

## **SPECIAL PANEL:**

### **Advancing Environmental Justice: Resistance, Framing & Access to Justice in Ecological Distribution Conflicts**

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#### Panel Abstract

This panel presents insights from the EJOLT project, examining mobilizations around and means of access to justice in ecological conflicts. We look at how environmental inequalities and issues related to environmental distribution are framed by environmental justice organizations (EJOS) through new concepts such as climate debt; argue for an ecological economics that is more sensitive to issues of distribution and show some possible means of advancing environmental justice (EJ) through legal mechanisms such as environmental courts and tribunals, lawsuits and criminal liability. The session presents success stories in which environmental justice has been advanced, with the aim of dragging out key lessons learned, ways forward and means of replication.

EJOLT aims to empower EJOS and the communities they support that receive an unfair share of environmental burdens to defend or reclaim their rights. In EJOLT the definition and applicability of EJ is taken from the ground-up (from activism to science). The project conceives the work of EJOs as instrumental in the path towards a more sustainable economy, and EJOLT aims to translate its research into resources for supporting grassroots-led mobilizations in their struggles through an activist-science.

#### **“Calculating Climate Debt. A Comparison and a Proposal”**

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The concept of climate debt have increasingly drawn attention and invoked wide-spread interest in the last few years. First conceptualized in 1999 within the millennium movement for (financial) debt cancellation, it was from the very start a bottom-up approach, elaborated within the social and environmental movements rather than by states or academia. Demands to repay the climate debt was raised by hundreds of organizations, mainly from the global South, in 2009 and later also by states such as Bolivia and the 49 Least Developed Countries. It should be seen as a part of the wider ecological debt, a concept that was first introduced by *Instituto de Ecología Política* before the Rio Earth Summit 20 years ago. Both concepts share the virtue of switching the commonly perceived positions of debtors and creditors in the world economy. Ecological debt can, in short, be seen as accumulated by countries and/or generations through exploitation of natural resources through (colonial) plundering or uneven terms of trade, or by excessive use of ecosystems at the expense of others.

While other approaches to quantifying ecological and climate injustices often have been developed by researchers and have a rigorous methodologies, climate debt is more of an 'open access' concept and lacks a unified way of defining, conceptualizing and calculating it. Although its openness probably has been part of its success, some confusion arises when very different ways of defining and quantifying a

concept exist. After comparing and evaluating several efforts to quantify climate debt or similar concepts by activist-researchers, NGO-campaigns, UN bodies and academic scholars, I therefore propose a method that is in line with the definition that has emerged from the climate justice movement and at the same time is accurate and user-friendly. Climate debt of a country is thus calculated as its actual emissions over time minus its fair per capita share of a “safe”, sustainable level of global emissions. The formula,

$$CD_C = e_{CP} - (S_W * P * pop_C / pop_W)$$

is to be understood as  $CD_C$  (climate debt of country C),  $e_{CP}$  (the C's total emissions during the time period P),  $S_W$  (a sustainable level of global, annual CO<sub>2</sub>-emissions that is fully absorbed by the ecosystems without damaging their functions), P (the time period of choose),  $pop_C$  (population of C at the end of P) and  $Pop_W$  (world population at the end of P).

The method (hence referred to as RWa) reminds of Paredis et als “Model 1” (EP), which arguably is more historically correct but requires significantly more data and calculations.<sup>1</sup> RWa has a model bias compared to EP that results in greater climate debt (or smaller climate claim) for countries whose population – as a rate of world population – is decreasing; i.e. generally developed countries. This bias can largely be obviated by a simple methodological innovation whereby the mean value of the population rates of the country in the beginning and end of the time period is used instead of only the end value (RWb).

Differing assumptions however causes greater result differences than the formal construction of the models. While Paredis et al proposes a level of global, annual emissions at 9 GtCO<sub>2</sub>, I argue that long-term sustainability rather requires a level of 3 GtCO<sub>2</sub>. Regarding the highly contested area of a monetary valuation of climate debt, Paredis et al proposes a value of \$10/tCO<sub>2</sub> while I follow Nicolas Sterns proposal of \$85/tCO<sub>2</sub>. In Table 1, the climate debt for Guatemala and Sweden 1990-2000 resulting from the models EP9 (9 referring to the sustainable level of 9 GtCO<sub>2</sub>), RWa9, RWb9 and RWb3 (a level of 3 GtCO<sub>2</sub>) is reported. Note that the model bias of RWa9 is largely obviated in RWb9.

**Table 1.** Sweden's and Guatemala's Climate Debt/Claim 1990–2000 according to four models (MtCO<sub>2</sub>)

	EP9	RWa9	RWb9	RWb3
Guatemala	-111	-135	-118	8,2
Sweden	481	489	481	583

The stronger ecological concern of RWb3 increases the climate debt of both Sweden and Guatemala; actually turning the latter's climate claim into a debt if only counting for the period 1990-2000. An advantage of the RW-model is however that the debt over longer periods of time can be calculated relatively easily. In an elaborated paper, calculations for more countries and region will be made, the historical and theoretical foundations of the concept further described, and assumptions discussed in depth. Finally, I will make some suggestions on how the climate debt can be repaid.

<sup>1</sup> When writing my original paper in 2010, I was not acquainted with Paredis, Erik et al (2008): *The concept of Ecological Debt. Its Meaning and Applicability in International Policy*. Gent: Academia Press; in this abstract, however, their findings and terminology have been integrated.

## **“Social Metabolism and an Ecological Political Economy: A Computable Stock-Fund Representation”**

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Biophysical sustainability has been the central focus of formal models in ecological economics. In some of the most salient problems at the interface of economic and ecological systems the question of distribution is at least as important as biophysical sustainability. From global-scale climate change to localized conflicts over distribution of the ecological space is often at least hard a problem for policy and praxis as biophysical sustainability. In ethical terms, biophysical sustainability is simply a question of intergenerational equity. Thus if one is making a case for biophysical sustainability, it would take a convoluted ethical calculus to simultaneously exclude the more traditional question of intergenerational equity. It is hard to make a case for sharing of ecological space with humans yet to be born, and with other species if one is also not making an argument for ecological justice for people that are presently alive. While ecological economics clearly recognizes this ethical imperative, its formal models have lagged behind policy and praxis. Significant exceptions notwithstanding, the formal models of ecological economics have largely considered questions of distribution as retrofits rather than as a fundamental variable to be modeled along with biophysical sustainability.

Distributional questions have been instead been the stock of neighboring disciplines like political ecology and social ecology. After reviewing the broad literature on ecological distribution within ecological economics as well as in other related disciplines (especially in the context of environmental conflicts in the South), we argue that it is both desirable *and* possible to simultaneously model distribution and biophysical sustainability using well-established theoretical frameworks.

In this paper, we demonstrate the possibility of integrating political economy questions of distribution into formal ecological economics models by using a two-fold strategy. First, we develop a formal computable representation of the economy-ecosystem interaction problem using the stock-fund framework first developed by Georgescu-Roegen. We then use this representation to study both biophysical sustainability and ecological distribution as questions of social metabolism within this stock-fund representation. Our model explicitly distinguishes between the cardinal stock-flow space and ordinal fund-flux space and represents social metabolism as a mapping problem between these two spaces. We show how both biophysical sustainability and ecological distribution is ultimately a fund-flux phenomenon even when social metabolism provides an account of throughput through the stock-flow space. Both biophysical sustainability and ecological distribution are modeled as tradeoffs between the stock-flow space and the fund-flux space. We show how the proposed mapping between the stock-flow space and fund-flux space can simultaneously handle questions of ecological distribution and biophysical sustainability using canonical examples where both neoclassical welfare economics and biophysical metrics are not satisfactory.

One of the distinguishing features of our theoretical framework is that it allows for a consistent treatment of both the source-side and sink-side of the economy-ecosystem interaction problem. Thus any social metabolism model that is developed on the source-side can also be used on the sink-side of the economy. For example, consider the canonical example of a forestry based industry – say a paper mill. On the source-side, we model how the paper mill extracts timber from the forest as well as timber regeneration. To achieve symmetry between source-side and sink-side, we model regeneration in terms of abstract ‘holes’. In the present example, waste paper products of the economy find their way back to

the ecosystem. The ecosystem in its role as a sink has a finite capacity to process this waste stream. We model the ecosystem's ability to process waste as an abstract regeneration process.

If the forest regenerates timber, the river regenerates 'holes' that absorb waste. Unlike timber, holes are an abstract construct. When waste throughput is less than the regeneration rate of holes, the ecosystem is able to process all the waste. When the waste stream throughput exceeds the processing capacity of the ecosystem, waste accumulates on the sink-side.

We use the theoretical framework to empirically investigate biophysical sustainability and ecological distribution at two different levels of economic-geographic aggregations. We present preliminary results from a study that looks at water metabolism in a large urban centre in India, and also more robust results from a study that looks at the global carbon emissions.

**Keywords:** Political Ecology, Social Metabolism, Ecological Distribution, Stock-Fund Framework

## **“Environmental Justice, Ethics and Values: The Interplay Of National, Transnational And International Litigation For Environmental Justice: Seeking Effective Means Of Redress For Grave Environmental Damage”**

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Environmental justice is a notion that has its origin in the United States. In a nutshell, it deals with the unfair distribution of environmental hazards between the haves and the have-nots, trying to address the disproportional burden carried by ethnic and racial minorities not participating in the social benefits of the hazardous activities the consequences of which they have to bear. Hence, environmental justice is primarily concerned with issues of corrective justice and distributive fairness. The notion of environmental justice has only commenced to permeate the academic analysis in the field of international law very recently. In this context, its potentials are being assessed as a conceptual tool of normative jurisprudence focusing precisely on the necessity to integrate not only economic growth and environmental protection, but also social development and procedural justice into the equation of 'sustainable development'. Accordingly, environmental justice is regarded as a theoretical construct, the embedment and practical influence of which in national, especially, in international law, remains largely to be seen.

Nevertheless, questions of environmental justice raise in the context of transnational relations in the light of an ever increasing number of instances of grave environmental harm resulting from the operations of multinational corporations in the territory of those developing countries with low environmental standards (if any at all), little enforcement capacities and spheres of corruption. Corporate activities in these countries that are based on the disrespectful exploitation of natural (and human) resources have not only negative impacts on the environment, but almost necessarily imply the deprivation of the enjoyment of basic human rights among local populations.

Does national and/or international law provide for remedy and redress? The most obvious way would be to seek remedy before the courts of the country in which environmental damage is being caused. However, national courts in countries in which the (allegedly) liable corporations have their seat, or hold assets, may also be addressed, albeit under tightly limited conditions. Factors such as the definition of the national courts' jurisdiction over acts committed abroad, the determination of applicable laws, as well as the standing of foreign citizens actually pose a hindrance to seek remedy on this way. In addition, occasionally states –and

even affected individuals— may resort to international courts (e.g. regional human rights courts) or quasi-judicial treaty bodies of international environmental agreements in this context.

Based on the insights derived from several relevant case studies, the paper appraises the circumstances under which each of these ways of remedy, either by itself, or in interaction with each other, have proven most effective in providing redress and fostering some sort of 'environmental justice'. It concludes that, whereas national courts in the country where environmental damage has taken place may provide some sort of redress, this is rather the exception, particularly in developing countries with weak enforcement structures. Despite the aforementioned difficulties, the most effective way to seek redress has proven to be the simultaneous resort to courts in those countries where the allegedly liable enterprise is incorporated or holds assets. In particular, the jurisdiction of US courts under the 1789 Alien Torts Claim Act seems to provide for such a possibility, especially in cases involving massive violations of human rights by companies incorporated under US law. So far, however, US courts have shown more reticence in accepting jurisdiction under the ATCA for cases concerning primarily the causation of environmental damages. Yet, case-law of national courts is not necessarily static. The view is taken that it is precisely in this context, where decisions of international courts and quasi-judicial treaty bodies may take influence, by providing national courts with useful hermeneutic tools to enforce their national legislation in a way consistent with international legal standards concerning the protection of human rights and the environment. It is argued that the interplay between national and international courts or quasi-judicial bodies may contribute to foster some sort of international rule of law. In this context the furtherance of an appropriate cosmopolitan legal culture may contribute to the emergence of a normative jurisprudence more sensitive to the concern of 'environmental justice'.

**Keywords:** environmental justice, national courts, international courts

### **“The Hijacking of Democracy and the Environment by Capital”**

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The CDCA (Documentation Center for Environmental Conflict) based in Rome, holds a unique inventory of environmental conflicts based on activist knowledge. CDCA aims to enquire, study and spread the knowledge of causes and consequences of environmental conflicts produced by the exploitation of natural resources and common goods, particularly in the global South. They see environmental conflicts as symptomatic manifestations of the present model of economic growth. Environmental conflicts occur when civil society, excluded from the decision process, opposes imposed policies based on the overexploitation of resources and territory. Through popular mobilization, the involved communities bring a model of active democracy in defense of their territory and environment.

This paper focuses on the link between the institutional responses to the economic and ecological crisis in Europe, where democracy has been subsumed to capital and technocrat-bankers have been put into power through non-electoral means; and the Rio+20 process, where instead of an emphasis on environmental justice there is a blatant attempt at commodification and financialization; subsuming the environment to capital. In both Europe and in the UN process, we see a weakening of local democratic structures. The authors argue for the democratisation of development, on an ecological reconversion of the production system characterised by a “just sustainability”, achievable only through a truly and complementary implementation of social and environmental justice.