 2006) to the Roundtable on Sustainable Palm Oil (SCHOUTEN AND GLASBERGEN, 2011), and such experiences could be considered as well.

At present, almost all countries—with the exception possibly of those in Europe—are unlikely to accept voting rights for non-state actors (regardless of the precedence of the ILO where unions and employer organizations can vote). It would be possible, however, to restrict the voting rights of civil society organizations for instance by reserving agenda items of highest importance—including agreement on new legally binding standards—for a vote of governmental representatives only. For civil society, formal participation in deliberations as well as the right to be heard and to voice contending opinions, within the framework of a special chamber in bodies such a UN Sustainable Development Council, would already be important gains that could increase the legitimacy and accountability of intergovernmental decision-making (BIERMANN AND GUPTA, 2011).

3.3 LOW TIDE FOR HIGH SUMMITS?

Finally, the question arises whether mega-summits, such as the one in Rio in 2012, are in fact still needed. Some observers have forcefully argued that the time for such summits is over, and that their effects are not worth their costs, in terms of both funding and carbon emissions (HAAS, 2012; ANDRESEN AND UNDERDAL, 2012; HALLE, 2012). Surely the outcome of the Rio+20 process is overall better than its distracters imply—less so in the compromise language of the conference document than in the discursive developments that have been triggered and supported by the summit. ‘Rio+20’ has not been in vain.

Yet the question remains whether such discursive developments cannot be achieved by other means. There are two possible alternatives to global mega-summits. One option is more specialized conferences that focus on one particular issue not covered by any existing negotiation (such as the climate or biodiversity convention). Examples could be global high-level summits on sustainability education, on the provision of food for 9 billion people, or on water. Focused summits could ensure a more concrete, and hence more sustainable, outcome. A second option is to grant sustainability more prominence in the United Nations General Assembly. The General Assembly still marshals the attendance and attention of most heads of state and government. Sustainability summits could thus well be integrated into the normal procedures of the General Assembly. Such a regular meeting could provide the trigger and momentum for advancement in discursive developments, as can be observed from summits in the past, without the high political, financial and environmental costs incurred with mega-events such as Rio+20.

4. CONCLUSION

Humankind has now become a planetary force that influences global biogeochemical systems. We are no longer spectators who need to adapt to the natural environment. We have become powerful agents of earth system evolution. As noted in the 2012 *State of the Planet Declaration* (2012, 2), ‘consensus is growing that we have driven the planet into a new epoch, the Anthropocene, in which many Earth-system processes and the living fabric of ecosystems are now dominated by human activities’ (drawing on the concept advanced in CRUTZEN AND STOERMER 2000 and CRUTZEN 2002).

The current human perturbation of the Earth system is a major planetary experiment; in fact, it is the largest experiment humans have ever conducted. As with all experiments, the exact outcomes and changes in system parameters are unknown. And added to this, our knowledge of the system is still very limited. The planetary system is likely to be full of further surprises, including possibly abrupt changes based in system parameters that we do not yet fully understand. The history of earth system research suggests a need for humility about the accurateness of the science. At the first major global environmental governance conference in 1972 in Stockholm, none of the major earth system challenges that we discuss today were on the agenda. Hardly anybody talked about climate change, desertification, and the mass extinction of species. In the case of stratospheric ozone depletion, we have already had a ‘near miss’, that is, a sudden transition in a tipping element of the earth system that was only recognized at a rather late stage. And in our current interdependent world, any major event related to earth system transformation will have significant impacts on human societies. About 850 million people are today undernourished. This ‘bottom billion’ of humanity is extremely vulnerable to any changes in their natural environment. Draught, floods, sea-level rise, tropical storms, as well as economic decline and increased food competition due to global environmental change are severe threats for millions (JERNECK AND OLSSON, 2010).

In short, it is time to act. There remains a serious mismatch between the research and recommendations of earth system analysts and the actions of political decision-makers, who are still trapped in a nation-state system inherited from the twentieth century. Scientists assembled at the 2012 Planet under Pressure stated emphatically that a ‘[f]undamental reorientation and restructuring of national and international institutions is required to overcome barriers to progress and to move to effective Earth system governance. Governments must take action to support institutions and mechanisms that will improve coherence, as well as bring about integrated policy and action across the social, economic and environmental pillars’ (STATE OF THE PLANET DECLARATION, 2012). In the twenty-first century, policy-makers are faced with one of the largest governance challenges humankind has ever had to deal with: ‘protecting’ the entire system earth, including most of its subsystems, and building stable institutions that guarantee a safe transition and a co-evolution of natural and social systems at planetary scale. Given this challenge, Rio+20 was a missed opportunity.

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