

Justice and fairness in resource governance: Conflicting views on allocation and access

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Paper presented to the Conference on the Human Dimensions of Global Environmental Change, Amsterdam, December 2-4, 2009

Theme 5, Panel 5: Allocation and Access in Earth System Governance

Abstract

In order to develop the concepts of access and allocation – central to the Earth System Governance project – we define and describe three dimensions of justice and fairness that need to be recognised in ESG. The dimensions are international, intergenerational, and intersectional justice and fairness.

Each dimension of justice and fairness is illuminated with the help of case studies. The international dimension highlights the global governance system of the United Nations and the conflict representativity vs efficiency; the increasing conflicts over land as land based resources become ever more crucial for ESG, as exemplified by the race for biofuels and the production of their feed stocks; the attempt to exploit Africa's raw material riches (oil for the US economy) as well as South East Asia's (hydropower, exploited for the benefit of China).

Intergenerational fairness and justice is discussed with the help of the conflicting views of what weight to give to the future and the needs of future generations; we conclude that the underlying favouring of the present at the expense of the future needs to be rethought which will have decisive effects on discount rates and cost-benefit exercises.

Finally, intersectional justice and fairness is illustrated by the conflict between shrimp farmers and fisher-men and women caused by "development" projects in Honduras.

We conclude that access and allocation issues need to be framed in the context of conflicts and contradictions. Earth System Governance cannot be designed, let alone improved, without due consideration to justice and fairness.

Introduction

The Earth System Governance (ESG) project identifies *access* to material and immaterial assets, goods and services together with their *allocation* as one of five analytical questions in need of further research for the sake of effective governance of the emerging earth system. In the context of ESG, access is defined as 'meeting the basic needs of humans to live a life in dignity' and allocation is defined as 'allocating benefits, responsibilities, and involuntary risks between countries and actors' (Biermann, Betsill et al. 2009).

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In order to further develop the concepts of access and allocation we here define and describe three dimensions of justice and fairness that need to be recognised in earth system governance. Proceeding from a definition of the three dimensions of justice and fairness in terms of the international, the intergenerational and the intersectional, we provide empirical examples that illustrate how issues of justice and fairness are expressed, practiced and violated.

It is an important underlying assumption of our arguments that conflicts over and competition for resources are driven by different interests of power and not just by malfunctioning, insufficient or lacking institutions, as is sometimes assumed (Walker, Barrett et al. 2009).

The International Dimension

Governance of global commons is crucially dependent upon institutional setup. Global governance institutions may be evaluated according to how well they manage to perform the functions for which they were created, i.e. for their efficiency. But they are simultaneously evaluated in relation to their legitimacy, that is, if the set-up of the governing institution is accepted by the parties concerned. Frequently, these two aspects – efficiency and legitimacy – although equally cherished, clash with each other.

This conflict is not new, and it has been discussed in relation to the UN in view of the need to redress the governing structure of the Security Council, a need that was underlined in the report of the Commission on Global Governance (1995, especially chapter 4). Today, as a sequel to the financial and economic crisis, it is clear that a major shift in economic and political power has occurred, which in effect has propelled the G20³ to the role of global centre of power, and thus of crucial importance for global governance.

The G20 can be evaluated in relation to the conflict of legitimacy vs efficiency. At the UN conference on Financing for Development (FfD) in Qatar 2008, a follow-up to the 2002 FfD conference in Monterrey, Mexico, Miguel d'Escoto Brockmann, then chairman of the General

³ The G20 is composed of G8 (Canada, USA, UK, France, Germany, Italy, Russia and Japan) plus Mexico, Brazil, Argentine, South Africa, Turkey, Saudi Arabia, India, Indonesia, South Korea, China and Australia. The last position is shared by the EU and the European Central Bank. European countries thus continue to be overrepresented, just as in the boards of the World Bank and the IMF.

Assembly (GA), openly criticized the G20 for not being representative when setting the agenda and deciding the future rules of the game for the international financial order. Instead, the chairman of the GA preferred to reserve this role for the UN, representing all the countries of the world, the so called 'G192'. The UN Secretary General Ban Ki Moon, cognizant of the real power relations in this world, defended the new role of the G20, however, by stressing that G20 represented '80 percent of everything': global population, GDP, trade, foreign direct investments, aid. Hence, G20 was to be considered as a far more legitimate body than G7/8.⁴

The United Nations Development Programme, (UNDP 2000), is taking such arguments into consideration when it proposes that an *Economic Security Council* (ESC) be established at the UN. The suggested governing system of the ESC is a combination of the current principles ruling the Security Council and a more representative set-up. The ESC is proposed to have 11 permanent members, chosen among the richer and more populous countries of the world, North and South. Another 11 members would be elected on a rotating basis, to achieve adequate geographical representation of the ESC.

The proposal is similar to an idea presented recently by the UN commission of experts (the Stieglitz commission): a Global *Economic* Coordination Council, to operate along with the General Assembly and the Security Council in order to avoid future financial and economic melt-downs (United Nations 2009). However, this idea was buried by the major powers – the G20 – when it was presented to the General Assembly in the summer of 2009 (United Nations 2009a). Thus, it can be concluded that the G20 have decided to opt for efficiency rather than legitimacy, a conclusion that is reinforced by the fact that the G20 channel almost all of its support to Southern countries through the IMF and the World Bank, all in all one trillion USD, rather than through the UN.

Thus, international governance can be seen to be at the core of ecosystem governance issues. However, in the context of this paper, we do not limit the term 'international' to 'inter-governmental', but rather wish to include various kinds of interaction across international borders. For instance, concern has been raised that climate change might trigger a new kind of world order founded on 'carbon colonialism' (Bäckstrand and Lövbrand 2006). In the struggle to reduce emissions of greenhouse gases, developing countries are increasingly coerced into

⁴ One of the authors, Kenneth Hermele, participated in the conference as NGO representative in the Swedish delegation.

development strategies that contribute to, rather than alleviate, this polarisation. Although global problems of climate change to a large extent are caused by industrialised countries, the need to mitigate climate change is also presented for consideration of the poor countries, although they can be seen to be more at the receiving end of the impact of climate change.

Common but differentiated responsibilities

The unbalance between countries responsible for the problem vis-à-vis countries suffering from it, was recognized already by the UN Framework Convention on Climate Change 1992, which in its preamble declared that the countries of the earth have ‘common but differentiated responsibilities’ (Article 10). According to the UNFCCC, rich countries have a distinctly different obligation as compared to poor countries. In the Kyoto Protocol 1997, this principle of ‘common but differentiated responsibilities’ was interpreted as an implied division of the globe into two groups: the rich countries plus transition countries having obligations to diminish their green house gas (GHG) emissions by an average of five percent (average emissions in 2008-2012 as compared to the emissions of 1990); versus the remainder of the world having no obligations.

But is this a reasonable interpretation of ‘common but differentiated’ responsibilities? Well, the Kyoto Protocol certainly presents a *differentiated* responsibility, but ‘common’ is open to doubt, since *no obligations* hardly can be said to mean that countries of the South have acknowledged that their common responsibility must be shared with the countries of the North. At least this is what the previous US administration argued when it wanted to justify its refusal to ratify the Kyoto Protocol (Giddens 2009).

In the run up to the Copenhagen UNFCCC COP-15 conference in December 2009, the issue has resurfaced as a central bone of contention. But the interpretation of ‘common but differentiated’ as ‘no responsibility’ has become even more untenable, we argue, by the fact that China has overtaken USA as the largest emitter of greenhouse gases globally, and further by the prospect that the Global South as a group will probably be responsible for two thirds of the increase in emissions until 2030.

How, then, is common but differentiated to be understood? Following Page (2008) we can discern three principles for setting differentiated targets for reducing GHG. The burden of mitigating climate change may be distributed among countries according to:

- Their historical *contribution* to climate change;
- Their *ability to pay* for the consequences of climate change;
- The *benefits* reaped from the economic activities causing climate change.

For each principle, objections may be formulated. In relation to responsibility for the occurrence of climate change it can be asked: is it reasonable to hold countries responsible for emissions that took place in the 18th, 19th and early 20th centuries, i.e. before climate change became a political issue recognized by the international community? If the answer is no, then the question is if it is only after the date of the international agreement on climate change – i.e. the Rio Conference and particularly the UNFCCC of 1992 – that such responsibilities should be valid. This would have an immediate impact on the allocation of responsibilities, as all countries, irrespective of their historic record, may be considered to have the same awareness of the importance of GHG as of this date. Thus, differential responsibility would become more of a common and equal responsibility as the emissions of countries like India and China have grown considerably during the last decades.

We may also pose questions for the other two principles: is it really the level of wealth as such that matters, or should wealth rather be seen in relation to needs, how much excess resources it can mobilize after assuring that it has enough to meet the needs of its own population?

Nevertheless, the principle of ‘common but differentiated’ stands strong in the international negotiations as all three interpretations of what it could mean lead to the same conclusion: rich countries have more responsibility than poor countries (see Page 2008:564). But the conflicting issue is still *how much* more responsibility?

These may be unnecessarily complicated arguments, as the *politically* available options are bound to be quite restricted. According to Giddens (2009:189-190, referring to the NGO Climate Action Network), a best case scenario for the outcome from Copenhagen (and now that it has become clear that no binding agreement will be concluded in Copenhagen, the argument may be prolonged until Mexico 2010) is that the dual system of Kyoto will be replaced by a three-layered:

- High-income countries should assume new and hopefully more demanding reductions.
- Low-income countries should just as in the Kyoto protocol be exempt from any mandatory reductions of their GHG emissions.
- Middle-income countries should promise increasing green house gas efficiency, i.e. reduce the volume of GHG (in relation to their GDP).

The only change compared to the Kyoto protocol is thus that middle-income countries will assume a responsibility for becoming more efficient, which by no means automatically will lead to an absolute reduction of actual GHG emitted. It can be noted that it was *exactly* this commitment that the Chinese President Hu Jintao expressed at the UN General Assembly in September 2009 when he stated that China will intensify its efforts to conserve energy and improve energy efficiency ‘by a considerable margin’ until the year 2020 (compared to 2005, Jintao 2009). And he simultaneously stressed the need to keep the principle of common but differentiated responsibilities alive, which in fact amounts to stressing that China is not a middle-income country. Hence, being a low-income country, China will not take on any obligations to reduce GHG emissions.

West African oil

We now turn our attention from the global arena to a level where interactions between two or more countries take place, and particularly interactions between countries that possess very unequal power. At this level we can observe many faces of violation of justice and fairness particularly in relation to soft states (Scott 1988) and predatory states (Galbraith 2008).

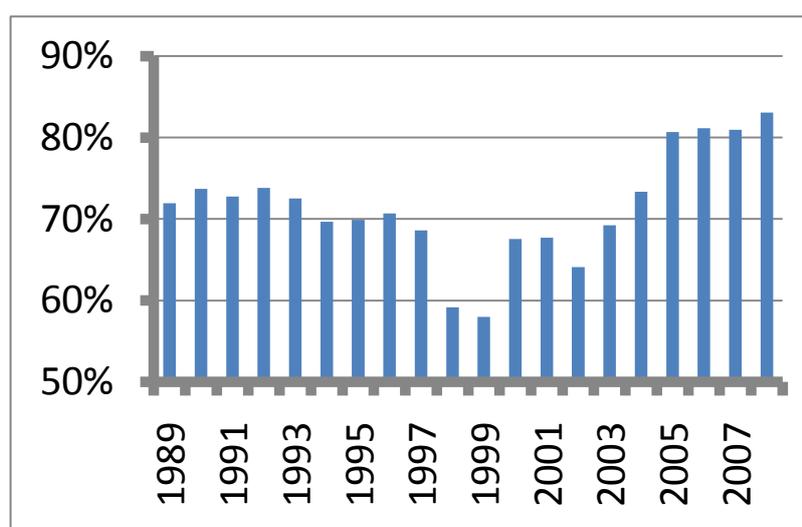
During the cold war, Europe and the United States had important interests in Africa. The aim was to counteract Soviet strategic interests in order to prevent the proliferation of communism (Lee 2006). After the collapse of the Soviet Union in 1991 these strategic interests faded away. In 1995 a Pentagon report declared that USA has ‘very little traditional strategic interests in Africa’ (Silverstein 2002). During the 1990s the US government criticised many African states for corruption, violation of human rights and bad governance in general. This changed, however, with increasing tension between the West and the oil exporting countries in the Middle East, culminating with ‘9/11’ in September 2001 and the subsequent ‘war on terrorism’.

A good example of how geopolitical interests trump human rights considerations is the relations between Equatorial Guinea and the USA. The USA terminated its diplomatic relations with Guinea in 1994 after the US ambassador had been threatened due to his call for improved human rights in the country. But then priorities started changing, and in 2000 Equatorial Guinea received a record loan guarantee from the USA (the largest ever in SSA), followed by the visit of a delegation from the US Congress (Silverstein 2002). Subsequently, in November 2001, then President George W. Bush prepared for the opening of a US embassy in Malabo, the capital of Equatorial Guinea, which was realised in June 2004.

Equatorial Guinea is not an isolated case. The African Growth and Opportunity Act (AGOA) was created in 2000, supposedly with the main objective to provide African countries with greater access to US markets. According to the official text:

AGOA can change the course of trade relations between Africa and the United States for the long term, while helping millions of African families find opportunities to build prosperity.

In reality, however, AGOA was primarily aimed at increasing the import of oil from Africa (Lee 2006). As can be seen from Figure 1, this goal was successfully achieved: since the creation of AGOA, oil has increased its share of US imports from Africa substantially and reached 83 percent of all US imports in 2008 (See Figure 1).

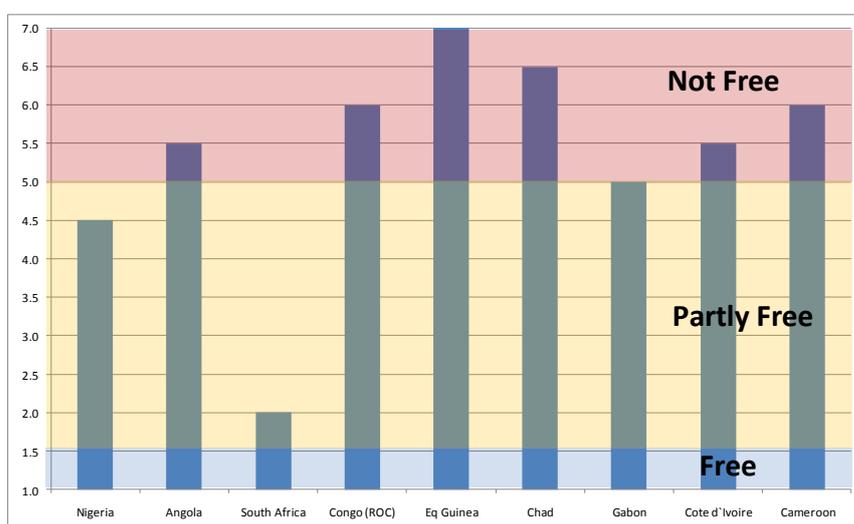


Source of data: United States International Trade Commission (2009)

Figure 1. The share of oil in US imports from Sub-Saharan Africa 1989-2008.

The issue here is not only double-talk and hypocrisy. In countries with so called poor governance, the exploitation of oil and other mineral resources may contribute very little to improved living standards for the majority of the population. Of the nine countries contributing over 95 percent of all the US imports of African petrol, five were classified as "Not free, two as Partly free, and only one (South Africa) as Free according to the neo-liberal US think tank Freedom House (See Figure 2). One of the main oil exporters, our case country Equatorial Guinea, was classified in the worst category together with countries like North Korea and Burma.

Figure 2 shows the nine leading oil exporting countries in Africa and their ratings. Here it can be seen that aspects of justice and fairness are sacrificed at the altar of geopolitical interests. It ought to be the other way around: only by taking justice and fairness into account, may we assure that the revenues gained by the oil exporting countries contribute to preparing the way for a future sustainable development path. Today, the opposite prospects dominate: when these countries run out of oil, they will be even less prepared for sustainable development than they are today.



Source of data: Freedom House (2009)

Figure 2. The ratings of "freedom" for the nine largest African trading partners of the US.

Furthermore, economic support to the incumbent predatory regime from the oil revenue will act as a strong barrier to change of the regime. Fighting bad governance – allegedly the prime objective of the Millennium Challenge Account, one of the major development assistance

initiatives in the US more recently – while simultaneously supporting the very same governments judged to be the worst performers, is nothing less than stupid.

Hydropower in SE Asia

Violating international justice and fairness is not a uniquely Western phenomenon. We can observe similar trends in relation to China's quest for renewable energy. To some extent this development is probably the result of climate change policies. During the last five years we have seen a dramatic increase in foreign investments in hydropower development in the big Southeast Asian rivers, notably Irrawaddy and Mekong (See Figure 3). According to NGOs operating in the SE Asian region, this development is promoted aggressively by Chinese public-private partnerships in collaboration with the governments in Burma and Lao PDR.

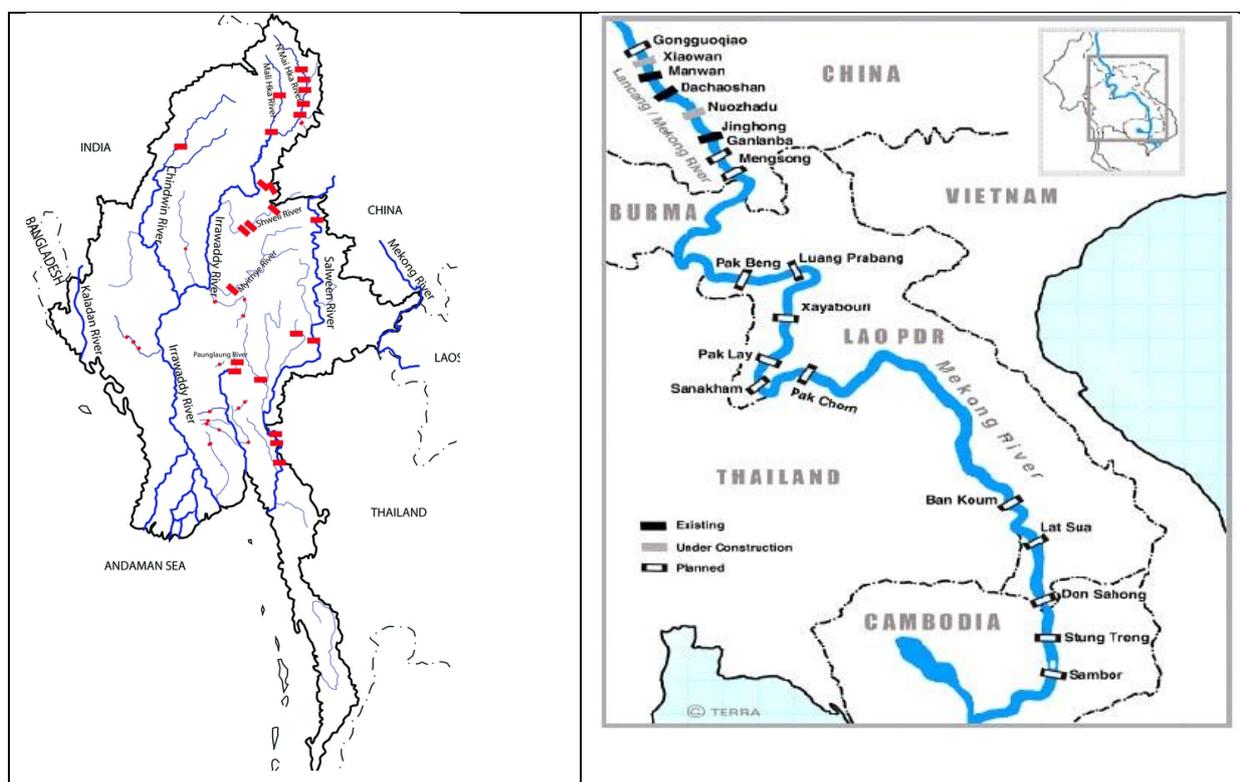


Figure 3. Planned and ongoing dam projects in Burma and Laos.

According to a review of 11 ongoing dam projects in the Mekong in Laos, hundreds of thousands of people are negatively affected through for example forced resettlement, disappearing land, declining fishing resources; and in a majority of the 11 cases social and environmental regulations were ignored (Lawrence 2008). A similar but much more brutal situation seems to prevail in Burma, where the government is driving hundreds of thousands

of people from their home using military force, forced labour and even systematic rape of women (KDNG 2009).

China has a code of conduct for this kind of large infrastructure projects domestically, according to which social and environmental considerations must be accounted for. But when the constructions are made in another country, such rules do apparently not apply (Lawrence 2008; KDNG 2009).

Biofuels and competing land uses

The use of agricultural feed stocks – and especially of cereals – for the production of liquid biofuels has exploded during the last couple of years. In the last two growing seasons, the total use of cereals for ethanol production increased by as much as 30 percent in 2007/08 (over the previous year), and by another 30 percent in the following year, 2008/09 (v Braun 2008).

This ought to mean that biofuels compete with food, the traditional use of the same cereals, which in turn should show up as increasing food prices. Indeed, this has been the case during the last couple of years, when food prices have grown almost exponentially, reaching a peak in 2008 when the World Bank average food price index reached close to 200 (base year 1995 = 100). The increase was unprecedented, and extremely fast: as late as 2005, prices were hovering around index 100 (World Bank 2008).

Concerning these price increases it has to be investigated whether they were the effect of the growth of feed stocks for biofuels. Here, great divides exist. It can be argued that a number of factors contributed to the price hikes. In addition to increased use of cereals for biofuel production, droughts were recorded in major producing countries like Australia; increased economic growth and a concomitant increase in meat consumption was noted for China and India implying a growing need for feed crops and demand for pastures. Speculation also played a part as a growing number of speculative contracts were recorded during this period. And the simultaneous and equally steep increase in oil prices certainly had an impact on food prices as agriculture depends on fossil fuels as well as on inputs based on petrol and its derivatives. Add to this a growing world population and an all time low in global stocks of cereals – and anything but price rises would have been surprising (Brown 2005). Judging the responsibility of each one of these factors is not easy.

At one extreme, biofuel production is held to be the main culprit for the price increases, much more important than any of the other contributing factors. While the impact of higher energy prices on fertilizer prices and transport costs explains 25-30 percent of the total food price increase, ‘most of the remaining 70-75 percent increase in food commodities prices was due to biofuels’; other factors, such as low grain stocks, speculation, and the exports bans that were imposed by some traditional exporters in order to mitigate food riots, were all seen as secondary consequences following on the growth of biofuel production (Mitchell 2008:17).

At the opposite extreme, pro-biofuel investigations play down the role of the increase of biofuel production, relegating it to ‘only one among a myriad of factors that drove up commodity prices’ (Garten Rothkopf 2009:498). Although this perspective is as cognizant of the various contributing factors – from oil prices, via low stocks and changing consumption patterns to speculation – the relative weight of these is turned upside down. While biofuel production is held responsible for a dismal one percent of the price rise in the US, speculation is said to be responsible for 40 percent of the rise in food prices world wide (op cit). If figures such as these should fail to convince, then the more recent *fall* in food prices, after the 2008 spike, is used as an intuitive argument: if prices fall while biofuel production continues to rise, then surely biofuels cannot be responsible for the earlier food price rises, the argument goes.

Somewhere in between, the International Food Policy Research Institute opts for allocating a responsibility of 30 percent of the food price rise, mostly on account of a shift of production from other feed stocks to corn (v Braun 2008:5).

However, we believe that many factors are involved and simple calculations of the responsibility of biofuels for the rise of food prices on the world market is not easy to present with a reasonable degree of reliability. Nevertheless, there exist convincing arguments that the production of the inputs for biofuels has entered into conflict with the earlier use of limited land resources. A subsequent effect is the change from food production to feed crops, and from grazing to crop production, both of which will have significant effects on land use. Here, just as in relation to the impact on food prices, conflicts reign as to how important such land use changes are.

Unfortunately, life cycle analyses (LCA) is of little assistance to resolve the issue, as LCA by design does not include land use change but only the direct use of resources – including inputs such as fossil fuels – that contribute to the output, in our case biofuels. Thus, when an LCA concludes that the use of a certain feed stock is beneficial to the reduction of green house gases, this is in fact a rather restricted conclusion that has to be circumscribed with the warning that no direct land use changes, not to speak of indirect, have been taken into consideration. By leaving land use changes out of the picture, studies can yield quite positive conclusion as to the ecological impact of transforming pastures into crop land, but this may be because land use change caused by the production of the feed stock – the transformation of forests into pastures and pastures into crop land – have not been factored in (Sparovek et al 2009).

But other metrics could be used. Take the case of Brazilian ethanol production, by far the most successful attempt to substitute fossil fuel with biofuel. In terms of its energy efficiency as well as its contribution to reducing green house gas emissions, no other feed stock comes close to the performance of Brazilian sugar cane on already cleared lands, mostly in the southern state of São Paulo. But these lands were not always set aside for sugar cane, quite the opposite: the lands today dominated by sugar cane were once the Atlantic Forest, of which today only 6-7 percent remains (Fritz 2008).

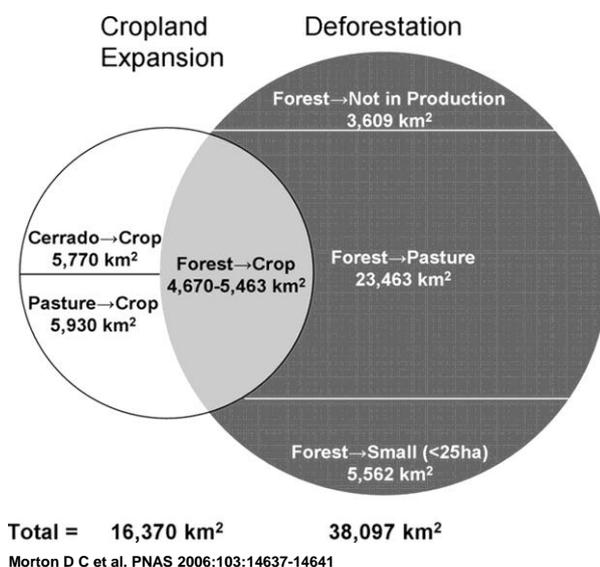
Still, this was only the first land use change caused by the growth of sugar cane production; in the present phase grazing areas are being converted to crop land. This in turn forces cattle ranchers to move further into the savannah (the *Cerrado*) as well as into the Amazon rainforest. Today, the growth rate of cattle ranching in the Amazon is six, seven times higher than the national average (Fritz 2008:16). The process is best described as a continuous chain of land use changes, where sugar cane tends to occupy the areas which were previously used for pasture or to grow feed crops for cattle, while pastures in turn displace savannahs and rain forests (WWF 2008).

So, the use of already cleared land for the production of feed stocks may lead to the opening of new lands in other areas of Brazil, or even in other countries. Hence, the land use change impacts of the increasing use of sugar cane for ethanol production – and soy beans for

biodiesel – must be measured before we can say anything with certainty about the pros- and cons of sugar cane and soy beans as biofuel feed stocks.

The chain of land use changes can be portrayed as a series of land clearing events, where one land use change leads to another as the ‘deforestation dynamics’ plays itself out (see Figure 4). The example here is the state of Mato Grosso, bordering the southern parts of the Amazon. In Mato Grosso, savannah lands and previous pasture lands have been converted into crop lands, mostly for soy bean cultivation (which is used as fodder for meat production and in the food industry but also as feed stock for biodiesel). As a consequence GHG are released, partly undoing the reduction in GHG that occurs when using biofuels. Furthermore, ‘cropland has become one of the major drivers of rapid deforestation’ (Souza 2006). This means that although the results so far only relate to Mato Grosso, they may also be valid for the Brazilian Amazon as a whole.

Relationship between cropland expansion and deforestation in Mato Grosso, Brazil, during 2001–2004



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Figure 4. The example of land use change in Mato Grosso, Brazil 2001-2004.

Intergenerational Dimension

International dimensions of justice and fairness are, however, just the first issue that we need to tackle in order to be able to design earth system governance structures and set-ups that are

efficient and operational. Intergenerational justice is also crucial, as was recognized already by the well known formula that the Brundtland Commission coined for defining sustainable development: ‘development that meets the needs of the present without compromising the ability of future generations to meet their own needs’ (Our Common Future 1987).

The utilisation of finite resources is one important example where the meaning of this mantra can be tested. Can it be taken for granted, for example, that minerals found in geological deposits belong to the current generation? The problem of one generation reaping the benefits of a technology while leaving waste to future generations should be one of the most burning issues today when there is a renewed interest in nuclear energy. Should we build intergenerational justice into the exploitation of such a technology and how can this be done?

Why is the future less valuable than the present?

The future is seen, at least by mainstream economists, through the lens of a discount rate. The higher the rate the lower the value of the future, this goes for negative as well as for positive events. In fact, when choosing a discount rate and applying it to cost-benefit analyses, the outcome of the analysis is given beforehand, especially if we consider long time periods, which is common with respect to ecological issues. A high discount rate, say four percent or above, is commonly used by economists, who prefer to postpone drastic measures in terms of ecosystem governance to the future. However, ecologically concerned economists opt for a much lower discount rate to reflect their concern for the ecosystems.

The discount rate thus carries great significance. The *only* real difference explaining the opposing conclusions reached by two leading environmental economists – Nicholas Stern vs William Nordhaus – is their choice of discount rate. The dramatic difference between the conclusions from the Stern Review and previous investigation into the costs of climate change stems from the different normative assumptions underlying the studies. The Stern Review (Stern 2006) states explicitly that the welfare of future generations is as important as the welfare of this generation, while most previous studies implicitly assume that the welfare of the current generation is more important than the welfare of future ones.

While Stern (2006) argues in favour of strong actions now to mitigate climate change, Nordhaus (2008) has come out strongly in favour of doing basically nothing. Their models of

climate change are more or less identical, but they part ways when it comes to discount rates: low in the sense less than one percent, implying valuing the future highly as in the case of Stern; and high with four percent, implying valuing the future lightly as for Nordhaus.

Is Stern right in fixing the discount rate so low that it becomes practically of no importance? We believe so although it must be recognized that two considerations enter into conflict with one other (Conceicao et al 2007). On the one hand, if we value the needs of future generations as high as we value our own, the discount rate should be low. But on the other hand, future generations are likely to be richer, which would lead us to increase the rate (since the welfare of the present generation would be more affected by the loss of one dollar than that of future generations).

But isn't it more reasonable to assume that these considerations in fact operate so as to reinforce each other, future generations will be worse off than the present one, at least when it comes to ecological resources? This is indeed how the Stern Review argues, and it would actually lead to a negative discount rate as poorer people in the future will suffer more from more substantial effects of climate change than less poor people today from less important effects (Stern 2006:36-37). By opting for a high discount rate, we in effect 'place a larger weight on consumption now over the effects on future generations', but so will future generations, which means that we are 'perpetuating the delay for significant reductions' forever (Stern & Taylor 2007:204).

Intergenerational justice simply prescribes more action today. The Stern Review settles for a very low discount rate – 0.1 percent – only in order to account for the possibility of the extinction of humanity for reasons unrelated to climate change (Stern 2008:15). Nevertheless, a more balanced position, we believe, would altogether disregard the time preference discussion and set the discount rate at zero, thus following the example of Daly & Cobb (1989:239) who call this the 'divine discount rate', and they conclude: 'As far as we know God is not impatient for all lives to be lived soon'.

Thus decisions regarding ESG should be designed in such a way that the prejudice in favour of the present generation at the expense of all future generations is eliminated.

Intersectional Dimension

Thirdly, intersectionality needs to be taken into account. This concept and analytical category may be defined as ‘the relationship among multiple dimensions and modalities of social relations and subject formations’ (McCall 2005). Intersectionality thereby reminds us that nobody lives a uni-dimensional life to be described in terms of only one single aspect like: age, class, ethnicity, race, religion, profession, vocation, gender or sexual orientation.

Apart from stressing multi-identities, intersectionality also gives attention to power when it takes into account that individuals may suffer simultaneous and multiple oppressions and inequalities in accordance with their identities. As Sen argues, each human being has several identities, and there is no ground for assuming that only one of them is the basis of the individual's existence or self-understanding. (Sen 2006) Furthermore, the multiple identities overlap in a haphazard manner, and there is no unique way to classify people that does justice to this blending of identities. Hence we are well advised not to use religion or language or ethnicity or class as the only yardstick when we try to understand real life situations.

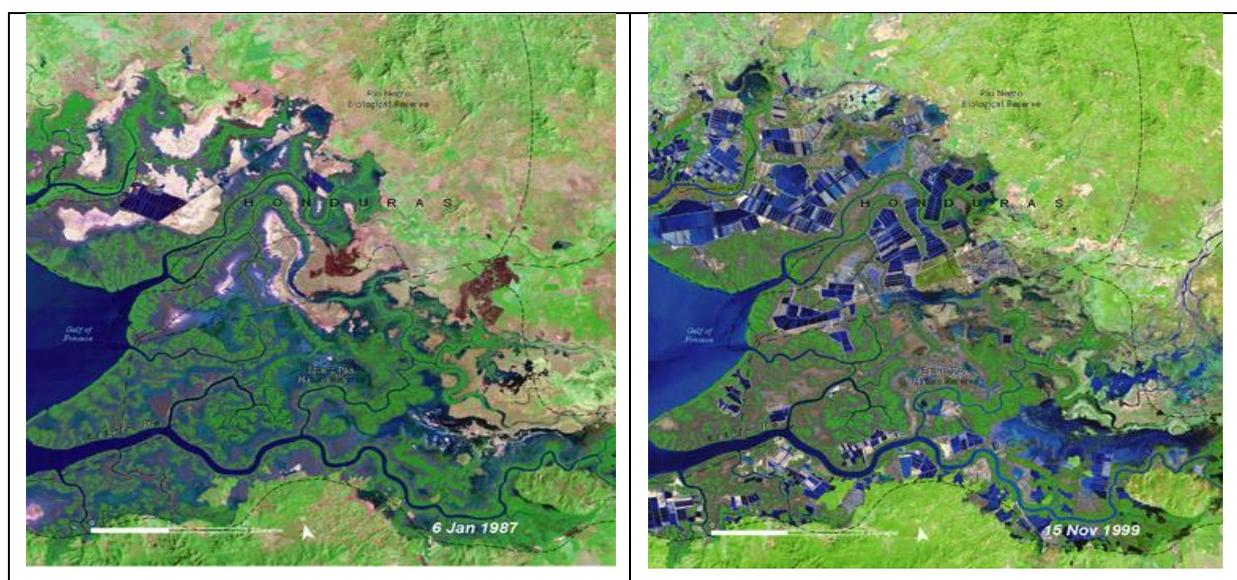
However, while some argue that the advantage of the term intersectionality is its intentional neutrality, others warn that the political dimensions of inequality may be washed away in the use of the concept (Hawthorne 2004). We want to avoid this and at the same time consider several material aspects and not just one, e.g. gender, in relation to ESG. In this way we hope to avoid ignoring or misunderstanding important discriminatory aspects (Sweetman 2005). Obviously, intersectionality includes divides and conflicts among people of the same or similar social standing and profession, like farmers, male and female, or fisher-men and women, as seen in the example below.

Shrimp farming in Honduras

Mangrove vegetation plays a crucial role in many tropical coastal regions (Millennium Ecosystem Assessment 2005). They provide a link between terrestrial and marine ecosystems such as coral reefs; they protect coastal livelihoods from erosion and storm surges: they trap sediments that otherwise would harm coral reefs; they provide important spawning grounds for fish: they harbour an enormous biodiversity; and they provide important goods for the local community such as fuel wood, food and medicinal plants. Nevertheless, mangroves are

often the targets of coastal development plans. An illustrative example of how intersectional justice and fairness, in the context of fisher-men and women and farmers, have been violated is provided by the Bay of Fonseca in Honduras (Figure 5).

Semi-intensive shrimp farming started in 1973 in the Bay of Fonseca. A number of development agencies (US AID, the World Bank and the Inter-American Development Bank) in collaboration with the Government of Honduras promoted vigorously the expansion of shrimp farming (Stonich 1995; Dewalt, Vergne et al. 1996). It soon became apparent that the shrimp production was not viable. The productivity declined but was compensated by an increase in the area converted to shrimp ponds. In 1999, two thousand hectares of shrimp ponds were abandoned and the shrimp packaging plants closed. The massive expansion of shrimp ponds was not only a problem for the shrimp farming but also for the entire coastal ecosystem and the marine fisheries off shore as the mangroves in the bay were an important spawning area for many of the commercially important fish species (de la Torre and Barnhizer 2003).



Source: UNEP, 2005, One Planet, Many People: Atlas of Our Changing Environment.

Figure 5. The bay of Fonseca in 1987 (left) and 1999 (right).

Along with declining fish catch, the fisher men and women became increasingly impoverished which subsequently resulted in violent conflicts with the shrimp farmers. The shrimp ponds were protected by barbed wire and watchtowers, and patrolled by armed guards.

Between 1992 and 1998 eleven fisher men were found shot or killed by machete near shrimp ponds. Nobody has been charged with the murders. (de la Torre and Barnhizer 2003)

The intersectional dimension of this story is how one social group (men and women in small scale fisheries) became the victims of development promoted for another social group (shrimp farmers). The development policies failed to recognise the bay of Fonseca as a linked social-ecological system, where both terrestrial and marine ecosystems as well as livelihoods were closely linked and dependent on each other. When shrimp farming intensified, the conflicts between social groups also increased. This conflict was further sharpened because of the power asymmetry between the groups as shrimp farming was promoted and protected by the government and international development agencies, while fisher-men and women were excluded from the scene.

Concluding remarks

We maintain that access and allocation issues need to be framed in the context of conflicts and contradictions. Ecosystem governance, not to speak of Earth System Governance, cannot be designed, let alone improved, without due consideration to justice and fairness. A number of aspects are of paramount importance:

- Governance is conceived in such a way that it is considered fair by the people, and countries, whose conduct and performance is to be governed. This includes giving due consideration to issues of representativity.
- International justice also has to embrace some understanding of the need for differentiated rules and responsibilities. Such differentiation, however, must not be taken as a token for arguing that some stake holders should be exempt from any and all responsibility, at least not when it comes to the major contributors to ecosystem governance difficulties.
- Intergenerational interests need to be taken into account by opting for decision rules that give the future as much importance as the present; the customary use of positive (and high) discount rates when conducting cost-benefit analyses should be discontinued.

- Intersectional justice and fairness has to acknowledge that no single characteristic – social, ethnic, gender, urban/rural – is enough to design fair and equitable systems of access and allocation. The same holds true for allocations of benefits and costs of Earth System Governance.

These are not simple matters. As remarked by Ostrom et al (1999:280), ‘it is difficult to find effective rules that both match the complex interactions and dynamics of a resource and are perceived by users as legitimate, fair, and effective.’ The prospects for easily applicable solutions are not made any likelier by the fact that difficulties multiply when you advance from local to global commons. Only one thing is certain: if considerations of fairness and justice are disregarded, we are certain to fail in our efforts to govern the Earth system.

List of references

- Biermann, F., M. M. Betsill, et al. (2009). Earth System Governance: People, Places and the Planet. Earth System Governance Project Report. Bonn, Earth System Governance Project. 1.
- v Braun, Joachim (2008): *Biofuels, International Food Prices, and the Poor*, International Food Policy Research Institute, Washington
- Brown, Lester (2005): *Outgrowing the Earth: The Food Security Challenge in an Age of Falling Water Tables and Rising Temperatures*, Norton
- Bäckstrand, K. and E. Lövbrand (2006). "Planting Trees to Mitigate Climate Change: Contested Discourses of Ecological Modernization, Green Governmentality and Civic Environmentalism." Global Environmental Politics 6(1): 50-75.
- Commission on Global Governance (1995): *Our global neighbourhood*, Oxford University Press
- Conceição, Pedro, Zhang, Yanchun & Bandura, Romina (2007): Brief on Discounting in the Context of Climate Change Economics, Occasional Paper, UNDP, New York
- Daly, Herman E & Cobb, John B (1989): *For the Common Good. Redirecting the Economy towards Community, the Environment and a Sustainable Future*, Green Print
- de la Torre, I. and D. Barnhizer (2003). The Blues of a Revolution: The Damaging Impacts of Shrimp Farming, Industrial Shrimp Action Network.
- Dewalt, B., P. Vergne, et al. (1996). "Shrimp aquaculture development and the environment: people, mangroves and fisheries on the Gulf of Fonseca, Honduras." World Development 24(7): 1193-1208.
- Fritz, Thomas (2008): *Agroenergia na América Latina*, Brot für die Welt, Stuttgart
- Galbraith, J. K. (2008). The Predator State: How Conservatives Abandoned the Free Market and Why Liberals Should Too. New York, Free Press.
- Garten Rothkopf (2009): *A Blue Print for Green Energy in the Americas*, Interamerican Development Bank, Washington DC, vol 1 and 2
- Giddens, Anthony (2009): *The Politics of Climate Change*, Polity
- Hawthorne, S. (2004). "The political uses of obscurantism: Gender mainstreaming and intersectionality." Development Bulletin 64: 87-91.
- Hu Jintao (2009): Speech on Climate Change, www.nytimes.com/2009/09/23/world/asia/23hu.text.html?_r=1&pagewanted=print
- KDNG (2009). Resisting the Flood: Communities taking a stand against the imminent construction of Irrawaddy dams, Kachin Development Networking Group.
- Lawrence, S. (2008). Poverty Reduction in Laos: an Alternative Approach. Power Surge: The impacts of rapid dam development in Laos. International Rivers: Berkeley, CA, USA. Berkeley, CA, International Rivers: 92.
- Lee, M. C. (2006). "The 21st Century Scramble for Africa." Journal of Contemporary African Studies 24(3): 303-330.

- McCall, L. (2005). "The complexity of intersectionality." *Signs: Journal of women in culture and society* 30(3): 1771-1800.
- Millennium Ecosystem Assessment (2005). *Ecosystems and Human Well-being: Synthesis*. Washington DC, Island Press.
- Mitchell, Donald (2008): *A Note on Rising Food Prices*, Policy Research Working Paper 4682, World Bank, Washington DC
- Morton, DC, DeFries, R, Shimabukuro, YE, Anderson, LO, Arai, E, Espirito-Santo, FdB, Freitas, R & Morissette, J (2006): "Cropland Expansion Changes Deforestation Dynamics in the Southern Brazilian Amazon", *PNAS* vol 103(39):14637-14641
- Nordhaus, William (2008): "Critical Assumptions in the Stern Review on Climate Change", *Science* vol 317:201-202
- Ostrom, E, Burger, J, Field, Ch B, Norgaard, RB & Policansky, D (1999): "Revisiting the Commons: Local Lessons, Global Challenges", *Science* 284:278-282
- Our Common Future (1987): Report of the World Commission on Environment and Development, www.un-documents.net/wced-ocf.htm
- Page, Edward A (2008): "Distributing the Burdens of Climate Change", *Environmental Politics* vol 17(4): 556-575
- Scott, C. (1988). "Socialism and the 'Soft State' in Africa: An Analysis of Angola and Mozambique." *The Journal of Modern African Studies* 26(1): 23-36.
- Sen, Amartya (2006): *Identity and violence. The Illusion of Destiny*, Norton
- Silverstein, K. (2002). "US Oil Politics in the "Kuwait of Africa" " *The Nation* 274(22 April): 11-20.
- Souza, Carlos Jr (2006): "Mapping Land Use of Tropical Regions From Space" , *PNAS*, vol 103(39):14261-14262
- Sparovek, G, Barretto, A, Berndes, G, Martins, S & Maule, R (2009): "Environmental, Land-Use and Economic Implications of Brazilian Sugarcane Expansion 1996-2006" in *Mitig Adapt Strateg Global Change*, vol 14:285-298
- Stern, Nicholas (2008): "The Economics of Climate Change", *American Economic Review: Papers & Proceedings* 2008, 98:2, 1-37
- Stern, Nicholas (2006): *The Economics of Climate Change*, Cambridge University Press
- Stern, Nicholas & Taylor, Chris (2007): "Climate Change: Risk, Ethics and the Stern Review", *Science* vol 317:203-204
- Stonich, S. (1995). "The environmental quality and social justice implications of shrimp mariculture development in Honduras." *Human Ecology* 23(2): 143-168.
- Sweetman, C. (2005). "Editorial." *Gender and Development* 13(1): 2-8.
- UNDP (2002): *Human Development Report 2002*
- United Nations 2009: *Report of the Commission of Experts of the President of the United Nations General Assembly on Reforms of the International Monetary and Financial System*, September 21, 2009, http://www.un.org/ga/econcrisissummit/docs/FinalReport_CoE.pdf
- United Nations 2009a: Resolution adopted by the General Assembly 63/303. Outcome of the Conference on the World Financial and Economic Crisis and Its Impact on Development, http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/63/303&Lang=E
- Walker, B., S. Barrett, et al. (2009). "Looming Global-Scale Failures and Missing Institutions." *Science* 325(5946): 1345-1346.
- World Bank (2008): *Rising Food Prices: Policy Options and World Bank Response*, Washington DC
- WWF (2008): *Analysis of Sugar Cane Agriculture Industry Expansion in Brazil*, WWF-Brazil, May