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**Ariel Salleh**

# **The Idea of Earth System Governance**

**Unifying tool? Or hegemony for a new capitalist *Landnahme*?**

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Humboldtstraße 34  
07743 Jena

Internet:  
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Redaktion/Layout:  
Christine Schickert  
[christine.schickert@uni-jena.de](mailto:christine.schickert@uni-jena.de)

Die DFG-KollegforscherInnengruppe „Landnahme, Beschleunigung, Aktivierung. Dynamik und (De-) Stabilisierung moderner Wachstumsgesellschaften“ – kurz: „Kolleg Postwachstumsgesellschaften“ – setzt an der soziologischen Diagnose multipler gesellschaftlicher Umbruchs- und Krisenphänomene an, die in ihrer Gesamtheit das überkommene Wachstumsregime moderner Gesellschaften in Frage stellen. Die strukturellen Dynamisierungsimperative der kapitalistischen Moderne stehen heute selbst zur Disposition: Die Steigerungslogik fortwährender Landnahmen, Beschleunigungen und Aktivierungen bringt weltweit historisch neuartige Gefährdungen der ökonomischen, ökologischen und sozialen Reproduktion hervor. Einen Gegenstand in Veränderung – die moderne Wachstumsgesellschaft – vor Augen, zielt das Kolleg auf die Entwicklung von wissenschaftlichen Arbeitsweisen und auf eine Praxis des kritischen Dialogs, mittels derer der übliche Rahmen hochgradig individualisierter oder aber projektförmig beschränkter Forschung überschritten werden kann. Fellows aus dem In- und Ausland suchen gemeinsam mit der Jenaer Kolleggruppe nach einem Verständnis gegenwärtiger Transformationsprozesse, um soziologische Expertise in jene gesellschaftliche Frage einzubringen, die nicht nur die europäische Öffentlichkeit in den nächsten Jahren bewegen wird: Lassen sich moderne Gesellschaften auch anders stabilisieren als über wirtschaftliches Wachstum?



Die Kolleg-ForscherInnengruppe zum Thema  
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Ariel Salleh \*

## The Idea of Earth System Governance. Unifying tool? Or hegemony for a new capitalist *Landnahme*?

### *Abstract*

The context of this essay is the loss of human livelihood and breakdown of earth life-support-systems resulting from an unsustainable mode of capitalist industrial production advanced by the global North. The research focus is a specific response to that crisis: proposals for Earth System Governance (ESG), currently being networked and assessed by an international team of academics. The paper offers a short history of the ESG idea - noting its class, ethnic, and gender drivers; its academic legitimation; techniques of institutionalization; possible ecological and socio-economic costs and benefits; impact on North-South relations; implications for rights, sovereignty, and cultural autonomy. Reading sociologically, the bio-political tone of much ESG discourse sounds hegemonic. So the question arises: is ESG a design for unifying a complex global civil society in a time of ecological crisis? Or is ESG a rationale for the next variety of capitalist *Landnahme*? This article explores human-to-human aspects of ESG; a future research study will look at how ESG methods address humanity-nature relations.

### *Zusammenfassung*

Der Kontext des Aufsatzes ist der Verlust menschlicher Lebensgrundlagen und der Zusammenbruch der Lebenserhaltungssysteme der Erde, die Resultat einer nicht nachhaltigen, kapitalistisch-industriellen Produktionsweise sind, die vom globalen Norden vorangetrieben wird. Den Forschungsfokus bildet eine spezifische Antwort auf diese Krise: Vorschläge für ein Regelungssystem, das Earth System Governance (ESG) genannt wird und momentan von einem Team internationaler WissenschaftlerInnen vernetzt und bewertet wird. Das Papier bietet eine kurze Geschichte der ESG-Idee mit Blick auf ihre Treiber Klasse, Ethnie und Geschlecht, ihre akademische Legitimation, Techniken der Institutionalisierung, mögliche ökologische und sozio-ökonomische Kosten und Nutzen, die Auswirkungen auf die Nord-Süd-Beziehungen und die Implikationen für Rechte, Souveränität und kulturelle Autonomie. Soziologisch gelesen klingt der biopolitische Ton großer Teile des ESG-Diskurses hegemonial. Daraus entsteht die Frage: ist die ESG ein Entwurf um eine komplexe globale Zivilgesellschaft in einer Zeit der ökologischen Krise zu einen? Oder ist die ESG eine Grundlage für die nächste Form kapitalistischer Landnahme? Der Artikel untersucht zwischenmenschliche Aspekte der ESG, eine zukünftige Studie wird darauf fokussieren, wie die ESG-Methoden Mensch-Natur-Beziehungen thematisieren.

### *Address of the Author*

Ariel Salleh  
The University of Sydney  
Department of Political Economy  
New South Wales 2006  
Australia  
Email: [ariel.salleh@sydney.edu.au](mailto:ariel.salleh@sydney.edu.au)

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The idea of Earth System Governance (ESG) is being advanced as a new 'knowledge paradigm' or discipline for the management of a globalised 21st century economy and polity; one that is responsive to its environmental base. Yet ESG literature disregards a vast body of thought published in political and social ecology, human geography, international relations, sociology, environmental ethics, and political economy. At the same time, ESG theorists maintain that their project presents the social sciences with a major challenge, since, "there is hardly any coherent, systematic, structured system of global environmental governance ... [but] a complex web of multiple and interacting actors, networks, and institutions ... the number and type of actors in global environmental governance has multiplied in the last decades" (Biermann and Pattberg 2012: 265). The suggestion is that because there is now a proliferation of authority forms - public and private - regime analysis or the institutionalist sociology of states as "rational actors" are too limited for articulating the cognitive, discursive, normative, and often, unintended effects of environmental regulation. New vertical and horizontal links between transnational administrative bodies diffuse accountability. Thus, for ESG advocates, the state is merely one actor among many and its future is uncertain.

The literature that is backgrounded in ESG research - social scientists like Held (1995), Altvater (1998), Hay (2001), Foster et al (2010), Barry (2012) and many others, might draw very different conclusions about global governance to ESG scholars. However, this essay will evaluate ESG claims by examining the actual "social construction" of the discourse itself. What are the historical antecedents of this narrative? What is its class, ethnic, and gendered character? Whose political interests primarily, would ESG management serve? How would it impact on North-South relations; that is, where the former is synonymous with high-tech capitalist societies regardless of hemisphere. Might such a regime extract costs from "othered" South groups in terms of ecological sustainability, social equality, or cultural autonomy? Are the analytical techniques used in ESG research adequate for what the program seeks to achieve? The ESG enterprise lends itself to a study of actor network theory, but the present reading adopts a critical sociological lens. The idea of ESG is embedded in the very global institutions that it sets out to reform, so some reflexivity is in order. Several traditions of critical sociology speak to the program, notably - the materialist analysis of *Landnahme*, and ideological studies of hegemony and bio-politics.

## **Introducing ESG**

The idea of Earth System Governance (ESG) has a clear trajectory. As early as 1970, a prominent US foreign policy strategist recommended such a plan of management, to be located outside the United Nations but embracing socialist states (Kennan 1970). A politically focused European Management Forum was set up a year later by a professor of business in Geneva, Klaus Schwab. International concern over societal impacts on the planetary ecosystem and potential "limits to growth" (Meadows et al. 1992) was formalised with the 1972 UN Conference on the Human Environment in Stockholm – and entrepreneur Maurice Strong was a catalyst in setting this ongoing UN process in motion. That same year, the United Nations Environment Programme (UNEP) was established under the Economic and

Social Council. The next UN landmark was the Brundtland Commission meeting in Oslo, and delivery of the UNCED plan for *Our Common Future*.

Humanity has the ability to make development sustainable – to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs. The concept of sustainable development does imply limits – *not absolute limits but limitations imposed by the present state of technology and social organization* on environmental resources and by the ability of the biosphere to absorb the effects of human activities but technology and social organization can be both managed and improved to make way for a new era of economic growth (UNCED 1987: 8, italics added).

The rejection of "absolute limits" and promotion of economic growth and new technologies as prerequisite to the "trickle down" of environmental benefits was perceived by sceptical publics as simply extending the power of the capitalist class (Trainer 1987; Sachs 1994). And in fact, the 1980s and 1990s was a time of consolidating neoliberal economies and market ideology among states North and South. Conservative think tanks like the Swiss Mont Pelerin Society and US Heritage Foundation were promoting the ideals of individualism, enterprise, competitiveness, and free trade. The European Management Forum evolved into the World Economic Forum (WEF) in 1987, instituting the annual Davos meetings where corporate and political leaders go to consider the future. A new World Business Council for Sustainable Development (Schmidheiny 1992), became proactive in designing the 1992 Rio Earth Summit with its Agenda 21, its Biodiversity and Climate Change Conventions, and its UN monitor Commission on Sustainable Development. The installation of a Global Environment Facility (GEF) within the World Bank came soon after. The effect of this geopolitical expansion called "development" was identified a century ago. As Luxemburg put it: capitalism can only maintain its profit base – accumulation – through material subsumption of resources, labour, and markets in the global periphery. The result is that colonised local peoples lose their local livelihood and communality (1968).

In 1992, the UN closed its Centre on Transnational Corporations, soon to broker a Global Compact with trade unions and ecological NGOs, wherein the private sector and civil society would voluntarily commit to social responsibility, the precautionary principle, and diffusion of environment friendly technologies. Meanwhile, Strong together with Mikhail Gorbachev as founder of Green Cross, and CNN media boss Ted Turner, introduced an Earth Charter as a cultural, ethical, and spiritual basis for ecological action, hand in hand with free trade. By the late 1990s proposals for yet another body, a "World Environment Organization" to operate alongside the neoliberal World Trade Organization (WTO) came from President Chirac of France, and from Chancellor Kohl of Germany in conjunction with Brazil, Singapore, and South Africa. In the year 2000, North-South Dialogue at the UN was replaced by a set of Millennium Development Goals (MDGs) handed down from the office of the Secretary General. At the same time, many within international civil society resisted the adoption of market values as organising principle for everyday life and political decision-making. This culminated in

major street protests outside the 1999 WTO meeting in Seattle (Tebtebba 1999) and a roll back of the ambitious plan for a Multilateral Agreement on Investment (MAI).

### **Exigencies of free trade**

What is the connection between these events and the call for Earth System Governance? The idea of ESG spans the terrain of economic struggle; it offers innovative problem solving and opportunities for consensus building. From the perspective of Gramsci (1977; Carroll 2007), that constitutes a typical hegemonic process, a way of holding existing power relations together by discursive and institutional means. In any event, European scientists were making the case for "Earth System Analysis" (Shellhuber and Wenzel 1998); and in tandem, Biermann (1998) an international lawyer argued for a World Environment and Development Organization. Next he authored a report for the Global Change and Social Systems section of the Potsdam Institute for Climate Impact Research (PIK). This does not engage with social arguments but discusses the technico-legal aspects of environmentally related trade restrictions. The opposition of developing countries to the "eco-colonialism" of free trade is seen as particularly problematic by Biermann, because "disputes about the interpretation of Article XX lit.b and lit.g of the General Agreement of Tariffs and Trade have given rise to conflicts which may threaten both effective environmental policy and the expansion of world trade" (Biermann 2000: 31).

The Potsdam Institute report (Biermann 2000) reviews 800 or so Multilateral Environment Agreements (MEAs) – on endangered species (CITES), hazardous wastes (Basel Convention), ozone (Montreal Protocol) and biosafety (Cartagena Protocol), with a view to bringing these into line with the General Agreement on Tariffs and Trade (GATT). Should MEAs be prioritised over GATT? Should the Biosafety Protocol precede World Trade Organization law? Biermann notes that WTO or GATT law does permit an import ban if a product is demonstrably harmful to a nation's people. However, the status of trade barriers based on process and production methods is less clear. Examples might be manufactures giving rise to carbon emissions or water pollution. The Potsdam report charges governments of the global periphery with rejecting the latter restriction, as well as rejecting the precautionary principle.

In trade matters, the Organization for Economic Cooperation and Development (OECD) usually enlists developing countries by means of a flexible implementation of MEAs, financial aid, or technology transfer. But Biermann recommends rule formalisation "to reconcile the objectives of free trade and environmental protection, limited reforms of international trade law are required ... through ... authoritative interpretation of international trade law by the Ministerial Council of the World Trade Organization" (2000: 31). This might both benefit the sovereignty of small states - as traders - and protect multilateral decision making for environmental standards. The recommendation seems unconventional in giving a juridical role – interpretation of WTO law – to a semi-permanent political body. A recent posting from the South Centre highlights ongoing tensions over these matters; and according to the Centre's Director, the neoliberal Trans-Pacific Partnership Agreement (TPPA) and the

Trans-Atlantic Trade and Investment Partnership (TTIP) are direct threats to sovereign states (Khor 2013).

### **The liquified state**

In 2001, the Potsdam Institute called a major conference on Global Environmental Change and the Nation State. This received UN standing under the International Human Dimensions Programme on Global Environmental Change (Biermann 2002). The key themes were global institutions and the state, global-local relations, the EU, non-state actors, and world markets. Biermann's introduction to the conference publication speaks commitment and urgency: "this breathless human activity. Modern production, transportation, and consumption of goods ... accelerate ... an earth system in transformation, if not in crisis" (2002: 1). Nevertheless, the words "human" and "modern" are used in a rather eurocentric way, inviting examination of how cultural diversity and autonomy might be sacrificed under a global regime of what Foucault (1980) would call "governmentality".

Sociological reflexivity is entailed in recognising the nation state as a 19th century institution. On the other hand, a dismissal of the state as anachronistic could reflect neoliberal pragmatism, if a global governance discourse is unable to relocate sovereignty within a people and its commons. In counterpoint to Luxemburg, it is argued here that transnational environmental regimes require a new international architecture of rulemaking bodies. Labour sociologists are likely to see this as preparation for a new kind of *Landnahme* - in Doerre's words: "based on contingent processes which in the long run aim to reposition and at least temporarily overcome the limits of capitalist accumulation established by 'outer' markets and ultimately, by human and extra human nature ..." (2010: 47). But as market actors contribute to devolution of the state and privatisation of governance, what happens to the principle of legitimacy? Traditionally, people legitimate the nation state through election of government representatives, so the legitimation of transnational bodies would need the assent of an earth-wide civil society. There is evidence that a grounded global democracy is in the making at events like "the battle for Seattle" or World Social Forum. But in general, the relation of rulers to ruled is a widening participatory gap (Bruhl 2002).

With capitalism having arrived at a point of overproduction and thus stagnation, the current accumulation drive is "upwards" into financial speculation, and, "downwards" into biological manipulation. Moreover, "the finance driven *Landnahme* seeks to improve the dynamics of accumulation without any further development of the welfare state" (Doerre 2010: 56). ESG reflects this uncertain venture. Biermann defines climate and biodiversity management as post-sovereign governance issues, bio-politics in Foucault's sense, dealing with scientific questions beyond the ken of realist international relations theory. In this respect, ESG converges with the far-reaching Global Redesign Initiative of the Davos World Economic Forum (WEF 2013). Conversely, Janicke (2002), a policy expert from the Free University Berlin, contends that an open global economy will need strong state governments to provide higher education, transport infrastructure, or health and environment

standards. So too, the state offers compensatory mechanisms for unprotected industries and for people forced on to social security by capitalist cost saving and structural adjustment measures. The interaction of private enterprise and the nation state is not "a race to the bottom" according to Janicke, but an opportunity to invent pioneering policy. It should not be forgotten either, that "development" in the global South, relies on state support of the private sector through loans, subsidies, R&D tax breaks, and procurement favours.

### **And everyday life**

Moving further down the political hierarchy, Oels (2002) of the German Advisory Council on Global Change looks at the deeply gendered life-world economy and finds that in implementing the Rio Agenda 21, local government attempts to preserve political control by refusing cooperation with neighbourhoods. Research by Maguire and Ellis (2002) from McGill also addresses governance at grassroots level, recommending use of the "precautionary principle" to enable deliberative policy making without the burden of proof. Moreover, they note that precaution politicises "embodied" processes: "Who would have thought, only twenty years ago, that the breast milk of Canada's Inuit mothers would affect chemicals policy in Australia? Waste management in south-east Asia? Public health and anti-malaria campaigns in sub-Saharan Africa?" (2002: 264). - Of course, the women's and ecology movements interrogate both the nation state and multilateral agencies, but as Merchant (1980) and Salleh (1997) explain, they do this by prioritising the logic of reproduction over production. Commons theorist De Angelis adds that neoliberal governance co-opts women's freely given reproductive labours by re-definition as a "voluntary sector". This deflects struggles for social recognition and justice, as if to affirm the conservative's "end of history" (2003).

In 2001 a ten-year research program on Global Governance got underway, directed first from Potsdam, and later VU Amsterdam where Biermann was head of the Institute for Environmental Studies. The research would deal with political actors other than states – namely intergovernmental bureaucracies, corporations, and scientific networks: [www.GLOGOV.ORG](http://www.GLOGOV.ORG). Civil society, women's, indigenous, and environmental NGOs were backgrounded as actors. Outside of academia, 2002 saw the UN World Summit on Sustainable Development (WSSD) reconvene at Johannesburg. And as anticipated by ecological and global justice movements, this Rio+10 meeting gave new impetus to private sector initiatives and partnerships between government and NGOs. Two years later, at the people's World Social Forum in Mumbai, the US neo-Keynesian Joseph Stiglitz was calling for new institutions to govern sustainability.

In 2005, Biermann with Steffen Bauer, a political scientist from the Free University Berlin, brought out an anthology entitled *A World Environment Organization: Solution or Threat for Effective Environmental Governance?*. Not self-consciously bio-political, the book is nevertheless about "managing the planet for the benefit of all peoples and life forms". This said, the authorship is mainly Euro-American, middle class and professional. It seems ironic that a foreword by UNEP Executive



Director Klaus Toepfer should emphasise that:

... a small fraction of ... citizens are enjoying unprecedented levels of wealth ... The costs of these life-styles are being 'externalized' to the poorer parts of the globe ... the world's consumption and production patterns are now at the heart of a hot debate as are the economic structures that are driving globalization and trade (2005: ix).

The 2005 ESG collection does not expose these class drivers and economic structures.

### **World Environment Organization**

A recurrent theme in the conversation around a World Environment Organization is the idea of upgrading UNEP. Working from an analysis of some seventeen different WEO proposals by Whalley and Zissmos (2001), Biermann reduces these to three. One, might be an umbrella agency similar to the WTO; two, might be an overarching decision making body with sanctioning powers over nations as the Security Council has. He thinks that the latter would have little chance of getting up in the face of opposition from the US, G77, and China. His third and preferred WEO template is an upgraded UNEP, and this would assimilate several important UN principles: - "the right to development" – "the sovereign right over resources", and, - "common but differentiated responsibilities". Biermann believes a General Assembly resolution would suffice to turn UNEP into a body like the World Health Organization (WHO) or International Labour Organization (ILO) with legal personality and a larger secretariat. It would serve as a clearing-house for emissions trading to fund its operation. It would approve draft treaties of two kinds: multi-lateral agreements whose ratification as law would be essential to membership; and outside of this, a level of optional pluri-lateral agreements. The Montreal Protocol might become a sub-committee of the new body. A single annual national report could cover all agreements, including commitments to capacity building, finance, and technology. A WHO or ILO type structure should give environment and business equal rights. Streamlining organisation should give voice to the global South as back-to-back conferencing reduces costs. Voting would replace consensus, but rather than one dollar/one vote which favours the North, or votes per capita which favours the South, voting could be by global bloc based on a two-thirds majority. There would be a common dispute settlement system (Biermann 2005).

Other governance research partners oppose the World Environment Organization concept altogether, on the basis of 'institutional pathologies'. Oberthur and Gehring (2005), international relations scholars at Bamberg, point to how the Kyoto Protocol typically uses forests for carbon sequestration while neglecting biodiversity protections specified in the same instrument. They contrast the UN Convention on Law of the Sea (UNCLOS) with a weakly operational ILO. As they say, organisations may possess the force of legal personality but loose international regimes can be as effective. They note that the World Bank's GEF already funds several policy areas and other regimes working by sub-committee can monitor compliance. Capacity for enacting trade sanctions for non-compliance already exists under some treaties and the WTO accepts that. These authors argue that an

EU-type model of environmental governance is unlikely to serve local interests, while states - particularly heavily militarised ones - are unlikely to cede sovereignty to it. At best, a global rationalisation of treaty agreements might save money by avoiding secretariat duplication.

The governance literature does not examine the sociology of class, ethnicity, gender, cultural autonomy, and the global periphery is not always represented in a positive way. Conversely, Najam (2005) from the Fletcher School of Law and Diplomacy at Tufts University Boston points out that peoples in the South see science and NGOs in the global North as compromised by funds from the industrial core. This raises the question of international trust. It is not weak institutions that cause the crisis in global environmental governance, writes Najam. Institutional 'tinkering' can achieve little in the absence of cross-cultural recognition and respect. In his analysis, current difficulties with governance result from the inadequate funding of UNEP, so that it is unable to synchronise the field of Multilateral Environment Agreements (MEAs). Would it help to put ecology before economics – with the World Bank under UNEP control? Too late: by 2002 UNEP had already adopted the 'Environment for Development' slogan.

### **Subsidiarity principle**

It is widely asserted that multi-level governance must be grounded in sovereignty and controlled at grassroots level by the principle of subsidiarity (Newell 2002; 2012). Among the GLOGOV researchers, Juma (2000), Harvard-based former secretary to the Convention on Biological Diversity, strongly favours decentralised environmental governance, judging plans for a World Environment Organization to be backward looking. Von Moltke (2005) from the International Institute for Sustainable Development in Winnipeg also wants global policy minimisation by clustering treaties. Charnowitz (2005), a lawyer from George Washington University, adds that decision makers already communicate across state borders. He also considers the tripartite ILO model, designed to mediate governments, business, and labour, unsuited to environmental negotiation between multiple civil actors.

Gupta of VU Amsterdam, a UNESCO water policy specialist, describes institutional design as an "ivory tower concept", whereas in real life, international relations result from protracted self-interested negotiation. Crucially, design is always limited by the mindset or hegemonic frame of the designer, such that differences between countries and sectors can be overlooked. Thus, it is known that private entrepreneurs accumulate profit by keeping wages low as well as by externalizing hidden costs on to women in the domestic periphery of the North and peasants in the neocolonial periphery of the South. In Gupta's view, the Rio Agenda 21 and the Johannesburg Declaration were sabotaged not just by lack of funds, but by ignoring broad structural and cultural factors of this kind (Gupta 2005). At present, the ESG dialogue fails to take problems of material exploitation and displacement into account, but a governance model based on the subsidiarity principle would help protect such people by giving them a voice (Waterman 2012).

The democratic deficit is illustrated by Kirton, political scientist and associate of the University of

Toronto. He speaks for a World Environment Organization located outside the UN, much as Kennan did. It would be managed by G8 powers with back up from the G20 group. It is too early to speculate on how the sub-imperial coalition of Brazil, India, China, and South Africa (BRICS) might affect this (Bond 2013). Kirton writes:

... after a decade in operation, the model of the North American CEC [Commission for Environmental Cooperation] and its NAFTA offer for a global WEO a proven architecture in which the values of the environment and the economy, and the countries of the North and South, have an equal and integrated place ... One possible path is to multilateralise the CEC model by having the G8 regime serve as the platform and the growth pole that an ever expanding array of other countries from around the world could join (Kirton 2005:148).

Kirton believes the G8 is a "flexible, leaders-driven institution" with a ministerial forum able to make the kind of "hard decisional commitments from which national compliance flows. What is more, and unlike the UN, the G8 can readily raise money for "environmentally related objectives" (2005: 162-166).

### **Flagship activities**

As academics weighed up the 'pros and cons' of Global Governance models, UNEP was talking with multilateral financial institutions, NGOs and CSOs about 'greening' the global economy. Between 2008-2012, a series of publications emerged from bodies such as the International Chamber of Commerce (ICC), World Bank, OECD, UNESCO, International Confederation of Trade Unions (ICTU), New Economics Foundation, and a new Green Economy Coalition, to name a few interested parties (Noricha 2010). In an empirical demonstration of Sklair's (2001) sociology of the transnational elite, this broad global dialogue opened tentatively around a "green new deal" (World Watch 2009) and closed with a firm proposition for a "green economy". As the 2008 global financial crisis unfolded, it became clear to many in the ruling class that not only should the economy be tailored to save the environment, but that environmental innovation could help save the economy by opening up a new era of capital accumulation based on renewable technologies, tradable offsets, and risk related financial products – a new form of *Landnahme* (Goodman and Salleh 2012).

Meanwhile, the instrumental rational assumption that nature can be controlled reflects an historical hubris - generated by the European scientific revolution – and persisting still (Merchant 1980; Shiva 1989). The instruments of modern mastery are economic, legal, and ideological. This is amplified in the reader *International Organizations in Environmental Governance* edited by Biermann et al. (2009a) dealing with the international finance corporation, OECD policy, the World Bank, EU, UNEP, MEAs, entrepreneurship, and adaptability of big NGOs. Also in 2009, the Global Governance research project matured into the Earth System Governance (ESG) research project with moneys for a further ten years. The intellectual genealogy and academic credentials of ESG are drawn from international law, management theory, environmental science, ecological economics, systems and game theory,

modernisation sociology, positivist political science, and actor network theory. Saving the faltering ecosystem is an aspiration, but one that is "hands-off", not yet translated into the bio-physicality of earth's functions and human thermodynamic embodiment in them.

Each of the above "disciplinary practices" aims for ethical neutrality and functionalist objectivity – but each is silent on the question of power. Thus 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 towards preventing, mitigating, and adapting to global and local environmental change and, in particular, earth system transformation, within the normative context of sustainable development (Bierman et al. 2009b).

ESG exponents posit 5 *Analytical Problems*: Architecture - Agency - Adaptiveness - Accountability - Allocation & Access. The "5A's" are paired with 4 *Cross Cutting Research Themes*: power, knowledge, norms, scale. In addition, ESG has 4 *Case Study Domains*, known as "flagship activities": the water system, the food system, the climate system, and the global economic system. For a critical sociologists like Luke (1995) or Charkiewicz (2005) such cybernetic management exemplifies Foucault's bio-politics: marshalling populations, resources, and markets in the right "disposition of things".

The categories of *sustainable development* reconstitute nature – through their recognition of encirclement of space and matter by national as well as global economies – as a system that can be dismantled, redesigned, and assembled anew to produce 'resources' efficiently and in adequate amounts when and where needed in the modern market-place without seeing a degradation in carrying capacity (Luke 1995: 28, italics added).

## **Equality and difference**

If ESG is about "the microphysics of power" in unimpeded circulation, this is disguised by the dense scientific language of - spatial, temporal, and functional interdependence; global risk and emergency governance; an intergovernmental science policy platform; ecosystem services and tradeoffs; stakeholders; deliberated transparency and the uncertainty principle; neocolonial and intergenerational tradeoffs. All 21<sup>st</sup> century subjects will be shaped by this configuration once they partake of it. In 2010, the ESG research network published a compendium on *Global Climate Governance Beyond 2012* and a special issue of the journal *International Environmental Agreements* (Biermann et al. 2010; Biermann and Zondervan 2010). Indeed, along with the Potsdam Institute, the UN Framework Convention on Climate Change (UNFCCC), meeting in Bali, Copenhagen, and elsewhere, has played a major role in shaping the ESG program. The introduction to the climate volume situates it at the conjunction of the global governance project and the European ADAM project on adaptation and mitigation strategies. The key question is:

... whether higher or lower degrees of fragmentation of this overall architecture promise to be more effective in steering societies towards lower emission levels of greenhouse gases ... [or whether] a new comprehensive protocol to the climate convention – will increase overall effectiveness, or whether pluricentric, diverse and possibly redundant systems of governance would bring better outcomes (Biermann et al. 2010: 2).

In discussing principles of accountability and legitimation, Biermann and Gupta (2011) seek to integrate the representation of civil society, particularly the voices of less powerful nations and of future generations. The ILO is offered as an equitable global governance model where employers and unions each exercise two votes per state – and the authors ask if something similar might facilitate problem solving by business, environmental organisations, and southern NGOs. Another possible model is a quasi-corporatist proposition from the Commission on Global Governance. In this, a self-selected civil society forum of some 300-600 members might meet within the UN, possibly as part of UNEP or a future World Environment Organization. A global assembly of elected national parliamentarians is yet a further governmentality option; one that would balance sovereign state interests with international developments. All this in turn, links back to the first premise of accountability and legitimacy: Who decides, who will be empowered, to 'self-select'?

Since the 1992 Rio Earth Summit, the UN has recognised 9 major stakeholder groups including business, unions, farmers, indigenes, women, and youth. This move was simultaneously progressive and divisive, diffusing the combined power of alter-globalisation activists. The Climate Change Convention highlighted both equality and difference - as the 1997 Kyoto Protocol stated: "The parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capacities" (Winkler 2010: 97). Yet, as Winkler from the Energy Research Centre at the University of Cape Town comments, equity can mean different things in policy designed around carbon emissions. For example: (a) equity can inhere in the right of each person to use the same absorptive capacity of the atmosphere; (b) equity can be based on reparations for cumulative historical responsibility; or (c) equity can be built into sustainable development policy. The Kyoto Protocol principle of "common but differentiated responsibilities and respective capacities" required quantitative pollution amelioration measures from the North and qualitative measures from the South. Then, at the 2007 Bali UNFCCC negotiations, new policy categories of mitigation, adaptation, finance and technology transfer, were introduced which reoriented climate responses to the advantage of business.

### **Techno-policy-refugees**

The material dependency of the global North on the global South is known as extractivism (Svampa 2012), but it is not yet formulated as a problem in the discourse of ESG. Environmental sociologists Brand and Wissen (2012) name this dependency "the imperial mode of living". Yet extraction forms the basis of even the "sustainable development" and "green economies" pursued by the transnational elite

and political leaders in the global South who want to be part of that elite. Clearly, this profit oriented provisioning is materially incompatible with global democracy and ecosystem health. A commentary from Shrivastava and Goel from The Energy and Resources Institute (TERI) in New Delhi, adds poignancy to this ethical shift by underlining the paradox of finance for technology transfer in climate governance. Here they give context to the principle of common but differentiated responsibilities:

The core problem of climate change is fossil-fuel development. What is thus needed is a complete shift in the development path of all countries ... While industrial countries need to reduce their per capita emissions without compromising the living standards of people, developing countries must think of a path that is different from what industrialised countries have followed so far ... (Shrivastava and Goel 2010: 26).

The right course of economic action for the North is to contract and converge with the South: in other words, degrowth. The authors thus distance their standpoint from the ecological modernist techno-development of much G77 policy (TWN 2008). As scientists, they do not delve into the value of cultural autonomy, but their important argument could make good use of sociological critiques of the commodity society.

Biermann and Boas (2010) favour an "adaptation framework" to protect climate refugees, as do Jerneck and Olsson (2010) from the Lund University Centre for Sustainability Studies - who also concede that the poor are those least responsible for climate change. Much ESG writing accepts ongoing climate change and thus adaptation as unavoidable. This elides the agency of neoliberal economic drivers in ecosystem breakdown, so that socially-created technologically-induced risk becomes redefined as a "natural challenge". The discursive move protects business and fosters the sale of further high tech, so called renewables, as climate solutions. Other climate policy schemes provide financial offsets for those who can afford to invest in them. But as Goodman and Roberts (2010) argue, little attention is paid to the experience of workers, migrants, or women who carry the material "externalities" of Reducing Emissions from Deforestation and Degradation in Developing Countries (REDD). Under UNFCCC management agreements, like REDD or the Clean Development Mechanism (CDM), peasants and forest dwellers can be forced out of land based economies into the precarity of urban slums. These techno-policy-refugees meet capital's need for ever cheaper reserve armies of labour, but women and even children often find prostitution the only paid work available. Sex tourism now becomes a second-order benefit for the North, deriving from its extractivism in the South (Isla 2009).

Forty per cent of world workers are farmers, and a majority of these are women in the global periphery. According to the international peasant organisation Via Campesina, the 1992 Earth Summit established a Commission on Sustainable Development to ensure follow through on conference outcomes. But this was side tracked as big pharmaceuticals and agribusiness intensified industrialization of the food production system. By default, the Convention on Biological Diversity and the UN Framework Convention on Climate Change invented new units of financial speculation - living genes and dead carbon - as commodities. Two decades later, the "green economy" of Rio+20 was still

tied to the WTO's Doha Round goal of eliminating all trade barriers to unimpeded capital accumulation. In 2012, Via Campesina wrote:

We expose and reject the corporate capture of the Rio+20 process and all multilateral processes within the United Nations. We oppose land grabs, water grabs, seed grabs, forest grabs ... We defend the natural resources in our countries as a matter of national and popular sovereignty ... We demand public policies from governments for the protection of the interests of the majority of the population, especially the poorest, and landless workers. We demand a complete ban on geo-engineering projects and experiments under the guise of 'green' or 'clean' technology ... We struggle for small scale sustainable food production for community and local consumption ... (Via Campesina 2012).

### **Ecosystem services**

Small, organic, subsistence farmers in the global South may be offered corporate or government cash to hand over food growing land for biofuel cropping or carbon sequestration projects, but indigenous forest dwellers are not always paid for appropriation of their medicinal plants. Either way, payment for extraction of livelihood resources locks previously autonomous communities into the monetised global economy. Many disempowerments follow from this mode of "development". Payments for Ecosystem Services (PES) tend to distribute assets upwards, and opportunity costs downwards. McAfee, a cultural geographer, observes that both the market and regulation paradigms miss natural synergies that exist already between conservation, climate mitigation, food production, rural employment, and equity (2012: 31).

Instead, the rising bio-political hegemony legitimates competition and conflict over land use. McAfee is critical of the instrumental rational role played by scientists, economists, and international business consultants like KPMG and McKinsey in exacerbating these problems. In her experience, eurocentric professionals destroy time-tested forms of humanity-nature metabolism by ascribing property rights to ecosystem functions, so allowing them to be traded internationally. At the same time, she discerns that: "Although the World Bank publicly depicts PES and REDD as boons to development, its guidelines warn that excessive focus on poverty reduction is 'counter-productive to the more fundamental PES objective of maximizing efficiency in conservation spending'" (2012: 28). McAfee's work confirms the Van der Pijl thesis on how the technocratic professional class serves capital. In her words, "the escalating ambitions of environmental-economic management entrepreneurs and technicians' provide scientific legitimation for neoliberal hegemonic control" (McAfee 2012: 26; Van der Pijl 1998).

The ESG enterprise was already 3 years advanced when the Rio+20 Summit was held in 2012, bringing the idea of a World Environment Organization to the table for international deliberation. At the same time, the UN-corporate-government "green economy" was circulating in a document called *The*

*Future We Want* (UNCSD 2012). Biermann with VU colleague Philipp Pattberg, formerly of the German NGO WEED, delivered the findings of the research decade 2001-2011 in *Global Environmental Governance Reconsidered*. The sub-projects of this "conceptualization of democracy and legitimacy beyond the state" were: MANUS - Managers of Global Change covering effectiveness and learning in international organizations; MEGLIO – New Mechanisms of Global Governance, covering traditional treaties and Public Private Partnerships (PPPs); MOSAIC - Multiple Options, Solutions, and Approaches: Institutional Interplay and Conflict, covering layers and clusters of rule making among different actors. Named funders were the Volkswagen Foundation, the King of Spain, European Commission ISO802, and Potsdam Institute. The core research network comprised some forty members from the Institute for Environmental Studies, VU Amsterdam; Environmental Policy Research Centre, Free University Berlin; Sciences Po, Bordeaux; Bremen University; Institute of European Studies, VU Brussels; Fridtjof Nansen Institute, Norway; German Development Institute; Graduate Institute of International and Development Studies, Switzerland; the London School of Economics; Lund University; Oldenburg University; Potsdam Institute for Climate Impact Research; and the Environmental Politics Group, Wageningen University. Dozens of pre and post-doctoral students were involved. Oran Young from UC Santa Barbara was recruited as MIT Series Editor (Biermann and Pattberg 2012).

### **Actors, mechanisms, links**

The book *Global Environmental Governance Reconsidered* is organized around the key themes of Actors, Mechanisms, and Linkages. As Biermann describes the stakes: "the entire earth system now operates outside the normal state exhibited over the past 500,000 years". The project's sociological framing is not so broad however, with most studies contained by functionalist assumptions and adjustments to the global socio-economic order. In Gramscian terms: "ways of regulation and production models are circulated and transformed, although always with the aim of preserving the capitalist system" (Doerre 2010: 49). In Carroll's perception: "The neoliberal project is primarily to rework, to repackage and to reform, to validate, to demonstrate global capitalism's continuing viability, to deflect calls for social justice by insisting on the plain justice of the market, to suggest pragmatic solutions that add up to a passive revolution ... " (Carroll 2007: 54). Biermann acknowledges that a critical marxist perspective sees globalisation serving ruling class interests, just as activists from the Geneva based South Centre (1996) see global governance schemes as inevitably biased towards imperial powers. There is no clear solution to this "conceptual diversity" in his opinion (Biermann and Pattberg, 2012: 5, 34-36).

However, the level of critique is more than "conceptual"; it has to do with what is put on the kitchen table at night. Under financial capitalism, commodified labour in the global industrial core has become as precarious as the reserve or secondary labour in household and geographic peripheries has always been. Doerre writes:



... capitalist players seek extra profits via the precarization of employment ... The resulting competitive advantages are easily copied and therefore are not permanent; the 'engine' of this kind of *Landnahme* must be kept running, requiring constant competitive undercutting, spin-offs, outsourcing, *deregulation campaigns*; with wage dumping and even repressive measures and the brutalization of the labour market. Growing insecurity in work conditions is the consequence of inflated promises and expectations of shareholder earnings and profits (Doerre 2010: 56).

The focus of ESG does not rest on the raw materiality of everyday life. Its concern is the autonomy and authority of bodies at multiple political levels, as these destabilise states by extending their "operative mandate". Policy expertise at the World Bank or OECD Environment Directorate is judged invaluable in synthesizing knowledge and facilitating "issue specific institutionalization" to assist transnational negotiations. Although UNEP is poorly resourced, it is able to coordinate policy interests, shape new MEAs, and broker public-private partnerships. Nevertheless, as states are liquidated and hybrid partnerships promoted, Pattberg's (2012) statistical study of some 300 sustainability PPPs ranks them weak on – participation, implementation, and regulation. Backstrand from Lund finds PPPs heavily reliant on intergovernmental support; short on problem solving capacity, accountability, and inclusivity. Post-Johannesburg partnerships are supply rather than demand driven and biased "towards Northern states, large developing countries, professional NGOs, and multilateral bureaucracies at the expense of poor countries, local grass roots movements, women and indigenous peoples ..." (Backstrand et al 2012: 138). This structural anomaly limits "discursive contest" and transparency. Few PPPs have clearly articulated ecological objectives or measurable benchmarks; many aim only at "building more partnerships or at further institutionalization"(2012: 134).- Indeed, without hands-on human interaction with the biophysical world, no amount of innovation can gain traction with the thermodynamics of natural processes. This is something the global industrial core will eventually learn from its peripheries.

### **Institutional enrolment**

As an actor network, ESG consensus building gains international legitimation from the IHDP (International Human Dimensions Programme on Global Environmental Change), the UN University, the International Council for Science, and for Social Science, respectively. The International Project Office is at Lund University, but the program is establishing campus centres around the world. An ESG website explains its Concept, Analytical Problems, Cross-cutting Themes, and Flagship Activities. There is an Events calendar and lists of Publications organised by a Science Plan. Articles on climate adaptive capacity, deliberative democracy, MEAs, forest certification, water and biodiversity governance, are found in journals like *International Environmental Agreements*, *Ecological Economics*, and *Global Environmental Politics*. Books are published with Springer Verlag, Edward Elgar, Cambridge University, and MIT Press. Working Papers and Reports available online include *Key Insights from Social Science Research*, *Planet Under Pressure*, Policy Brief, No. 3; and *Population*

*Dynamics in a Warmer World*, a Report on a Colloquium of the National Committee for Geography of the Royal Swedish Academy of the Sciences, 2011. In addition there is online information on Affiliated Projects, Teaching, People and Places.

ESG gatherings have included an Amsterdam Conference on Human Dimensions of Global Environmental Change, 2007; Roundtable on the Future of Environmental Governance in China, Beijing, 2009; Climate Change Governance in the Asia-Pacific, sponsored by Asia Pacific Network for Global Change Research and the College of Asia and the Pacific, Australian National University, 2012. In the lead up to the Rio+20 summit, a major Planet Under Pressure conference was hosted by the Royal Society in London, with keynotes from the UK Chief Scientist and Vice President of Shell Oil. Registration was GBP 400 per head. Co-sponsors of the event were IHDP, IGBP (International Geosphere and Biosphere Programme), Diversitas, and WCRP (World Climate Research Programme). Now, as the UN reviews the Millennium Development Goals (MDGs), a set of Sustainable Development Goals (SDGs) is being floated. Biermann, speaking at the conference Towards a New Social Contract, International Research Centre on Sustainability, University of Reims, June 2013, is hopeful that global governance will become a cross cutting SDG goal.

ESG articulates points of friction in the circulation of market mechanisms; strategies of organisational alignment; practices of institutional enrolment and capture. But as scholars refine this new direction of governmentality, hegemonic aspects of ESG come to the surface. What is maximised is leadership innovation and opportunities for reinforcing public consensus around it. The objectives of business, ruling elites, and technocratic professionals are brought to the fore through dialogue in academic, corporate, state, and UN agency contexts. Research applications and grants, public lectures, conferences, articles, books, internet sites, and media reports are the building blocks of this proto bio-political regime. The publication of contradictory findings on ESG signifies open-ended intellectual endeavour. Hegemony is, after all, about speaking the right language, and the discursive construction of social reality rests more on conceptual reiteration than consistency. What is minimized in the ESG analysis are major historical tensions between capital and labour, core and periphery, human production and natural reproduction. The technico-legal neutralisation of these living relations may affirm class-consciousness in the private sector, but this same "retreat from the public sphere" risks the strategic disadvantage of political unity without a material base. Indeed, ESG researchers themselves, continually raise the question of legitimacy.

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