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*How it works
and why it fails*

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Contours of Climate Justice

Ideas for shaping new climate and energy politics

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Dag Hammarskjöld Foundation
Uppsala 2009

The Dag Hammarskjöld Foundation pays tribute to the memory of the second Secretary General of the UN by searching for and examining workable alternatives for a socially and economically just, ecologically sustainable, peaceful and secure world.

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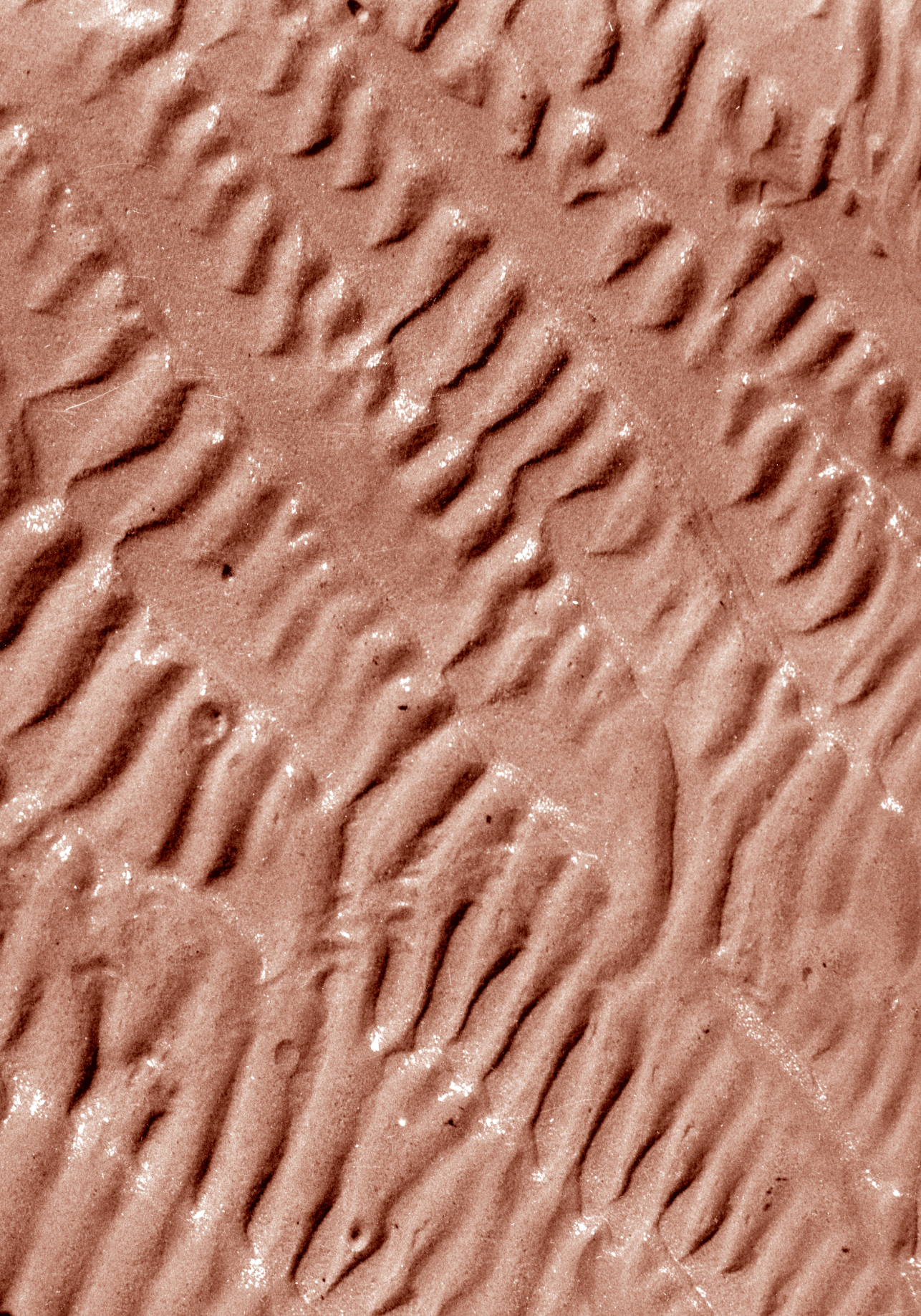
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Preface

'Man has lost the capacity to foresee and to forestall. He will end by destroying the earth.'

Albert Schweitzer

More than 75 years ago, in a letter to Rutger Moll (probably in 1933), Dag Hammarskjöld wrote about his emotions while spending the summer hiking in northern Sweden. For him, this experience evoked 'a feeling of solidarity with nature' as 'almost the most important thing'.¹ Hammarskjöld had a profound, intimate relationship with the world of the sea and even more so that of the mountains.² He had a deep-rooted and conscious personal interaction with nature, which was evidenced by, among other things, his admiration for the work of Carl von Linnaeus as well as his affinity for the fiction of Joseph Conrad and his belief in the ethical philosophy of Albert Schweitzer, to mention only the obvious instances. His posthumously published childhood memories of his upbringing on Uppsala's Castle Hill provide further striking insight into his almost spiritual relationship with the natural environment and habitat.³

Not the least testament of this relationship can be found in his entries in the notebook

he kept from the mid-1920s onwards. For Hammarskjöld, nature amounted almost to a sacred frontier. Some of the notes from 1951 show with particular clarity his deep bonds with the wilderness, which for him was the:

...extrahuman in the experience of the greatness of Nature. This does not allow itself to be reduced to an expression of our human reactions, nor can we share in it by expressing them. Unless we each find a way to chime in as one note in the organic whole, we shall only observe ourselves observing the interplay of its thousand components in a harmony outside our experience of it as harmony.⁴

Hammarskjöld's photos, which he took with a passion during his explorations, pictured mostly landscape and were a visual expression of this respect for nature. As he commented in an essay entitled 'The camera has taught me to see', he was seeking to illustrate 'the balance of strength and nervous sensitivity so often displayed by nature's own creations'.⁵

1 Quoted in Thelin, B. (2001), 'Dag Hammarskjöld – Nature, Landscape, Literature', *Development Dialogue*, Vol. 1, p.88.

2 See on the latter the magnificent pictorial tribute by Grundsten, C. (2007), *Swedish Wilderness. The Mountain World of Dag Hammarskjöld*. Stockholm: Max Ström.

3 Hammarskjöld, D. (2000), *Castle Hill*. Uppsala: Dag Hammarskjöld Foundation.

4 Hammarskjöld, D. (1993, 16th printing), *Markings*. New York: Random House, p.66.

5 Quoted from 'Landmarks. Photographs by Dag Hammarskjöld', in *Development Dialogue*, Vol. 1, 1987, p.28.

The second secretary general of the United Nations most likely did not have climate change in his mind. However, his notion of 'solidarity with nature' calls for further and fuller contemplation. Suffice it to conclude within the confines of this preface that throughout his varied career he clearly had an awareness of natural beauty and serenity and appreciated them as a treasure to be protected in the post-Second World War era, with its belief in progress and modernity based on technological advancement and a Fordist conception of the industrialisation and commodification of consumer societies.

Soon after his untimely death in the early hours of 18 September 1961 on a mission to the Congo to seek a peaceful resolution of the conflicts arising from its decolonisation, humankind's disastrous effects on nature, and responsibility for them, became a topical issue in global governance initiatives. In 1967, Sweden proposed that the UN General Assembly convene a conference on the environment. The UN Conference on the Human Environment in Stockholm (1972), the UN Conference on Environment and Development in Rio de Janeiro (1992) and the World Summit on Sustainable Development in Johannesburg (2002) were subsequent markers in a series of top-level global meetings, which were continued in other forums all over the world. They created normative reference points and political institutions such as the Convention on Biological Diversity and the Framework Convention on Climate Change in order to meet the challenges.

More than four decades after the Swedish initiative in 1967, with governments of the world due to meet in Copenhagen in December 2009 to seek a follow up to the Kyoto Protocol, progress has not advanced

much beyond square one. Despite more than 300 multilateral agreements negotiated and entered into since 1972, the world's climate as we know it faces ultimate collapse. Political and institutional constraints have stood in the way of a solution:

Many of the problems related to sustainable development would have been solved easily, or would not have evolved if the agreements reached early on actually had been implemented. However, by the end of the process, a huge implementation and accountability gap had accumulated – a failure that lies at the core of the challenges today.⁶

The tendency of governments to place narrow state interests above global survival comes at a life-threatening price. It is therefore not surprising that many concerned persons have few if any expectations or illusions that those participating in the Copenhagen event will actually demonstrate the required problem-solving capacity. Despite all the declarations, declamations and lip service, even the scariest climate-change scenarios are proving to be understatement of what might come. Policy responses and adaptations fall short of addressing the challenges. The logic of the era of the Enlightenment, in which human beings utilise nature for short-term gain without concern for long-term survival, approaches bankruptcy.

Securing a future for human beings and the many other endangered species on this planet requires instead a change of mindset. The

6 Engfeldt, L-G. (2009), *From Stockholm to Johannesburg and Beyond. The Evolution of the International System for Sustainable Development Governance and its Implications*. Stockholm: Government Offices of Sweden/Ministry for Foreign Affairs, June, p.15.

quote above by Albert Schweitzer has been used as a motto for a 'Provocation' published by the Swedish Tällberg Foundation. In its postscript, the authors conclude, that 'we have to rethink the principles upon which we base the development of our economy, technology and governance. Nature is what it is. We cannot negotiate with nature to change its nature, its processes, and its chemical and physiological characteristics'.⁷

The urgency of the situation has in the meantime also been expressed in official arenas and discourses. On 24 October, the fourth European Development Days, organised in Stockholm by the Swedish government during its presidency of the EU, closed with a plenary session on climate change and development. Edward Natapei, prime minister of the small Pacific island state of Vanuatu, made this appeal: 'Urgent action is needed to avoid a genocidal impact on small island states'. Ahmed Shaheed, minister of foreign affairs of the Maldives, warned that at current rates of sea-level rise, the island soon risks losing its international airport. 'We must find ways to adapt to rising seas, coral bleaching, flooding and disease.'

Mary Robinson, president of the Ethical Globalization Initiative and vice president of the Club of Madrid, called on Europe to take the lead in climate change negotiations: 'The time has come for decision taking. It is time for leadership'. She added: 'The image of climate change is the polar bear. I like polar bears, too, but that is the wrong image. The image of climate change is a poor

farmer, and she is a woman and she is desperate'.

That date, 24 October 2009, also marked the International Day of Climate Action (350 Day) when people in 181 countries came together for the most widespread day of environmental action in the planet's history. At over 5,200 events around the world, people gathered to call for strong action and bold leadership on the climate crisis. Copenhagen could be an important marker in current efforts to face the challenges responsibly on a global level and at the level national governance, through state institutions and governments. But the solution lies beyond Copenhagen.

The contributions to this volume seek to strengthen awareness of the key issues and the urgent need for initiatives and commitments beyond one place at one specific moment in time. They testify to the need for a mind change and the implementation of subsequent new paradigms, a commitment most politicians as representatives of their governments and states still seem to lack – particularly on the level of global governance. Dag Hammarskjöld, from what we know of him, would have been on the side of the deeply concerned voices advocating a fundamental shift in mindset.⁸

Henning Melber

7 Ekman, B., Rockström, J., and Wijkman A. (n.d., 2008/09), *Grasping the Climate Crisis. A Provocation from the Tällberg Foundation*. Stockholm: Tällberg Foundation, p.38.

8 This suggestion is strengthened by the noteworthy fact that Sverker Åström, one of Hammarskjöld's closest colleagues and friends since the 1940s, as the Swedish permanent representative to the UNs in the mid-1960s initiated and with much foresight and determination oversaw the implementation of the process leading to the Stockholm Conference of 1972. See Engfeldt, *From Stockholm to Johannesburg*, pp.32 ff.

Introduction »



Radical climate change politics in Copenhagen and beyond: From criticism to action?

*Ulrich Brand, Nicola Bullard,
Edgardo Lander and Tadzio Mueller*

There is something uncanny about the politics of climate change. An issue at the same time old and new; omnipresent, yet easily forgotten; threatening the destruction of billions of lives, yet somehow relegated to a relatively obscure corner of the global political system, the United Nations Framework Convention on Climate Change (UNFCCC), a treaty organisation far less powerful than, say, the World Trade Organization (WTO). But whence the relatively sudden prominence of the issue, after languishing in the environmentalist doldrums for nearly two decades – is it ‘really’ because of the climate crisis, or are there other interests, other structures at work? And what can ‘we’, the global movements, global civil society, whatever name we give to ourselves, what can we do about the issue? These questions might not be resolved here, but we feel that it is important to start asking them.

Since public discussion of the issue began in earnest in the 1980s, climate change and its potential and real impacts have become more and more obvious. Not only the developments in scientific research, but also the activities of environmental movements, media, critical intellectuals, progressive state officials and alternative energy producers have focused social and political attention on the implications of the problem. With the UNFCCC and its Kyoto Protocol, an international political mechanism to manage the issue was developed in the 1990s.



Ulrich Brand is a professor of international politics at the Institute of Political Science at Vienna University, member of the Scientific Council of Attac Germany and of the working group on social ecology of the Federal Coordination of Internationalism (www.buko.info). Among his recent publications is ‘Postneoliberalism. A Beginning Debate’ (Uppsala: Dag Hammarskjöld Foundation, 2009), a special issue of Development Dialogue (co-edited with Nicola Sekler).



Nicola Bullard has worked with trade unions, women’s organisations, human rights groups and development agencies in Australia, Thailand and Cambodia for more than 20 years. Since 1997, Nicola has been with Focus on the Global South, the international policy research and advocacy organisation based in Bangkok, Thailand, and is currently coordinating its climate justice programme.



Edgardo Lander is a social scientist and works at the Venezuelan Central University in Caracas, and is a member of the secretariat of the Social Forum of the Americas. He researches and writes on Venezuelan society; environment and the limits of planet Earth; development; alter-globalisation movements; epistemology and the critique of Eurocentrism; the colonial character of hegemonic modern knowledge and science and technology as political issues.



Tadzio Mueller lives in Berlin, where he is active in the emerging climate justice movement. Having escaped the clutches of (academic) wage labour, he is currently writing a report on ‘green capitalism’ for the Rosa Luxemburg Foundation. He is also an editor of Turbulence-Ideas for Movement (www.turbulence.org.uk).

In the last two years especially, climate change has climbed to the top of the political agenda. There are, of course, a multiplicity of reasons for this resurgence of an issue that has gone through alternating cycles of low and high public attention, but central among them are, no doubt, the publication of the Fourth Report of the Intergovernmental Panel on Climate Change (IPCC); of the Stern Report – whose message, crucial from the perspective of enlightened capital, is that it is cheaper to take action on climate change now than in the future, and that a ‘green capitalism’ might be possible; sky-high energy prices (recall that in 2007 and 2008, oil prices were touching the US\$ 150 mark); and the argument that *peak oil*, that is, a peak in global oil discovery relative to demand, had been reached, after which prices would have to rise drastically. In the comparative political frenzy that followed, the IPCC and Al Gore were awarded the Nobel Peace Prize, while G-8 summits in 2007 in Germany, in 2008 in Japan and in 2009 in Italy had the linked issues of energy and climate change high on their agendas. The UNFCCC summit in Bali in December 2007 was widely covered in the global mass media.

The climate summit in December 2009 in Copenhagen, the ‘COP 15’ (15th Conference of the Parties to the UNFCCC), will no doubt be a decisive moment – one way or the other – and everybody is gearing up for it. Global attention is guaranteed, and as a publicity stunt, UN Secretary General Ban Ki-moon initiated a ‘global count-down to Copenhagen’ on 24 September. The meeting will also be important for the fact that US President Barack Obama and his administration are, for the first time, going to engage in the process. The Major Economies Forum –

an informal gathering of the governments of the main emitting countries, known amongst NGOs as the ‘Major Emitters Forum’ – has been meeting every month since March 2009. A number of preparatory meetings have taken place, and in Copenhagen itself we will no doubt be treated to the best that the theatre of international diplomacy can offer: the negotiations will be extended in a dramatic lock-in of the delegates, and at the very end, we will be served a ‘result’ of sorts, because in spite of recent official attempts to downplay the relevance of the summit, ‘total failure’ would just be too embarrassing an option to contemplate. And yet, it is unlikely that there will be a significant ‘deal’ of any kind, that the next phase of the Kyoto Protocol will be signed there. More likely, we will get a type of roadmap for further negotiations (with a protocol being finalised in Mexico in 2010). Still, there will be a dramatic showdown.

Alas, with all the attention, all the drama, not much has changed in the last 20 years, at least not for the better. Oil and gas consumption have increased enormously, and so has the rate of increase – and, of course, global greenhouse gas emissions show the same trend. Production and consumption patterns are still the same and, moreover, have rapidly been globalised through transnational capital, state policies and the lifestyle of a ‘global middle class’.

The main reason for this lack of change is this: Environmental policies in general and climate change policies in particular are formulated in line with dominant political and economic structures and interests. Today, in spite of the economic and political crises that are rocking the globe, these dominant politics remain neo-liberal and neo-imperial, oriented towards

competitiveness and maintaining and enhancing the power of Northern governments, corporations and elites. To be sure, this is not just a North–South issue: the lifestyles of Southern elites are as ‘unsustainable’, if the somewhat tainted word be allowed, as those dominant in the global North. Policies formulated at the global level reinforce the position of owners of assets, and of the global middle classes – *including* the middle classes of economically ‘emerging’ countries such as China, India or Brazil. The ‘Western lifestyle’ is still being promoted around the world, its destructive insanity notwithstanding. Human wellbeing and social security are still seen as closely tied to economic growth, which implies resource-intensive growth of car production, of airports, of industrialised farming, etc.

The role of global crisis discourses and the UNFCCC

In spite of its obviously political nature, the issue of climate change is often perceived as a question of *science* rather than *politics*. This in turn leads to a situation in which the problem of climate change is exclusively or predominantly framed as a problem that has to be dealt with *globally*, that is, from above, with Western knowledge and through the techniques of scientific and economic management rather than through social and political transformation. Such an approach obscures the many local conflicts over scarce resources and land use that are as constitutive of ‘climate change’ as any abstract figure expressing the amount of CO₂ in the atmosphere. The many local, practical alternatives – more precisely, existing low-carbon lifestyles – to be found are downplayed. Moreover, a number of ecologically sustainable forms of producing and living have actually been put under pressure

not only by globalised capitalism, but more specifically by a top-down kind of climate politics. The build-up of pressure within the agricultural sector to produce crops for agro-fuels for the world market is merely the most visible example of this trend. Over the last 20 years, a type of global resource management has emerged wherein government officials, business, scientists, some NGOs as well as media act in concert to control and manage the destruction of the environment and to profit from it both politically and economically. Over the same period, the *content* of these policies has been criticised. However, there has not been a critique of their *form*; this intergovernmental politics, this kind of diplomacy that occurs under the pressure of lobby groups searching for consensus, while systematically leading to weak compromises.

Most importantly, however, the question of form is one of the economic ‘overcoding’ of apparently environmental concerns surrounding climate change: the line of thought goes from scientific knowledge to global problem, and from global problem to economic opportunity, while questions of power (between genders, classes, North and South, of corporations...), lifestyle, production and consumption are pushed aside. Following the *zeitgeist* of the 1990s, the instruments of global environmental politics are largely market-based because powerful actors consider the market to be the superior means of dealing with fundamental problems such as climate change. Not by chance, the main instrument of the UNFCCC is therefore emissions trading. This in turn justifies weak policies ‘at home’. The current division of labour (along lines of class, gender, race, age and power in the international system) is hardly problematised. Environmental policies have thus be-

come a moral and efficiency-based strategy aimed at the middle classes. The generalisation of the Western lifestyle (a generalisation that remains valid for most people in spite of the significant differences in power and wealth within Western societies) is cynical because billions of people are poor and lack access to even basic means of subsistence.

Besides this managerial framing, a *catastrophic discourse* about climate change and its effects has been established. In 2007, the head of the IPCC, Rajendra Pachauri, stated that 'we' must bring about a complete turnaround by 2012 in order to avoid 'disaster' and that the two or three years from 2007 onward would be decisive. This kind of invocation of urgency, its basis in scientific discourses notwithstanding, narrows the room for a critique of existing global climate change policies and politics; goes hand in hand with a 'technocratisation', that is, depoliticisation, of climate change politics; and places our hopes in the discovery of some as yet unknown silver bullet-technological solution that would simply 'fix' the anthropogenic greenhouse effect. Such technologies – if any – are likely to be large-scale and delivered by powerful players such as the Desertec Consortium that is planning to build large-scale, centralised solar-power generating systems in the Sahara to supply Europe's energy needs.

Geographer Erik Swyngedouw has elsewhere shown how this catastrophic framing of climate change fits in neatly with powerful political discourses on post-democracy and post-politics. It seems that there is virtually no alternative to existing forms of politics and to the socioeconomic conditions that give rise to them. Quoting Fredric Jameson, he reminds us that today 'it is easier to imagine the end of the world than to imagine the end of capitalism'.

To counter the development of a top-down system of global resource management, we need a broad public debate about as well as practical steps towards the necessary transformation of production and consumption patterns, society's relationship with nature and the power of states and capital. Of course, the UNFCCC is not responsible for the continued growth of CO₂ emissions or for our *fosilistic* mode of development, that is, for further climate change. This is a much broader process involving many more powerful economic and political actors and structures, for example, the lifestyles of the global upper and middle classes. At the institutional level, the WTO, the International Monetary Fund (IMF) and the World Bank, all of which promote trade liberalisation and structural adjustment policies, are far more significant in terms of climate change (their policies accelerate it, for example, through expansion of industrialised agriculture and global transport, two major greenhouse gas emitters). The UNFCCC, however, maintains that it is *the* most central and appropriate institution to stop climate change. But in the last 15 years, it has become evident that technocratic approaches and their catastrophic framing change very little with respect to the problem: on the contrary, current lifestyles and dominant (and so far ecologically pointless) policy orientations are being re-legitimised.

To be sure, the UNFCCC embodies the fact that there is today a politicised awareness of climate change. Within the institution, however, this awareness is then framed in specific ways and in line with dominant interests and social forces. This spells daily disaster for billions of people – in fact, some movements from the global South argue that the policies driven or encouraged by

the UNFCCC are today a greater threat to their livelihoods than climate change itself. The political mode of crisis management that exists on this terrain is diplomacy, and behind this is the pursuit of 'national interests' under conditions of globalised capitalism and the race for competitiveness. Once governments come back from major conferences at which, yet again, the notion of 'being at a crossroads' has been evoked (as they are now doing around the climate summit in Copenhagen), they continue to obey powerful actors such as the car industry, seed companies, industrial farming, meat producers, etc. Additionally, environmental ministries tend to be relatively weak within governments, as energy issues are usually dealt with by other, stronger apparatuses.

Take agro-fuels as an example. When it comes to energy security and profits, critical questions and disastrous experiences are simply brushed aside. The issue of agro-fuels is presented by Southern governments such as Brazil or Indonesia as an 'opportunity for growth and development'. But for whom, and at what price? In these countries, agricultural restructuring is determined by the huge demand from the EU, where specific norms have recently been implemented that call for a higher percentage of ethanol to be mixed with gasoline. The global middle class consumers support these policy developments because they fear high energy prices. Alternatives are left aside or are reduced to a sideshow in the wider 'energy mix'. Finally, what we see in the field of environmental politics is an attempt to stabilise the neo-liberal, neo-imperial globalisation project by presenting a progressive image in the field of environmental policy-making. 'World leaders have understood the problem', is the message we hear from summits of the

G-8 or the UNFCCC. But in fact, the current forms of environmental and resource politics are the result of, and in turn reproduce, existing relationships of domination. Irresponsible policies like the development of nuclear power plants are formulated in other forums such as the G-8 and will no doubt be picked up by the UNFCCC.

Beyond global resource management

Of course, a simple breakdown of the UNFCCC would probably not be the best possible outcome for the movements for global (climate and environmental) justice. We almost certainly need internationally formulated, binding and enforceable rules in order to promote the profound transformations necessary to deal with not only the climate crisis, but also the wider biocrisis, and to transform the idea of 'development'. From an emancipatory perspective, stopping climate change is of the utmost importance, which means stopping fossil-fuel-based patterns of production and consumption.

But radical social movements and critical NGOs as well as critical intellectuals and some media are increasingly recognising that the UNFCCC in its current form is not an adequate mechanism to deal with this enormous task. Like other international institutions, the UNFCCC is part of a capitalist, Western, white and masculine regime of global resource management. It should no longer be legitimised through the participation of NGOs, social movements and other critical actors. We do not need 'sustainable globalisation', basically another expression for neo-liberalism and neo-imperialism – or, put another way, maybe neo-liberalism's Plan B.

Fifteen years after the UNFCCC's first meeting in 1994, we can clearly see that what is needed are fundamentally different political and social responses. In this process, states will still be important, but they and their officials will not be the forces driving it. On the contrary, today they are mainly an obstacle to serious action against climate change. Changing production and consumption patterns, lifestyles or the meaning of the 'good life', and attacking corporate power and the politics of resource management are complex and long-term processes. Several elements need to be considered. One major element has to be a practically rooted critique of the dogma of competitiveness linked to technological developments. There are few governments and social actors who have really understood the dangers of existing trends. What is needed is a repoliticisation of the 'market'. It is not just the efficient mechanism for allocating resources that it is often taken to be, but a highly effective instrument for the production of domination of some people over others – and for hiding precisely this relationship. Markets imply and in turn obscure power and exploitation along the lines of class, gender, race and North-South divisions. And at the same time as we need to criticise the structure of market relations, it is equally crucial to restrict the power of industrial and financial corporations that thrive within them.

Of course, if such an endeavour were successful, it would mean less economic growth, with all that this implies for profits, the power of private capital, the tax basis of the state and employment in the traditional sectors. An emancipatory politics has to take care not to be moralistic about environmen-

tal issues. Of course we need to consume less meat, cars/auto-mobility and electrical gadgets. But this cannot amount to a simple moral claim that ignores social structures and the power relations on which they are based. Alternative and attractive forms of living, producing and exchanging; new social divisions of labour; and alternative identities are necessary, as well as possible, and in many cases revolve around concrete struggles for the protection of the natural commons (water, biodiversity, air, etc.) against their commodification. The public sector and its accompanying infrastructures, more energy efficiency and sustainable goods are not only linked to learning processes, but might also call into question the power of certain producers and the speed of globalisation. What we need is the ecological conversion of existing industries, while taking advantage of the enormous knowledge of the producers that lies within them. Environmental issues are profoundly linked to questions of social power. For example, over-exploitation of labour, especially of illegalised migrants and many workers in the global South, obeys the same logic of profit and accumulation that is at work in the destruction of nature. It is necessary to politicise the immediate desires of workers for cheap food, energy and other goods, which are produced under unsustainable and unsocial conditions. But there is also a problem here that needs to be solved: the short-term interests of many people are linked to unsustainable patterns of production and consumption. Emancipatory socio-ecological orientations and practices therefore need to be linked to all aspects of life, as well as to a redistribution of social wealth.

Emancipatory demands and conflicts

Many alternatives are thinkable, possible and already exist. It is possible that socio-ecological conflicts can show that much more is at stake than symbolically tackling climate change through global resource management: questions of democracy and decision-making, power over social knowledge and the means of production, the necessary reduction of working-hours, the valorising of reproductive activities concerning caring, health, food, etc. For that, we need to develop radical demands and proposals through debates and the exchange of views and experiences. With our critique of dominant climate change and environmental policies we are not cynical about climate change and we do not intend to strengthen the lobby that defends the fossil-fuel path of development. However, we do not see the solution to the problem in Western scientific knowledge, in intergovernmental processes and in ecological modernisation for the Western middle classes at the expense of many others, especially the poor, and the material living conditions on earth. Politics in times of deep socio-ecological crises have to change; to become a democratic and informed transformative process, taking into consideration the many ambiguities that exist, but with a view to a more just world based on solidarity beyond the dogma of competitiveness and profitability. We want to reorientate debates and policies towards fundamental socio-ecological and emancipatory transformations in conjunction with an acknowledgement of alternative practices and processes.

About this publication

We met in January 2009 in Belem at the World Social Forum for the first time to discuss compiling a dossier as a contribution to ongoing debates about the politics of climate change. It is this inspiring environment that motivated us, an environment where the practical critique of globalised capitalism in its many facets is condensed, where the frustrating and productive experiences of struggles against exploitation and patriarchy and for justice and real democracy come together. For a long time, climate change issues had not been at the top of the agenda of the global justice movement, but a few years ago, this changed. And still it is not at all clear what a radical or emancipatory climate politics will look like.

Our goal is to contribute to a more sophisticated understanding of the emerging climate justice movement and to create resonances between different perspectives and spheres of engagement. We want to render more explicit a multiplicity of experiences and proposals and put them into context, referring to real or supposed tensions and contradictions – such as that between ‘development’ and ‘climate justice’ – and showing the existing wide array of alternatives. The activities around the COP 15 in Copenhagen are a starting point in the creation of such a broad movement – or in Naomi Klein’s inspired words used to describe the anti-WTO protests in Seattle exactly 10 years before the publication of this dossier, they can be the movement’s ‘coming-out party’. A ‘movement’ goes beyond the activities of activists, their importance notwithstanding. It includes convincing many people to engage in different everyday practices and convincing

journalists to refer to voices from outside the conference halls and official science. It implies politicians who are willing to break with the dogma of competitiveness and politics as a power game among elites and it takes seriously changes in institutions such as private and public firms, schools and universities. This ‘movement’ is a broad process of social transformation and its core and catalyst is the collective thinking and action that is currently taking place within the climate justice movement.

This issue of *Critical Currents* was a collective undertaking. First of all, we would like to thank the authors contributing to the dossier. We are grateful for the many contributions we received from activists and scholars from different continents and social contexts, with knowledge of varying fields of international climate and energy politics, and with very diverse perspectives. The common ground is that we are all preoccupied with, and critical of, the direction in which international climate politics are and have been heading for a long time.

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We hope that this publication can contribute to shaping a future climate and energy politics that will prove capable of solving the multiple crises that climate change is part of, and which humanity is facing in the second decade of the 21st century.

PART I »

How did we get here
in the first place?



A feminist critique of the climate change discourse. From biopolitics to necropolitics?

Ewa Charkiewicz

Global ecology and global markets interact in a number of ways, to the point that nowadays the two are mutually indistinguishable. On the one hand, the global expansion of markets increases demand for resources and puts more pressure on the integrity of ecosystems, one result being global climate change. On the other hand, measures to address climate change rely on market instruments for environmental policy. Cap-and-trade measures contribute to the creation of new virtual financial markets. Today, the neoclassical model of the market is also offered as a compelling conceptual model for thinking about solutions to the problems of environmental degradation.

Close to half a century ago, French philosopher Michel Foucault coined the concept of 'biopolitics' to point to the problem of how *human life* is managed or administered. Foucault understood biopolitics as a historically contingent mode of the mutual implication of power and knowledge that enabled the differential adjustment of human bodies to new forms of capital accumulation (Foucault 1990). Later, neo-liberal biopolitics would expand the notion of the economic to include the social (Foucault 2004). Domains of government such as so-

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cial security systems and other public forms of social provisioning, for instance, education or healthcare, as well as public administration (the state itself) are reorganised in terms of economic rationality. The firm becomes a regulatory ideal, a beauty queen, for state, school or hospital. Environmental policy, too, has been subsumed under this economic rationality.

The way interactions between markets and the environment are governed has far-reaching consequences for human and non-human life. The combination of environmental and human resources has been neatly captured by Teresa Brennan (2000) as 'living nature'. Her work exemplifies a new feminist social critique, which has developed some interesting arguments about the relationships between people, nature and capital. These relationships, as in all social institutions, are funda-

mentally gendered. In other words the production of knowledge, access to resources, division of labour, responsibilities and entitlements are founded, signified and legitimised by way of the concepts of gender and gender relations. While for decades concerns have been raised about the ecological and social limits to growth, with the latter focused on poverty, feminist political thinkers have pointed to the effects that neo-liberal marketisation has had on social reproduction or the economy of care, where people's lives are sustained, maintained and reproduced at the level of everyday life (Bakker 2004, Elson 1994). Neoclassical economic models are blind to the maintenance of life in the households, or see households as firms, as single units that maximise their utility. The concept of the 'care economy' shows how markets and states depend on the reproduction of the lives of subjects (configured as taxpayers, workers, soldiers, consumers) that takes place in the household economy. According to global studies, the vast majority of care and reproductive work is done by women. The expansion of the concept of the care economy to include relationships with nature opens up new possibilities for linking feminist and environmental agendas. In this short piece, I will show how the relationships between nature and human reproduction have been captured by a neo-liberal *biopolitics* and discuss the possibilities for strategic interventions in the current global conjuncture.

From managerialism to marketisation

In the period since the signing of the United Nations Framework Convention on Climate Change (UNFCCC) at the Rio Summit in 1992, global environmental politics have been fundamentally reframed in line

with the rationality of the market, and have become one of the avenues through which the neo-liberal revolution has affected more and more areas of human life. The changes in environmental policy were effected in two steps: first, techno-managerial and fiscal instruments gained ground, and second, a shift from material to virtual took place.

Thirty years ago, after the failure of attempts at measures to 'control and prevent', proposed solutions for the global environmental crisis were framed using the concept of 'sustainable development'. The high point of these debates was the formulation at the UN Earth Summit in Rio de Janeiro in 1992 of the global programme of action known as Agenda 21 (Agenda for the 21st century). Agenda 21 was a multilayered document that accommodated different vocabularies, including changing consumption patterns, linking poverty eradication with environmental improvements, as well as clean technologies and economic instruments. While the strategy of suggesting that women were better environmental managers was debatable, nevertheless the governmental Agenda 21 gave unprecedented visibility to women. At the time, the political space created by the UN's global conferences enabled the articulation of dissent in the form of alternative treaties from Rio, such as the 'Women's Agenda 21', which represented an alternative vision of social and ecological justice and participatory democracy.

Over the next 10 years, former critics of Rio who in 1992 had rejected the summit's compromise between 'the environment' and 'development', by 2002 had become defenders of Agenda 21. The turning point was the Rio+10 conference on sustainable develop-

ment in Johannesburg (WSSD), where the battle for a North-South deal on environment and development, and for keeping Agenda 21 intact, was lost. In Johannesburg, the question of the ecological and social limits of economic growth was displaced from the summit agenda. In the final documents of Rio+10, poverty was no longer an issue pertaining to access (or the lack thereof) to sustainable livelihoods. Women simply disappeared from final document (with two minor exceptions). Sustainable development morphed into global environmental management, the threads of which were already to be found in Agenda 21. To quote former UN Secretary General Kofi Annan (2001) during the preparations for the Rio+10 conference in 2002, 'we have to make globalisation work for sustainable development'.¹ In fact, it was the other way round: sustainable development was retooled to work for neo-liberal global governance.

Now the solution to interlinked global crises no longer lay in fundamentally changing consumption and production patterns, but in liberalising global trade and investment flows. Trade as the new saint and the new saviour of development was supposed to raise all boats. According to the script of free market ideology, the liberalisation of investment flows was meant to generate funds for environmental improvements and to reduce poverty. With the help of fiscal policy incentives, environmental management and new technologies, the environmental mess would somehow be cleaned up. Of course, these policies designed to speed up capital flows and turnover further inten-

sified pressures on the environment. Ironically, in light of *man-made* climate change, the persuasive neo-liberal metaphor of lifting all boats literally comes true.

Crucial in the move towards a neo-liberal biopolitics was the relocation of environmental policy to the domain of virtual financial markets. This move was consolidated on a global scale with the Kyoto Protocol. Pollution was no longer something that policy-making sought to avert, and its materiality was banished to the subtext. Instead, environmental policy itself became a means of creating virtual markets, such as local markets for pollution permits or global cap-and-trade measures. What Rio+10 did to sustainable development, the Kyoto Protocol did to climate change discourse, in effect harnessing global ecology in the service of the expansion of virtual financial markets.

From the perspective of the materialities of everyday life, reducing 'environmental policy' to mere techno-managerial fixes makes it far more difficult to avert global ecological and climate crises, as the politically and technologically mediated growth in the volume, scale and speed-up of production and consumption has far outpaced environmental efficiency gains (Sonntag 2001). The shift to market-based instruments either transfers some of the environmental costs of production and consumption to the end user, that is, the consumer (with poorer households paying the largest share of cost relative to their income), or creates new virtual money markets for pollution permits through global cap-and-trade systems, with no effect on the real economy in terms of reducing global emissions. As pointed out in a UN Department of Economic and Social Affairs (DESA)

1 Annan, K. (2001), Implementing Agenda 21. Report from the Secretary General to the ECOSOC, www.johannesburgsummit.org

policy note of 2009, the policy focus on fiscal incentives for green technologies and cap-and-trade measures will offload the costs of dealing with climate change on to developing countries. Just like earlier end-of-pipe policies, these new techno-financial strategies do not decouple economic growth from environmental pressures and continue to transfer the risks and costs of ecological crises on to households. Given historical gender divisions of labour and responsibility as well as the exigencies of biological reproduction, women who provide caring work in formal or informal markets or in their households bear the greatest burden in making up for the environmental and social costs of neo-liberal governance. The loss of existential security, and specifically the loss of means of livelihood, food security and health as acutely experienced by poorer households and populations, as well as the intensification of work and claims on time and physical energy, exert enormous pressures on people's capacities to live, and on the care economy or reproductive economy, in particular in households in the global South. Not surprisingly Teresa Brennan (2003) analysed globalisation in terms of the 'terrors of everyday life'.

Environmentalism, feminism and neo-liberal revolution

In her critique of global environmental management, Ynestra King (1997) wrote that the end of 20th century involved:

...a massive renegotiation of power, knowledge, and the ownership of life from the molecular to the planetary. Fertility, labor, 'natural resources' can all be rationalized and controlled...all part of the managed and manageable brave new

world...nature, and the unruly masses, particularly women of color in the north and south, are monitored and managed as never before.

Current mainstream wisdom on climate change is that new technologies and financial instruments will mitigate the consequences, or fix the problem. To be sure, global feminist discourse has also been affected by the neo-liberal revolution and become an avenue for the marketisation of social imaginaries and human interactions. Recently, free-market feminism, alpha-girls feminism or the feminist managerialism so visible in the reorientation of gender mainstreaming from women's rights agendas towards formal equity – and technical anti-discrimination – politics have gained prominence. Analogous with the dubious effects free market environmentalism has had in reducing the impacts of economic growth on the environment, feminist managerialism has not improved the quality of women's lives, nor has it slowed the intensification of new forms of exploitation of bodies, which are bombarded with toxins, forced to work long hours in flexible and insecure labour markets, while all the costs of reproducing people are reprivatised to households.

In both cases, neither environmentalists nor feminists have abandoned the ideas of sustainability, justice and rights, but for both groups it has been increasingly difficult to bring this language into global policy arenas. The old strategies of working from both inside and outside were preempted when the discourse, for instance on poverty, shifted from meeting basic needs towards the technical Millennium Development Goals (MDGs) in the late 1990s. One possibility

for strategic intervention is, therefore, to recover old language and the memory of shifts in conceptual frameworks to challenge the contemporary enclosure of feminist and environmental discourse within the rationality of the market. There are various feminist and environmental stakes in challenging this rationality not only in relation to economic activities, but also to the extent that markets have captured the politics of states, which enforce neo-liberal policies and increasingly operate according to the economic logic of the enterprise, where budgetary/macroeconomic politics is 'the last argument of the king', the *ultima ratio regum*.²

The financialisation of politics, including the politics of everyday life, entails the reproduction of patriarchal, gender, class and race relations in new guise. All human interactions and institutions are gendered – including markets. As Joan Scott (1987) puts it, gender is a primary signifier of power, and gender relations are constitutive of all power relations. The first economics textbook in history, Xenophon's (427–355 BC) *Oeconomicus* ('The Economist'), describes the good manager of the *oikos* (household and estate) as one who knows nature in order to make the best use of it in order to enhance the value of all his possessions. The good manager arranges workers like soldiers in a battle to plough the fields, and takes care of commerce while the nameless wife attends to duties under the household roof, including the management of slaves. What today is seen as *economic* activity is based on the same historically established gender division of labour, time and money, with access to wealth and money controlled by privi-

leged men and subsequently determined by anonymous capital pursuing its own reproduction. When the industrial revolutions relocated part of traditional women's housework to the market (making clothes, cooking, healthcare, childcare, etc.), it was always valued less monetarily than work signified as 'male'. With the modernisation of patriarchy (Pateman 1987), women now have access to markets on terms of being equally exploited with men, while their responsibilities for care are intensified unless they can afford to 'outsource' it to other women in global care work-chains.

This massive renegotiation of power and knowledge, while maintaining modernised patriarchal structures intact in the domain of global economic, environmental and social policy, coincided with political changes in the status of human subjects. When markets become the key source of political rationality (as Foucault argued in his 1979 lectures on the birth of biopolitics), not only nature but also human beings are remade and re-categorised, no longer being subjects or citizens. From the perspective of markets and states, we become revenue-generating resources, disposable sources of discretionary income to be cultivated and optimised for the market, or transformed into human waste. The state no longer legitimises itself by taking care of its citizens. Responsibilities for social reproduction are not shared, as they were in socialist or liberal welfare states, but are relocated to the households. The assumption is that women's time is infinitely elastic in providing paid and unpaid work, turning women into a buffer zone for rises in productivity, declining quality of jobs and for everything else that is required in the speeded-up time of the reproduction of capital.

2 This was the inscription on the guns of King Louis XIV.

Neo-liberal biopolitics optimises human subjects as economic units sufficient unto themselves, idealising those who can afford the bill for all their needs, including healthcare, children's education and pensions; who have sufficient disposable income to afford savings; and who do not need systems of mutual social insurance. Neo-liberal biopolitics has its dark underside, the politics of death or necropolitics, as Achille Mbembe (2003) put it, where the poor are left to die or are exploited to the verge of bare existence in this new slave economy. As the expansion of credit markets to the 'sub-prime' sector (with all its eugenic connotations) shows, the poor are continuously accessed and processed for profit. As indeed is nature, a quest that includes new appetites for extraterrestrial resources, dangerously coupled with new techno-political capacities for planetary enclosure. It is not unlikely that these trends will be amplified in the future. From the standpoint of critical social movements, this calls for strategic interventions in the name of human agency and universal indivisible human rights. The 'right to a healthy environment' has now become the right to live. To prevent the slip into necropolitics, the future of the present – with its differential life chances for useful neo-liberal subjects and for human waste, and new scenarios of the future where the spaceship earth is abandoned to rot – needs to be inserted into the social imaginary. Environmentalists and feminists have to take up the role of Cassandras who challenge neo-liberal politics of truth, free market Muzak and nihilism, with clear accounts of where this course is threatening to take us as human communities. For too long, while pursuing the strategies of change from inside, NGOs have patiently argued that destroying the environment or excluding women from

the market is not good for business. Now we need to argue that this kind of business is not good for people.

Last but not least, one of the salient features of neo-liberalism is the so-called pragmatic shift from discussing causes of social and environmental misery and predicaments to focusing instead on dealing with their effects (preempting the option of dealing with the causes). An example of this is the abandonment of any debate on changes in consumption and production patterns that was perceived as central to addressing the causes of the global environmental crisis back in the days of Rio (chapter 4 of Agenda 21). All the talk of emission volumes, emission reduction scenarios, estimates of mitigation costs, focuses the climate change discourse on effects, while the in-depth causes of climate change are removed from the agenda. Analogous to earlier end-of-pipe policies, new techno-fiscal strategies do not decouple economic growth from environmental pressures and continue to transfer the risks and costs of ecological crises to households, while the benefits of economic growth and income from markets increasingly accrue to a small privileged group with economic and political resources.

When looking at the climate crisis from the perspective of environmental integrity and social reproduction, the major source of misery is revealed to be the unrelenting growth of pressures on both nature and human bodies. People need nature and nurture to live, and to live they have to produce and to consume. In a capitalist society, the interactions between nature and people are mediated by money. The currently ruling form of money (financial capital) is driven by the

compulsion to reproduce itself. As Teresa Brennan (2000) points out in her theory of energetics, the time of reproduction of living nature (human and non-human) is on a collision course with the time of reproduction of capital. Following and reworking the arguments of Karl Marx, she argues that the accumulation of capital requires the input of living nature (human and non-human) into products and services. As 'raw materials', nature and human labour are sources of energy and sources of surplus value. *Both labour and nature give more than they cost*. Capital does not pay the costs of the reproduction of people, but transfers these costs to households (to the care economy, as some feminists would say). Nor does capital pay for the reproduction of nature (under substitution laws), unless forced to do so.

The real costs of nature are always deferred...Speed of acquisition and spatial expansion increase pressures on living nature...In the event that natural processes of reproduction cannot be speeded up, the cost of natural reproduction has to be reduced to make up for the drag on exchange-value. (Brennan 2003: 128)

From this perspective, and taking climate change seriously, what is at stake is to shift the language of the debate from effects (emissions) to causes (the way virtual and productive economies are functioning now), and to reorganise markets, in particular to slow down the flow of money through the economy. With the transaction time of global money markets now reduced to milliseconds, market growth dependent on its further speed-up and expansion has disastrous consequences, as the recent financial crisis shows. To challenge these powerful trends, we need to socialise and 'green' markets. Markets have always existed as a form of exchange. The problem is how markets are constructed and regulated, in particular in the current lethal regulatory form of neo-liberal governance where all social and ecological costs are externalised to households, with disastrous effects for the weakest social groups. Socialising markets implies recapturing the notion of the market as a form of exchange, where costs of human and environmental reproduction are shared. This is where feminist agendas of securing the integrity of social reproduction and environmental agendas of environmental sustainability coalesce.

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Kyoto's 'flexible mechanisms' and the right to pollute the air¹

Achim Brunnengräber

The current financial and economic crises are generating pressures towards the regulation of the global capitalist economy, but the much-heralded strategies for reform remain mere piecemeal and seem to have reached their limits long before the crisis has run its course. After all, their primary focus is on the revitalisation of the banking and trade sectors, not on global environmental issues. The relapse suffered by Angela Merkel – once hailed as the 'climate chancellor', now considered once again a run-of-the-mill car and industry chancellor – shows that during a crisis, the environment has no lobby. To be sure, environmental organisations, green (wings of) parties, engaged scientists and international environmental and development NGOs issue regular reminders about the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol. But that, too, is symptomatic of the problem: the crisis has not led to a critique of market-based instruments, but rather to an ever more desperate attempt to cling to them, in spite of all their weaknesses, for beyond them there seems to be nothing but political wilderness. This makes a critique of the political economy of climate change all the more important.¹



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¹ For a more detailed exposition of this argument cf., Brunnengräber (2009), *Die politische Ökonomie des Klimawandels*.

The Kyoto Protocol is a set of political rules for the economic management of a capitalist crisis phenomenon, which had already been on the agenda long before the financial crisis – at least since the UN Conference on Environment and Development in Rio de Janeiro in 1992. The third Conference of the Parties (COP) to the UNFCCC in Kyoto in 1997 agreed on a path towards the regulation of the crisis. Ecological necessities such as reducing the use of fossil fuels, the expansion of renewable energies, as well as new concepts of mobility and new lifestyles were largely ignored. Powerful economic interests were pushing for market-based instruments and insisted that these should not interfere with growth targets or economic competitiveness. As a result, the mechanisms contained in the Kyoto Protocol will not make it possible ‘to reduce emissions more quickly than the rhythm of economic growth would allow’, argues Enrique Leff (2002: 102).

At the same time, the Kyoto Protocol was also the starting point for the emergence of an international regime of resource management that would soon open up new business opportunities. Within the context of international climate governance, economic processes have taken on a life of their own and now reach far beyond the protocol as such. The crisis is seen not as a systemic crisis of capitalism, but as an opportunity: a ‘Green New Deal’ or a ‘Global Green Recovery’ (Edenhofer/Stern 2009; cf., also Friedman 2008) is meant to create jobs, reenergise the global economic system and protect the climate. A ‘green capitalism’ is seen as a significant source of potential technological innovations, if only governments

get the incentives right.² We are witnessing the emergence of a climate neo-liberalism, which may very well energise some national economies, but will certainly not protect the climate.

Climate change and global constitutionalism

At the international level, governments have waived such options as taxes, imposing bans on certain substances or reducing ecologically damaging subsidies. Dominant actors within these governments, as well as private businesses and international NGOs (participating in the process in a kind of conflictual cooperation) have largely enforced the use of economic instruments in the international governance of climate change. When governments guarantee rights to pollute by emitting CO₂, they develop a specific steering mechanism by means of which they create the framework for economic actors to regulate themselves. By doing so, they abdicate their responsibility for the general good and, in this case, for the environment. Governments only point the self-regulating markets in one particular direction, primarily in order to secure the later surveillance and control of newly institutionalised property rights, thereby reducing transaction costs. In the context of ‘global constitutionalism’ (Gill 2000), the contractual international regulation of ‘rights to pollute’ is thus the precondition for the creation of new markets.

For companies, this implies the emergence of

² According to Hans-Joachim Schellnhuber of the Potsdamer Institut für Klimafolgenforschung, protecting the climate will lead to a ‘third industrial revolution’ due to the technological innovations it will induce (*Frankfurter Rundschau*, 8 November 2005).

new criteria of competitiveness, which affect the conditions for the valorisation of capital, their investment and innovation strategies and their choice of location and technology. The precondition for this is the ability to render the natural environment in monetary values. Nature the way that we perceive it does not exist per se, but is subordinated to the dominant socioeconomic rationality. This rationality also shapes the politics of climate change: rather than ethical questions, it is questions about the costs of climate change and of instruments for companies, states and societies that determine the dominant discourse. 'If we do not take any steps to protect the climate', says Claudia Kemfert of the Deutsches Institut für Wirtschaftspolitik, 'by 2100 we will be faced with global climate change-related damages of up to 20 trillion US\$' (2005: 1). Nicholas Stern, former chief economist at the World Bank, has calculated that a further increase in greenhouse gas (GHG) emissions could lead to up to 20 per cent being lopped off the global GDP by 2050. These kinds of calculations are primarily intended to make environmental problems fit into economic discourses.

At the same time, the instruments in the Kyoto Protocol cement the separation of international climate change politics from other international institutions and organisations. In many ways, the treaties aiming for economic growth and the liberalisation of trade in goods and services contained within the World Trade Organization (WTO) contradict the goal of the Kyoto Protocol. The discursive-ideological as well as institutional separation of a *global climate problem* and *fossil fuel (in-)security* enacts a (temporary) rapprochement between the economy and the environment (Altvater 2008). But because

fundamentally the contradictions cannot be excised, the governance of climate change remains a fragile construct (Brunnengraber 2007).

Carbon trading, or the valorisation of nature

The creation of a market for tradable CO₂ emissions is seen as a significant step towards the solution of the global climate crisis. By virtue of being tradable, CO₂ certificates are meant to contribute to the reduction of greenhouse gas emissions in the places where such reductions are cheapest. The *cap* that limits the amount of certificates is intended to contribute to the realisation of greenhouse gas reduction targets. This trade in emission rights follows an economic logic that is fundamentally and widely accepted. However, so far experiences with this instrument, both in Germany and the wider EU, have been rather sobering, even if the impacts of carbon trading have not been only negative for German industry. Although emission rights were given away for free in the first trading period, energy companies simply added their *theoretical* costs to the price of energy (*windfall profits*). According to the German ministry of the environment, in 2005 this practice resulted in the companies raking in profits of between € 6 and € 8 billion at the expense of their customers (*Tagesspiegel*, 16 May 2006).

In the EU, some 9,400 energy producers and industrial facilities require a certificate for each ton of CO₂ emitted. However, given that the EU's member states were rather generous in their distribution of about 1,829 million tons of emission rights, industry's real requirements were exceeded by 44 mil-

lion tons in 2005. In May 2006, the price of these emission rights accordingly collapsed from € 30 per ton to less than € 10, ‘an embarrassing success for the environment’, a German newspaper commented (*die taz*, 16 May 2006). From 2008 to 2009, the price of certificates that the KfW Bankengruppe could sell for the German government had crashed by 60 per cent. At EXX, the energy exchange in Leipzig, they were temporarily available for less than € 8 (cf., www.exx.com for an evaluation of the first trading period cf., DEHSt 2009). In the second trading period (2008–12), the number of CO₂ certificates that were distributed was somewhat reduced as a result of pressure from the European Commission. Now, however, the economic crisis and the ensuing reduction in the CO₂ emissions of many companies are leading to a drop in demand for the certificates, which in turn reduces their price.

But the mechanism at the heart of the Kyoto Protocol can only work efficiently if certificates are scarce and therefore expensive. If they are too cheap, they do not generate pressure towards reducing emissions and their steering effect remains limited (cf., Brouns/Witt 2008). In addition, prices for certificates have been extremely volatile, highly dependent on the ups and downs of the business cycle and the vagaries of speculation. So far, the erratic movements of the price of certificates have more or less negated the hoped-for regulatory effects (Hollain 2009). Carbon trading is thus an instrument of dubious value that cannot guarantee a reduction in greenhouse gas emissions. In fact, it is even doubtful whether the certificates that are being traded on the exchanges actually still represent real emissions, or whether they have become mere objects of specula-

tion whose material (physical-chemical) effect on the atmosphere becomes obscured.

Protecting the climate thus becomes ‘a matter for speculators’ who strive for rents and profits from financial transactions, while not being at all interested in climate change (Altvater 2008: 154).

Another problem is the participation of the Central and Eastern European (CEE) countries in the emissions trading system. The agreement in Kyoto was that Russia and Ukraine would, by 2012, merely have to stabilise their emissions as measured against the baseline of 1990. But the breakdown of their economies generated massive real reductions in greenhouse gas emissions, such that today both countries can sell their surplus emission rights on the future market for certificates. Even in the absence of any further measures to achieve reductions, Russia’s emissions in 2020 would most likely still be some 20 per cent lower than those of 1990. The CEE countries will thus be able to sell significant amounts of ‘excess’ emission rights on the market, although these certificates will not be based on any real emission reductions. Many describe the possibility that governments and companies will use these certificates to effectively buy themselves out of their responsibility to reduce emissions as the production of ‘hot air’. The problem might only deepen once the developing and newly industrialised countries participate in the global carbon-trading market. For reasons of justice, these countries are granted the right to increase emissions in order to close gaps in economic development and progress (cf., the article in this journal by Eduardo Gudynas). The quandary is that the emission allowances they are granted can be unrealistically high.

A reduction of absolute emissions in the industrialised countries, as formulated in the Kyoto Protocol, seems hardly realistic against this backdrop since additional emission certificates are so easy to come by. Even the German Bundesverband Emissionshandel und Klimaschutz has to admit that the trade in CO₂ certificates has so far ‘inhibited rather than strengthened the transformation of the energy sector towards structures that are less dependent on emissions’. Renewable energies have not benefited from the emissions trade either. It is not merely teething problems that are preventing an anti-fossilistic transformation, but political and economic constraints, interests and power relations. The emissions trade functions as a creative form of CO₂ accounting that simply allows business as usual to continue. This might explain the ‘unprecedented lack of critique vis-à-vis the fundamental flaws of emissions trade’, as Valentin Hollain puts it (2009: 25).

Flexibility through loopholes: The Clean Development Mechanism

The Clean Development Mechanism (CDM) opens yet another way for the governments and companies of industrialised countries to meet their emission reduction targets by reducing emissions not in their own but in developing and newly industrialised countries. The CDM effectively allows CO₂ reductions to be ‘exported’ to the global South, while emissions in the industrialised nations remain constant or even increase, depending on how many CERs (Certified Emissions Reductions) are fed into domestic systems. Common examples include reforestation projects or the construction of wind turbines and power plants. The emissions saved or captured by such projects are then

credited towards the investing government or company and deducted from their respective emission reduction targets. The argument is that, from a global point of view, it is irrelevant where exactly greenhouse gas emissions are reduced. Thus, protecting the climate is made possible not only cheaply and efficiently but also profitably.

Growth prospects for CDM projects are significant. In June 2006, 190 projects were registered and 860 were in preparation. By early 2009, 1,400 projects had been registered and 4,600 projects were in preparation (see <http://cd4cdm.org> for current numbers). The frequently high expectations for CDM projects were often disappointed, however. In order for investments in emission reductions to qualify as CDM projects, they have not only to make a contribution to sustainable development but also fulfil the criterion of *additionality*. In order to qualify for the CDM, projects have to prove that they would indeed generate *additional* emissions reductions in their host country. Measures that would also have been taken in the absence of the CDM (such as the construction of a hydroelectric power station that was planned before the existence of the CDM) are not eligible under the Kyoto agreement. One particular goal of CDM is also to support ‘host countries’ on their path to more sustainable (cleaner) development by way of technology transfer.

Primarily, however, CDM helps industrialised nations and their companies to avoid having to really reduce their emissions at home. The actual point of the instrument is to reduce the costs of protecting the climate by implementing measures where expenses are low and profits high (Witt/Moritz 2008). The additionality and actual contribution to

sustainable development that many CDM projects make is also in question. One study reveals that 40 per cent of the CDM projects registered before summer 2007 did not meet the criterion of additionality (Schneider 2007). This means that ‘false certificates’ reach the EU, eventually leading to a global *increase* in CO₂ emissions. A particularly strong critique is directed towards projects to eliminate or dispose of partly halogenated hydrocarbons (HFCs) and laughing gas (N₂O) in China, India and Brazil. More than one-third of the tradable certificates derive from these so-called ‘end-of-pipe’ technologies. The gas that forms as a residue in the production of coolants has very high global warming potential and is an extreme climate killer. By burning it, emission certificates can be earned fast and at low cost.

The CDM is biased in favour of large projects and tends to ignore smaller ones with relatively higher costs. Over 90 per cent of the CERs come from India, China, South Korea and Brazil. However, especially Least Developed Countries (LDCs) often lack the institutional infrastructure for CDM projects. Likewise, few CDM investments reach rural areas. The lasting transformation of energy systems and the extension of decentralised renewable supply systems are goals of the CDM only on paper. Market-based mechanisms invest where it is cheapest. Costlier efforts to protect the climate – efforts that demand strong investment in sustainable technologies – are neglected (CDMWatch 2004).

Peanuts for adjustment measures

When it comes to climate protection and adjustment measures, the LDCs commonly

demand support from industrialised nations. The latter should carry the ‘new and additional’ costs³. Three global financial funds have been established to meet these demands: 1) The so-called Special Climate Change Fund (SCCF) with the goal of promoting development in the energy and transport sectors. By March 2008, the fund had received about US\$ 90 million in voluntary contributions (GEF 2008); 2) the Least Developed Countries Fund (LDCF) provides financial aid for the implementation of the most important adjustment measures and serves only LDCs. Altogether, US\$ 170 million had been paid voluntarily into the fund by March 2008; and 3) the Adaptation Fund (AF), whose aim it is to strengthen concrete adjustment measures and projects. This fund is financed by a mandatory 2 per cent tariff on each CER generated by CDM projects. Measured against current stimulus packages, these sums are hardly more than ‘peanuts’. Furthermore, the projects most likely to be funded are those that open up new market opportunities for the technologies produced by industrialised countries.

The countries most affected by climate change are those of the global South – countries that are extremely poor by socioeconomic standards. The consequences of climate change will spawn and intensify conflicts over access to resources such as water or arable land (Unmüßig/Cramer 2008, WBGU 2007). Considering the adjustment measures and financing programmes employed so far, there exists reasonable concern that these are not based on the needs of the most vulnerable populations, but rather determined by other inter-

3 Art. 4.3. and 4.4., UNFCCC, United Nations (1992).

ests. This would seem to be confirmed by the exclusion of local actors from the planning stages of national adjustment strategies and by the apparent economic and technological prioritisations (Dietz/Scholz 2008).

Hot investment climate

In industrialised countries, climate change has long been of economic importance. International regulations create a booming market of unforeseen possibilities. Consulting firms are founded that advise the industry in its approach to emissions trading, while banks and brokerage houses create their own boards to manage the trade. On the stock market, new types of financial instrument are developed that take into account companies' efforts to reduce their climate footprint. Meanwhile, companies develop programmes that allow offsetting emissions caused by international travel by way of special taxes. The purchase of emission certificates for individuals is managed by initiatives like MyClimate or climatepartner (www.myclimate.org, www.climatepartner.com). Evaluation services assess companies' CO₂ emissions and counsel on reduction possibilities. International agencies direct climate protection programmes towards developing countries, and internet firms offer emission-free communication platforms. In addition, there are the reports and surveys from the field of economics that supplement and rationalise the process.⁴

Climate change has been on the agenda of reinsurance companies such as Munich Re and Swiss Re since the 1970s. They are mainly affected by the increasing costs of natural catastrophes. Early on, their main

concerns were damages to objects or services already insured. The key question was risk assessment. The costs likely to be caused by climate change were factored into prognoses of estimated future damages. The reinsurance companies were among the very few players in the private sector to demand far-reaching reductions in greenhouse gas emissions and adaptation measures as soon as climate change politics became an international issue. They have also added their own studies to relevant discussions.

Recently, the market opportunities created by the climate change debate have become ever more obvious. Insurers offer comprehensive policies, from covering your own home against storm floods to covering entire tourist regions against potential income loss as a consequence of climate change. Take, for example, the case of coral reef bleaching. Ernst Rauch writes:

As concentrations of climate gases soar, so do the demands upon the insurance industry: without adequate primary insurance rates, stable reinsurance capacity will no longer be possible. The solution lies in risky joint ventures between primary and secondary insurance companies and the capital market. (www.munichre.com, downloaded 15 September 2006)

Conclusion: multiple crises?

Destructive modes of production as well as resource-intensive consumer habits and mobility needs are being defended. Neo-liberal policies would not be successful if they were not able to transform the climate change debate into new market opportunities. The 'flexible mechanisms' are neither

4 Cf. 'Zum Geschäft mit der Erwärmung', *Der Spiegel* 32/2005, and 'Das Portal zum Emissionshandel und Klimaschutz', www.co2-handel.de.

aimed at reducing growth nor towards energy or development policies. No measures are introduced that increase the production of renewable energies, or contribute to the decentralisation of energy structures. The focus lies instead on the societal use and valorisation of nature, as well as on the enormous innovation potential of the climate change label for the economy. The regulation of climate governance by the market is the result of special interest lobbyism, contributing to the stabilisation of hegemonic capitalist structures and exploiting climate protection for profits made in newly created (financial) markets. The empirically evident difficulties of administering the mechanisms of the Kyoto Protocol thus form a veil behind which the consolidation of a *political economy of climate change* and the *economisation of nature* proceed apace.

This raises the question of whether the international climate regime is in fact the right institution to combat climate change. Twelve years after signing the Kyoto agreement (1997) and 17 years after signing the Framework Convention on Climate Change (1992), it should be obvious that the effects of these policies are not only incredibly slow, but also that they have not achieved their desired outcomes. Presently, the financial crisis and economic recession make low energy prices, the preservation of jobs and national competitiveness more important than the reduction of emissions caused by production and consumption. This goes for all countries: industrialised, newly industr-

ialised, developing. We can hardly expect upcoming negotiations and conferences on climate change to change this.

The concept of a Green New Deal does to some degree respond to criticism of the climate policies we have seen to date, but it remains very vague as far as future measures are concerned. So far, no response to the ever-increasing destructive consumption of resources has been found. The idea of sustainability, celebrated in 1992, has failed (Park et al. 2008). Technological approaches, insurance policies and adjustment measures fit smoothly into the ambitions for growth and market efficiency. They follow the same logic that has been responsible for the destructive ecological effects of industrialisation. In the end, it is always easier to approve economic stimulus packages that cosmetically modify existing structures than strive for fundamental transformations that challenge a paradigm of growth which is both ecologically unsustainable and socially unjust.

*Translated from German
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Climate change and capitalism's ecological fix in Latin America

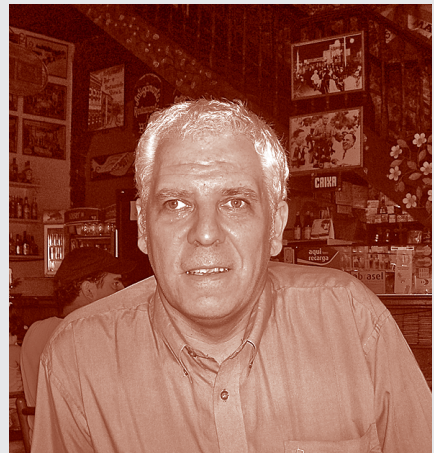
Eduardo Gudynas

The issue of climate change has recently acquired great prominence in South America. It has received considerable coverage in the mainstream media, been the object of many citizen-led campaigns and has at least been discursively acknowledged by governments and some companies. Yet despite this growing presence in public debate, the question is whether the proposals that have been circulated so far are really aimed at devising effective measures to tackle climate change.

The analysis in the present text shows that the discourses of all South American governments today, while not denying the challenge of climate change, present it in a distorted way. Climate change is thus rendered as functional for a process of commodification of nature and a reorientation of environmental policy. Even under left-wing governments, South America is witnessing the redeployment of variations on the theme of faith in progress through the appropriation of nature, thus preventing the substantive agreements that would be necessary to confront climate change.

A distorted perspective on climate change

All the governments of South America are worried about climate change. The reasons are



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varied, and range from possible losses in agricultural production, the disappearance of the Andean ice fields, coastline changes, declines in tourism or the effects of an increase in natural disasters. Their emphases, too, are very diverse, from enraged speechifying to the establishment of scientific committees and the promotion of campaigns. Concomitantly, the conventional media

recycle reports on the subject, almost all of which, however, originate in industrialised countries: the ones that are more regularly cited come from the Northern hemisphere, and thus obviously express the problems and priorities of richer countries.

It is thus that, step by step, a certain idea of climate change has spread across South America, wherein the following elements are central: emphasis on the responsibility of industrialised nations as a way of deferring and avoiding commitment; identification of emissions by sectors such as industry and transport as the main culprits; and the view that South American countries would be, above all, 'victims'. However much truth there is in each of these elements, the whole set leads to distorted positions, allowing South American countries to engage in media campaigns while avoiding both debate and concrete action to tackle the roots of the problem.

To be sure, a much greater responsibility falls on industrialised countries, particularly if the question is considered from a historical perspective. However, we must also admit that several Southern countries have become huge greenhouse gas emitters, sometimes at levels higher than developed nations. For instance, if we consider total emissions (excluding land-use changes), Brazil ranks 7th, ahead of countries such as Germany and Canada; Mexico is 11th (ahead of Italy and France) and Argentina, 25th (ahead of The Netherlands).¹

The volume of current emissions is sometimes minimised, sometimes hidden (this partly explains the delayed presentation of

the official reports by various South American countries), or relativised according to evaluations in proportion to surface or population. Despite their global responsibility, many Southern countries oppose accepting any substantive commitments to reduce emissions on the grounds that they do not want to be tied to reduction goals that might hinder their development. But they also, by emphasising their condition of victimhood, insist that the fight against climate change must be financed and supported with technology transfers from industrialised nations. Their own responsibilities – which, however 'differentiated', are global nonetheless – disappear. Their own initiatives remain limited, and South American countries contribute to the eternal horse-trading and bargaining in international negotiations concerning the money that is expected in order to initiate national measures against climate change.

Correspondingly, the way in which these governments have begun to take action on climate change accentuates other deformations. While recognising problems of vulnerability, which are serious and urgent, their mitigation campaigns are focused on reducing emissions in sectors such as transport, industry and electricity generation. On these fronts, their actions are generally modest and narrow, and usually exhaust themselves in programmes to foster the use of energy-saving light bulbs, filters in some factory chimneys and praising hybrid cars. Whatever their true efficacy, in the end these programmes matter because of the support they garner in the form of public opinion. Besides, this kind of initiative is in line with the dominant message in the media, where the stress is always on industrial or transport emissions.

¹ Emission figures for 2005, based on the Climate Analysis Indicators Tool – CAIT database, World Resources Institute.

The problem is that this does not correspond to South American reality. A greater proportion of emissions in the energy sector is typical of rich countries. For instance, transport and industry generate about 90 per cent of greenhouse gas emissions in the EU. It is for this reason that these are the sectors targeted by such countries.

The situation in South America, however, is very different: the most substantial portion of greenhouse gas emissions (75.2 per cent) comes from agriculture and land-use changes. Industry, transport and the like represent 23.6 per cent of emissions of CO₂ equivalents.² Agriculture, land-use change and forestry represent 83 per cent of total emissions in Brazil, almost 86 per cent in Peru and 91 per cent in Bolivia. It is obvious that this situation is different from what many assume. This situation exposes the contradictions of, for example, Brazil, which has become a great global emitter, but resists taking substantial measures, demands compensation and transfers while at the same time presenting itself as a new global power.

The gravest and most urgent problems for climate change in South America relate to agricultural policy, land use and exports of agrifoods. The agenda of political debate and the most urgent measures must turn to these questions, and in particular to urgent issues such as deforestation, land reform and the expansion of export monocultures such as soy. Yet this nexus does not receive the attention it deserves from the South American public: on the contrary, it is repeatedly avoided by governments whose mitigation plans are inadequate and whose goals are vague. What is more, they take advantage of this distortion in the debate on climate change by organising

marketing campaigns around themes such as light bulbs. In this way, the most urgent and politically most costly themes, such as agricultural policy, go undiscussed. This stance is, nevertheless, instrumental in strengthening their international bargaining positions while carrying on with the present models of development.

The commodification of nature

The persistence of conventional development strategies is one of the main causes of the resistance to a climate change agenda in South America. The dominant model is still one based on the appropriation of nature and on export-led growth. Even the so-called progressive governments (Argentina, Bolivia, Brazil, Chile, Ecuador, Paraguay, Uruguay and Venezuela) have been resurrecting a particular version of an ideology of *progress* – according to which, these countries possess enormous natural resources and ample potential for ecological buffering, and so the governments take it as their mandate to make the most of this wealth. The high price of commodities in recent years has amplified this tendency, and many governments thought it essential to take advantage of these opportunities in the global economy to further their foreign trade. To that end, they refused, and are still refusing, any idea of environmental conditions or restrictions, although now the justification is the global crisis that has negatively impacted economic expansion.

The distortion of the climate-change agenda enables governments to evade a deeper debate on the central ideas of this style of development, which are central in the formulation of land-use and agriculture policies. But this same distortion means that some conventional actions can be present-

² Data for the year 2000. CAIT database, World Resources Institute.

ed as having an environmental purpose. A typical case is the agro-fuel programme in Brazil, greenwashed as a fight against an oil-based civilisation, when in fact it constitutes a deepening of the expansion of soy and sugarcane monocultures in support of exporting agribusiness, with serious social and environmental impacts.

Thus nature is turned into a basket of commodities: environmental goods and services replace ecosystems, and natural capital comes to express the environment's monetary value. This kind of approach is functional to the trade in natural resources, and so does not contradict the present version of the ideology of progress.

This emphasis is not new, and is part of the heritage of the neo-liberal years, but it has also been promoted by South American governments. One should remember the Rio+10 summit in South Africa in 2002 where various Latin American countries, led by Brazil, insisted on the idea of promoting the commercialisation of their own biodiversity and ecosystemic functions as if they were but one commodity among others. This explains the present insistence on the part of various progressive governments on arriving at agreements on environmental goods and services at the World Trade Organization (WTO).

In the framework of the commodification of nature, the environment is broken up into commodities to be inserted into productive processes. As a consequence, the components of ecosystems – its fauna and flora, or even their genes, ecological cycles, etc. – are converted into commodities that are subject to trade laws and can have owners and an economic value. Countries like Brazil and Argentina, for example, are among the most energetic advo-

cates of the incorporation of environmental goods and services into the WTO regime.

Other actors operate in the same way. Among the so-called conservation BINGOs (big international NGOs), for example, market-based mechanisms such as carbon trading are seen as key in responding to the challenge of climate change – extending all the way to extreme cases such as Conservation International's proposal regarding the Amazon, whereby protected areas should self-finance themselves by way of the sale of environmental services and goods, or carbon capture, in global markets (Killeen 2007). This is an extremely pessimistic position, which assumes incapable states and the forsaking of any idea of transforming global capitalism, and accepts the destruction of the greater part of the rainforest, while all that is hoped for is to salvage the odd protected area by including it in the very commercial networks that cause environmental destruction.

Along the same lines, the recent ECLAC (Economic Commission for Latin America and the Caribbean) report on international trade, insofar as it even acknowledges the importance of climate change, also calls for resistance to green forms of trade protectionism. More importantly, this proposal demonstrates other aspects of this distortion, since national or local environmental problems vanish from the agenda. Environmental impacts that range from the loss of biodiversity to urban contamination are not adequately considered; the actions to confront them are emptied of meaning; environmental institutions are even more fragile; and there are multiple problems with enforcement. Much is said about environmental questions, but from a distorted perspective, while a parallel weakening of na-

tional and local environmental governance in South America takes place.

The ecological fix for capitalism

This distorted perspective on climate change, and the advancing commodification of nature even in times of global crisis, are due to the fact that we are witnessing a sort of 'ecological fix' for capitalism. This new version is different from the programme pushed in the framework of the neo-liberal reforms of the 1980 and 1990s, since today there is acknowledgment of the problems with those positions, a greater role for the state is envisioned and social programmes are to remain in place.

Yet there has been no progress in developing a substantive critique of the economic order, of the excessive emphasis on the appropriation of nature or the logic of progress and economic growth. The progressive or left-wing governments of South America have rectified some of the extremes of the old politics, especially in the social arena, and this is no small matter. But they have, nevertheless maintained the same style of development as natural resource-exporting countries. What is more, in some of these governments the state acts to facilitate the intensified use of natural resources, the export of primary commodities and the attraction of foreign investment: directly, through state enterprises, such as national oil companies, as in the case of Bolivia or Venezuela, or indirectly, as in the plans to attract large-scale mining investment in Ecuador.

For the said governments, the importance of the state as a new promoter of the appropriation of nature is clear. For example, the Bo-

livian president, Evo Morales, has recently challenged environmental organisations and even local communities that oppose oil exploration thus: 'What are we to live off?' he asks. Along the same lines, support for a traditional style of material development can be found in old social movements, such as trade unions with an industrial, urban base.

In this context, the social policies characteristic of progressive governments remain targeted at specific social groups and compensate for the negative effects of this very developmentalist strategy of the commodification of nature. Environmental questions are engaged at a surface level, usually taking the form of marketing campaigns, but the insistence is still that environmental regulation would slow economic growth and represent a risk to development itself. As a result, only a superficial environmental agenda is accepted, or one that effectively incorporates actions that are functional to economic growth and a relationship to the global economy that relies on the export of primary commodities. This explains the distortions of the debate on climate change and the resistance to discussing, for instance, the role of emissions originating from agriculture and land use.

Since this style of development now has a social and environmental face, it generates the illusion of a 'benign capitalism'. The fundamentals of its functioning go unquestioned, as do those of the commodification of nature or the supporting role of social programmes. Instead, there are measures of reparation and compensation, and even the acceptance of another kind of globalisation, with greater state regulation (a good example would be the 'capitalism 3.0' proposal of economist Dani Rodrik).

Targeted poverty-alleviation programmes are very important in emergency situations, but when they become permanent they dampen the most acute effects of this capitalism and pacify social unrest. Governments find political legitimacy and so prevent the discussion of their mode of appropriation of nature and their international insertion based on natural resources. The examples above show how governments, several big NGOs and significant sectors of academia are complicit in this. The degradation of the environment is hidden, made invisible. However much recognition of ecological effects there may be, the argument is that they are the inevitable costs of leaving underdevelopment behind. Not only that, but the intensification of the commodification of nature is presented as a solution to the existing problems.

Climate change and post-material development

A radical shift in international negotiations on climate change requires another kind of leadership from South American countries. It is necessary to break with the ideology of progress and to move towards *post-material development*. To the extent that political debate in South America is today richer and more diversified, it is possible to move forward with this agenda. For example, the proposal for post-oil development in Ecuador, including a moratorium on oil drilling in the Yasuní region (Acosta et al., 2009), is a very important intervention. In the same way, we need to discuss urgently policies regarding agriculture, cattle farming and forestry, and generally come up with a new design for rural development.

In this task, it is necessary to put the essence of contemporary Latin American capitalism

itself at the centre of the debate, and particularly its goal of achieving economic growth through the export of primary commodities. The ‘solutions’ that beckon with the commodification of nature are not enough to tackle national environmental problems, let alone global ones. Measures such as the creation of international carbon markets are mere illusions of supposedly effective alternatives, when in fact they do nothing but exacerbate the problems. If there is no radical change in this kind of relationship, everything points to the persistence of sluggish international negotiations that will repeatedly avoid real commitments to tackle the root causes of climate change.

*Translated from Spanish
by Rodrigo Nunes.*

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The deadly triad:

Climate change, free trade and capitalism

Walden Bello

The way out of the global recession, it is alleged by figures ranging from Gordon Brown to Pascal Lamy, is by expanding global trade, and the key to this is concluding the stalled Doha Round of trade negotiations under the World Trade Organization (WTO). But there is something surreal about this argument. Faced with the looming spectre of climate change, the trade negotiations in Geneva amount to little more than arguing over the arrangement of deck chairs while the *Titanic* is sinking. Indeed, one of the most important steps in the struggle to come up with a viable strategy to deal with climate change would be to *derail* the Doha Round.

Global trade: deeply dysfunctional

Global trade functions by virtue of a transport system that is heavily dependent on fossil fuels. It is estimated that about 60 per cent of the world's use of oil goes to transportation activities, which are more than 95 per cent dependent on fossil fuels. A study by the Organisation for Economic Cooperation and Development (OECD) estimated that the global transport sector accounts for 20–25 per cent of carbon emissions, with some 66 per cent of this figure accounted for by emissions in the industrialised countries.¹



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From the point of view of environmental sustainability, global trade has become ever more dysfunctional. Take agricultural trade. As Daniel Imhoff has pointed out, 'the average food item journeys 1,300 miles before becoming part of a meal'.² Long-distance travel contributes to the absurd situation wherein 'ten calories of energy are required to create just one calorie of food energy'.³

The WTO has been a central factor in increasing carbon emissions from transport. A

¹ new economics foundation, p.9.

² Imhoff, pp.425–6.

³ Ibid.

study done by the OECD in the mid-1990s estimated that by 2004, the year marking the full implementation of free-trade commitments under the WTO's Uruguay Round, there would have been an increase in the transport of internationally traded goods of 70 per cent over 1992 levels. This figure, notes the progressive British think tank new economics foundation (**nef**), 'would make a mockery' of the Kyoto Protocol's mandatory emissions reduction targets for industrialised countries.⁴ Since then, with the exception of the dip in global trade caused by the world economic crisis, things have been getting progressively worse.

Transportation: More fossil-intensive than ever

Ocean shipping accounts for nearly 80 per cent of the world's international trade in goods. The fuel commonly used by ships is a mixture of diesel and low-quality oil known as 'Bunker C', which contains high levels of carbon and sulphur. As Jerry Mander and Simon Retallack point out, 'if not consumed by ships, it would otherwise be considered a waste product'.⁵

Aviation, which has the highest growth rate as a mode of transport, is also the fastest growing source of greenhouse gas emissions, with its consumption of fuel expected to rise by 65 per cent from 1990 levels by 2010, according to one study cited by **nef**.⁶ Other estimates are more pessimistic, with the Intergovernmental Panel on Climate Change (IPCC) suggesting that fuel consumption by civil aviation is increasing at a rate of 3 per cent a year and could rise by nearly 350 per cent from 1992 levels by 2050.⁷

Again Mander and Retallack: 'Each ton of freight moved by plane uses forty nine times as much energy per kilometer as when it's moved by ship...A two minute takeoff by a [Boeing] 747 is equal to 2.4 million lawn mowers running for twenty minutes'.⁸ In support of trade expansion and global economic growth, authorities have by and large taxed neither aviation fuel nor marine bunker fuel, which now account for 20 per cent of all emissions in the transport sector.

Along with fossil-fuel-intensive air transport, fossil-fuel-intensive road transport has also been favoured by the expansion of world trade, instead of less emission-intensive modes of transportation such as rail traffic. In the EU, for instance, the focus on building up a road transport network led an OECD study to comment that 'the way in which the EU liberalisation policy has been implemented has favoured the less environment-friendly modes and accelerated the decline of rail and inland waterways'.⁹

Decoupling growth and energy: a panacea

There has been talk about decoupling trade and growth from energy use, or shifting from fossil fuels to other, less carbon-intensive energy sources. This is the position held by the G-8. The assumption is that affluent societies can take on commitments to reduce their greenhouse gas emissions, but still grow and enjoy their high standards of living if they shift to non-fossil fuel sources of energy. Moreover, the domestic implementation of the mandatory cuts agreed on multilaterally by governments must occur by way of market-based mechanisms, that

4 new economics foundation, p.10.

5 Mander and Retallack, pp.28-9.

6 Cited in new economics foundation, p.11.

7 Ibid.

8 Mander and Retallack, pp.28-9.

9 OECD, quoted in new economics foundation, p.11.

is, through the creation and trading of emission permits. The subtext is: techno-fixes and the carbon market will make the transition relatively painless and – why not? – profitable too.

The reality is that other energy sources and technologies are either dangerous, like nuclear power; have deleterious side-effects, like agrofuels' negative impact on food production; or are simply science fiction at this stage, like carbon sequestration and storage technology. Moreover, market mechanisms such as carbon trading are simply a way for states to avoid forcing their corporate sectors to make the hard decision to significantly cut emissions now.

It is also rapidly becoming clear that the dominant paradigm of economic growth is one of the most significant obstacles to a serious global effort to deal with climate change. But this destabilising, fundamentalist growth-consumption paradigm is itself more effect than cause. The central problem, it is becoming increasingly evident, is a mode of production whose main dynamic is the transformation of living nature into dead commodities, creating tremendous waste in the process. The driver of this process is consumption – or more appropriately over-consumption – and the motivation is profit or capital accumulation.

Global trade has been a central mechanism of this capitalist dynamic of accumulation, consumption and expansion. And for the foreseeable future, trade expansion and global growth will fall in line with their historical trajectory of being correlated with increased greenhouse gas emissions.

Ultimately, a fundamental transformation at the level of the mode of production seems

inevitable if the world is to address seriously the challenge of climate change and the broader environmental crisis. In the short term, however, a sharp U-turn in consumption and growth in the developed countries and a significant decrease in global trade are unavoidable if we are to have the space to mount this more strategic enterprise of moving away from capitalism towards a more ecologically sustainable form of economic organisation.

The outcome of the Doha negotiations will determine whether free trade will intensify or lose momentum. A successful conclusion to Doha will bring us closer to uncontrollable climate change. It will continue what **nef** describes as 'free trade's free ride on the global climate'. A derailment of Doha will not be a sufficient condition to formulate a strategy to contain climate change, but given the likely negative ecological consequences of a successful deal, it is a necessary condition.

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PART II »

Wrong turns, dead-ends and cross-roads



REDD realities

Simone Lovera

Some six years ago, Kevin Conrad, a close friend and advisor to Michael Somare, prime minister of Papua New Guinea (PNG), had a great idea. The prime minister was complaining to him that the World Bank had forced him to comply with a number of strict conditions on a loan to the PNG forestry sector. The conditions were aimed at conserving the forests in this remote country. As the biodiversity and carbon stored in these forests were of global importance, Mr Conrad advised his prime minister to ask for compensation from the world community for the ‘environmental service’ of reducing deforestation. Thus the concept of payments for Reducing Emissions from Deforestation and forest Degradation in Developing countries (REDD) was born.

This anecdote is often told by Mr Conrad himself at international meetings. However, Mr Conrad seldom specifies what the conditions of the World Bank exactly entailed – that the government of PNG would make a strong effort to combat corruption in its forestry service and illegal logging in general. So in fact, the prime minister of PNG wanted to be compensated for complying with his very own forestry laws.



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The basic principle of REDD is not necessarily objectionable. In fact, the suggestion that industrialised countries should contribute financially to policies and actions taken by developing countries to reduce emissions from deforestation and forest degradation is very much in line with Article 4 of the Framework Convention on Climate Change (FCCC) and the concept of common but differentiated responsibilities. Reducing deforestation is a contribution developing countries can make towards global efforts to mitigate climate change. As industrialised countries have a historical responsibility for climate change, it is reasonable that they should fully compensate the costs of such actions. So REDD *could* be a great opportunity to combine climate change mitigation, forest conservation and income provision for forest-dependent communities, *if*:

- REDD actions were voluntary and *additional* to deep emission cuts in Northern countries;
- the payments by these same Northern countries covered the full costs of these actions, and these funds were *additional* to the significant ecological reparations they are expected to pay to compensate Southern countries for the significant damage climate change has already caused them;
- these funds were spent on the conservation and restoration of forests and not on the establishment of monoculture tree plantations;
- these funds were spent on policies and programmes fully in line with the UN Declaration on the Rights of Indigenous Peoples (UNDRIPs);
- these funds were shared equitably with the actors that are actually responsible for forest conservation and restoration,

namely indigenous peoples, local communities and women;

- these funds were shared equitably among countries that have already put in place effective strategies to reduce their deforestation and countries that have failed to do so until now;
- there were serious problems with corruption and bad governance in the countries concerned; and
- the reductions in deforestation are real.

The problem with REDD is that there are simply too many ‘ifs’ to be true. Although the overwhelming majority of policy papers on REDD published over the past years, whether by NGOs, indigenous peoples, governments, scientific institutions or multilateral donors,¹ have listed most if not all of the conditions above as preconditions for effective and equitable REDD strategies, few of these policy papers subsequently reach the logical conclusion that REDD should thus not be implemented if these preconditions are not met.² This means that the REDD dreams sketched in these policy papers are likely to become REDD nightmares in reality.

¹ <http://www.redd-monitor.org/2008/12/08/accra-caucus-statement-on-forests-and-climate-change/http://research.yale.edu/gisf/tfd/pdf/stakeholders/FERN%20REDD%20Position%20Paper%202.pdf>
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http://www.cifor.cgiar.org/publications/pdf_files/Books/BAngelsen0801.pdf
<http://www.un-redd.org/LinkClick.aspx?fileticket=gDmNyDdmEI0%3d&tabid=587&language=en-US>

² A noteworthy exception is the recently published IIED briefing paper, Cotula, L. and J. Mayers (2009), *Tenure in REDD, Start-point or Afterthought?*

REDD without emission reductions

The reality is that Northern countries are not willing to commit to deep reductions. The draft US climate legislation that is supposed to be adopted this year is estimated to lead to approximately 0 per cent domestic emission reductions by 2020 compared to 1990 levels (if all non-domestic offsets are excluded).³ The chances that the US administration will take a position that is more ambitious than this are close to zero. While the EU has at least committed itself to 20 per cent reductions by 2020 even if other Northern countries will not follow, the chances that Canada, Australia, Japan or other industrialised countries will commit to significant emission reductions without the US are equally slim.

The source of REDD funding is another important factor here. If financed through public funds, the reduced emissions from deforestation will at least be additional to the meagre emission cuts proposed. But many Northern countries seem to be in favour of funding REDD through carbon markets. This implies that REDD will, by definition, not contribute anything to emission reductions, as every ton of carbon saved by reduced deforestation will be compensated for by an extra ton of carbon emitted in the global North. REDD without emission reductions will simply mean the end of most of the world's forests, as climate change itself is the number one threat to forests and other ecosystems.

3 The legislation is still being discussed, but this is a conservative estimate. Different US-based NGOs have estimated that the bill will reduce emissions to 1990 levels between 2024 and 2042.

REDD markets versus ecological debt

It is also unlikely that Northern countries will provide the new and additional funding necessary to pay for REDD *on top of* the ecological debt repayment Southern countries have demanded. The African Union recently demanded between US\$ 65 and US\$ 200 billion per year as ecological debt repayment. The additional costs for REDD vary significantly with the kind of policies that will be implemented. However, the original REDD concept as promoted by PNG would imply that landowners will be granted a right to ask for compensation for not cutting down that forest to produce, for example, palm oil on their land. Oil palm plantation owners can earn between US\$ 3,600 and 12,000 per hectare of plantation. Considering that there are 1.5 billion hectares of tropical forests, and that at least 50 per cent of these areas are suitable for oil palm production, the world community would theoretically have to provide between US\$ 2,700 and US\$ 9,000 billion per year to compensate potential oil palm farmers alone. The chances that Northern countries will commit to paying those costs, on top of their ecological debt payments, are, again, very slim. The financial offer by the EU made on 10 September 2009, less than three months before the Copenhagen Summit, is more in the range of US\$ 1.5 to US\$ 4 billion per year, some 0.1 per cent of what would be needed for the PNG version of REDD alone.

Many institutions have argued that REDD should be financed through a 'basket of funding options',⁴ that is, by a combination

4 <http://research.yale.edu/gisf/tfd/pdf/stakeholders/FERN%20REDD%20Position%20Paper%202.pdf>

of public funds and carbon markets. As stated above, the first and foremost problem with this is that it will mean that REDD does not contribute to climate change mitigation, but rather to helping the North find cheap reduction options. Allowing carbon offsets for REDD and other projects will also seriously undermine Southern claims to reparations for ecological debt. By absorbing the little development space that Southern countries have left, such offsets will significantly increase inequities in the division of ecological space between North and South (FoE 2009).

REDD forests or REDD monocultures

Another major problem with REDD is the definition of forests that was adopted by the parties to the Kyoto Protocol in 2001. This definition includes not only a forest as commonly perceived, but also any kind of tree monoculture, and even areas that are ‘temporarily unstocked’ (a euphemism for clear-cut) but waiting to be planted again at an unspecified future moment. This flawed definition will most likely be adopted for REDD activities. As a result, REDD policies might not only ignore serious forms of forest degradation (see also Sasaki 2009) but also the quite common forestry practice of replacing biologically diverse forests with monoculture tree plantations.

While some of the latest proposals include references to the need for ‘co-benefits’ for biodiversity and even reject ‘the replacement of natural forests by tree plantations’, these safeguards, even if accepted, will not prevent significant amounts of funding from being used for the establishment of tree

monocultures in non-forest areas. The Brazilian national climate strategy, for example, includes a target of 13 million hectares of additional tree plantations, of which only 2 million hectares will be planted with native species. The more recent ‘planted forests’ strategy sets a target that is more than double that. Most of these plantations will either replace other ecosystems like pampa (grasslands), cerrado (semi-dry woodland) or caatinga (arid woodlands), and/or areas where forests might have grown back provided the land was left undisturbed.

REDD, indigenous rights and equitable sharing of benefits

Indigenous Peoples’ Organisations (IPOs) have expressed strong concerns about the potential impact of REDD on their rights and interests, including their land rights. Considering the significant amounts of funding that might be at stake, their fear is that indigenous lands will be subjected to land grabbing for profitable projects. These impacts will be significantly aggravated if REDD is financed through carbon markets, as commercial finance is likely to flow towards projects that are able to reduce deforestation rates significantly. Comparative research in Brazil revealed that deforestation rates in indigenous reserves are between 1.7 and 7 times lower than deforestation rates in surrounding areas (Nepstad et al. 2006). The Center for International Forestry Research has thus recommended that payments for environmental services should not be targeting indigenous peoples, as it would be highly inefficient to pay people who were not planning to deforest their territory anyway.

An analysis by the Global Forest Coalition of the impact of market-based conservation in five different communities revealed that:

[t]he use of market-based mechanisms inevitably means that the odds are stacked against those in a weaker initial negotiating position. This includes people with no legal land tenure and those unable to afford the considerable expense involved in the preparation of environmental impact assessments, the delivery of environmental services, the fulfilment of a range of quantifiable qualification criteria and the provision of upfront and operational finance, including insurance against project failure. This implies that market-based conservation mechanisms will inevitably lead to increased corporate governance over biodiversity conservation, and erode the governance systems of (monetary) poor communities and social groups including Indigenous Peoples and women.⁵

While carbon markets can, in theory, bring some economic benefits to local communities, it is important to analyse any economic costs in terms of decreased food security and food sovereignty and the loss of alternative sources of jobs and income related to, for example, the establishment of labour-extensive tree plantations. The most significant impact was the sense of disempowerment felt by many community members. In all cases, local residents reported that their control over their forests and livelihoods had decreased because 'the main decisions were now taken by other actors'. Thus, communities that had their own gover-

nance systems promoting collective sustainable management of biodiversity became, under the impact of market-based mechanisms, more likely to act individually and pursue individual economic interests such as jobs, profits and financial rewards. The position of women within the communities was also affected, as women's interests are more likely to be overlooked in commercial transactions normally closed by men (even in communities where women previously had responsibility for matters related to forests and biodiversity). Women have a disadvantageous position in monetary economies in general, as they spend a significant part of their time on activities such as childcare, household management, procuring clean water and other goods for the family, which are not rewarded in monetary terms.⁶

The challenge of equitable sharing of benefits is felt not only on a sub-national level. By definition, REDD will lead to much higher payments for countries that have failed to halt deforestation until now, as these countries have deforestation to reduce. Recent proposals to include 'enhancement of carbon stocks' (that is, reforestation, including the establishment of monoculture tree plantations) and land management practices are unlikely to resolve these inequities, as those countries that have caused much carbon emission through both deforestation and other unsustainable land management practices will still receive far higher payments than countries that have practised sustainable land management. African countries will not be able to compete with the likes of Indonesia and Brazil in reducing emissions from land management. Thanks to its

⁵ GFC 2008.

⁶ *ibid.*

land-based emissions, Indonesia has joined the world's three largest emitters. A country like Ethiopia will have a hard time competing with that, even if it does decide to plaster its countryside with 27 million hectares of monoculture tree plantations, as Brazil intends to do, according to its draft 'planted forests' strategy.

Thanks to the vocal campaigns of IPOs themselves, especially at recent conferences of the parties of the Climate Convention, concerns about indigenous rights seem to be taken seriously by at least some governments. In this respect, it has been helpful that the two main multinational initiatives to finance countries' efforts to 'prepare' for REDD, the World Bank Forest Carbon Partnership Facility and the UN-REDD programme, are respectively bound to instruments that demand consultation with and participation by indigenous peoples in the development of policies that affect them. UNDRIPs even specifies the right to 'free prior and informed consent', which means that REDD policies should formally be implemented with explicit indigenous peoples' consent. It is important to note that this pressure from the main REDD donors has been helpful in convincing at least some governments to consult with IPOs in the elaboration of their REDD strategies. For some countries, especially in Africa and Asia, this was the first time ever indigenous peoples were seriously consulted on forest policies.

However, it is important to remain cautious here, as these multilateral donors are mainly funding the preparation of REDD strategies. Once these strategies reach the implementation stage and support comes in from donors and carbon markets that are not bound to

indigenous rights' instruments, these rights could easily be marginalised again. Indications are that the capacity of national IPOs themselves to engage in the national REDD debate are a determining factor on whether REDD will benefit them or not, and regrettably many of them still lack that capacity.

Last but not least, at the international level, REDD is in violation of UNDRIPs, as the negotiations have continued until now without any meaningful participation by indigenous peoples, despite the fact that a REDD agreement by the FCCC will have a significant impact on indigenous territories, which are home to many of the world's most precious forests.

REDD corruption

The need for good governance as one of the preconditions for proper implementation of REDD has been emphasised by many inter-governmental and non-governmental institutions.⁷ Without good governance, corporations and other national actors will be inclined to claim overestimated or otherwise fraudulent emission reductions. In order to calculate the reductions caused by a specific conservation project, one has to establish an appropriate baseline in order to ascertain exactly what proportion of the emission reductions is the result of the project. But establishing proper baselines and verification of the added value of REDD activities has proven a tremendous challenge. It is hard to define what would have happened with a

7 http://www.unredd.net/index.php?option=com_docman&task=doc_download&gid=455&Itemid=53/
http://www.rightsandresources.org/publication_details.php?publicationID=857

forest in a business-as-usual situation. Determining a proper baseline:

would either take the form of a reference period in the past or a scenario which could be used as a convincing projection of the future trends of deforestation. Unfortunately, there is little chance that the future resembles the past; robust predictions of future deforestation seem unlikely given the complex interactions of factors commanding the pace of deforestation, especially as most of them lie outside the forest sector. (Karsenty 2008)

Another major problem is that of ‘leakage’, which is inherent in forest-related carbon projects. Leakage means that the environmental benefits of a project are undermined or even completely negated because the destructive activities are simply moved to another area. Protecting one forest area from logging, for example, makes little sense for the climate and provides few environmental benefits if the logging shifts to a nearby area, or another country.

Here again, the problems with REDD are seriously aggravated if REDD is funded through carbon markets. If non-additional emission reductions from deforestation are used to compensate for real emissions in the North, the net result will be increased emissions and thus aggravated climate change.

The fundamental dilemma with REDD is that deforestation itself is an indicator of bad governance and thus a good reason not to implement REDD. As practically all countries in the world (the US being the only exception) have not only ratified the Convention on Biodiversity but also committed

themselves in 2002 to significantly reducing biodiversity loss by 2010, those countries that still have high deforestation rates are obviously not complying with international commitments. That makes REDD a recipe for disaster in countries like PNG, Brazil and Indonesia, in fact, in practically all countries that still, 17 years after the UN Conference on Environment and Development, have not succeeded in reducing deforestation.

Learning from success instead of paying for failure

Luckily, there are countries that have succeeded in reducing or even halting deforestation. These countries are complying with the relevant regulations, and they should be rewarded for doing so through the provision of significant new and additional financial resources. Respecting indigenous land rights and community forest management has proven to be one of the most equitable, effective and efficient policy incentives for forest conservation and forest restoration. While these policies require far less funding than compensation schemes targeted at compensating soy farmers for not burning every hectare of their land, they still require institutional capacity, sound monitoring and enforcement systems and resources to develop socially just, participatory and inclusive forest conservation and restoration policies. Both the Convention on Biodiversity and the Framework Convention on Climate Change that were signed in 1992 oblige all governments to conserve forests and require developed countries to contribute new and additional financial resources to reward developing countries for the incremental costs of providing global environmental benefits through reducing de-

forestation. The fact that the overwhelming majority of developed countries have not complied with these legally binding agreements does not imply that they do not exist anymore. Instead, as pointed out by an increasing number of G-77 countries, the failure to comply with these commitments has created an ecological debt that should be repaid on top of the new and additional resources that were promised 17 years ago.

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Green capitalism and the climate: *It's economic growth, stupid!*

Tadzio Mueller and Alexis Passadakis

*'For things to remain the same,
everything must change'*

Sicilian aristocrat Tancredi,
from the *The Leopard*

*'The Chinese use the same sign for
"crisis" as they do for "opportunity".
'Yes, "Crisitunity"!'*

Dialogue between Lisa and
Homer Simpson

Is green the new black?

Remember the days when 'the ecology' seemed to stand in stark contrast to 'the economy'? When capital, labour and governments stood side by side to see off the challenge articulated by 'mad' environmentalists; when to admit the reality and threat of 'climate change' would place you far beyond the realms of acceptable discourse; and when green parties were perceived as standing to the left of Social Democracy?

Alas, times and climes change. Not too long ago a small revolution took place in, of all places, conservative Germany. The local



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version of the *Financial Times*, a newspaper known around the world as the mouthpiece for the more enlightened, forward-thinking fractions of transnational capital, for the first time in the history of German journalism endorsed a party for the European parliamentary elections. Big deal, one might think, they probably endorsed the market fundamentalists in the FDP, or else they went for stability-*über-alles* by endorsing Chancellor Merkel. But not this time: 'If you want to use your vote to support meaningful change, then this time you should vote for the Green Party'. Why? Because the party is, they argue, a 'market-friendly engine of innovation' that is pushing a Green New Deal (GND) that they describe as a 'stimulus package for the ecological technologies of the future' (*FTD*, 4 June 2009).¹ And lest anyone think this is a German peculiarity, take it from the mouth of Thomas Friedman, neo-liberal *par excellence* recently turned 'green': 'Making America the world's greenest country is not a selfless act of charity or naïve moral indulgence. It is now a core national security and economic interest' (Friedman 2008: 23).

This of course raises the question of why all things green – green jobs, green growth, even a Green New Deal – in short, why green capitalism has suddenly become so attractive, not just to the editorial team of the *Financial Times Deutschland* and to Thomas Friedman, but to an increasingly broad coalition of actors ranging from Achim Steiner at the head of the United Nations Environment Programme (UNEP), to Ban Ki-Moon and Al Gore, Barack Obama and green parties all around Europe, as well as

an increasing number of financial capitalists and industrialists? Our hypothesis is this: viewed from the perspective of capital, as well as a number of governments, what is interesting about a GND is not whether it can, or cannot, *solve* the multiplicity of ecological crises we are currently facing – we argue that this is, in the medium term, an impossibility – but whether it can *internalise* these crises as an engine of growth and legitimisation, thus solving several other crisis tendencies currently afflicting global capitalism. It is not, to be clear about this, an exercise in traditional 'greenwashing', but an attempt to kick off, at the end of the neo-liberal phase of capitalism, a new round of accumulation and mode of regulation. And the point about the ecological crises, or 'biocrisis', is that it is neither solved nor ignored in a green capitalist regime, but rather placed at the heart of its growth strategy.

A world in crises: from the economic to the biocrisis

The world is currently facing not just an economic crisis but a multiplicity of linked yet relatively autonomous crisis tendencies so severe that a number of indigenous peoples' movements took the opportunity at the 2009 World Social Forum in Belem to declare the current conjuncture a crisis of the Western model of civilisation. To start, there is the political crisis that has seen not only global but also national governance institutions – from the World Trade Organization (WTO), the International Monetary Fund (IMF), to national parliaments, parties and institutionalised class compromises – haemorrhage legitimacy and public support since at least the end of the 1990s. This loss of legitimacy was briefly countered by

¹ All translations into English by the authors.

the Global War on Terror, but this was at best a strategy of domination in the face of a breakdown of neo-liberal hegemony, which ended up undermining the stability of the system more than it maintained it. Second, there is the global economic crisis, the result not ‘merely’ of the collapse of the financial sector, but of deeper causes such as a structural lack of what Keynes would have called ‘effective demand’ arising from decades of successful neo-liberal class struggle from above; and of the absence of a sustainable engine of growth (Stern 2008), as a result of which more and more profits had to be made within ever shorter-lived bubbles. Third (in this non-exhaustive list), there is the energy crisis: supplies of fossil fuels, on which the global economy has been based for some 250 years, are less and less able to match demand, which will, in the medium term, lead to drastic increases in energy prices and escalating conflicts over ‘energy security’.

And finally there are the multiple ecological crises that are currently afflicting the globe in different ways. While the most discursively visible of these is no doubt the climate crisis, we are at the same time facing a drastic reduction in biodiversity; desertification; a fresh-water crisis; overfishing; the destruction of forests, and several more: together, they constitute a *biocrisis*, a crisis of human life (*bios*) on this planet. While each of these has its relatively autonomous immediate causes, in the final analysis they are all the result of an antagonism between the requirements of human survival in stable eco-social systems and the requirements of capital accumulation – or, more succinctly, between capital’s need for infinite growth and our collective survival on a finite planet.

Crisitunity? New Deal, antagonism and green capitalism

Of all the crises named above, there is something special about the last, the biocrisis. Far from threatening to destroy capitalism, it in fact contains the promise of solving all the other major crises in one fell swoop. Recall that in a capitalist economy, crises are not necessarily negative. The Austrian economist Schumpeter thought of crises as unleashing the force of capital’s ‘creative destruction’, a kind of radical diet that would purge the unproductive and the unprofitable and make way, after running its course, for a leaner and meaner economy to emerge at the other end. More importantly, nor is antagonism necessarily a problem – it is, in fact, precisely what is at the core of capitalism’s dynamism, of its infamous ability to profane all that is holy and melt all that is solid into air. The core of the Fordist-Keynesian New Deal, which contributed significantly to the at least temporary resolution of the Great Depression of the 1920s and 1930s, lay in the fact that the antagonism between capital and labour was neither solved nor ignored, but internalised as the driving force of capitalist development.

The economic situation that prevailed during the ‘Roaring ‘20s’ in the US was in many ways not dissimilar to the situation we faced until recently: high corporate profits, a high degree of financialisation, a significant expansion of production as a result of increases in productivity. However, since wages were stagnating as a result of an ‘excess supply’ of labour (and in spite of increasing unionisation in the industrial workforce), at the end of the 1920s a crisis of overproduction/underconsumption hit – then, as now, there

was not enough effective demand in the system (Rupert 1995: 79–81; Negri 1988).

Keynes's often cited 'genius' – most recently by the Green New Deal Group (2008: 12) – simply lay in recognising the systemic relevance of an arrangement that was not technocratically imposed from the top, but rather emerged as the result of a multiplicity of often militant workers' struggles and of the initially mostly defensive reactions of capitals and the US government under FDR (both acting under the impression of the constant imagined threat of a Soviet-type revolution). As increasingly well-organised workers put upward pressure on wages in certain key companies – for instance, at the Ford Motor Company – these industrialists in turn put pressure on the government to generalise these high wage deals across the economy, lest they suffer a competitive disadvantage. Almost miraculously, the results of this were that a) the high wages led to an increase in purchasing power that allowed for the absorption of surplus production; b) the class antagonism, managed by the trade unions that were increasingly integrated into the emerging 'Fordist' mode of regulation, was domesticated; and c) high wages became the driving force of capitalist development as they forced companies to become ever more efficient in order to maintain their profit margins. Thus began what would later be seen as the 'golden age of capitalism'.

What the class antagonism was 80 years ago, the biocrisis is today, itself a product of an equally indissoluble antagonism – between capital's limitless drive for accumulation and our survival on a finite planet. The biocrisis, suitably internalised in the economic and regulatory machinery of a green capitalism,

offers governments and some advanced fractions of capital the chance to at least temporarily manage the abovementioned crises. Examples in the field of politics range from the way the G-8, led by the German government, outflanked protest movements at their summit in 2007 in Heiligendamm by talking about climate change, thus avoiding the *delegitimising* strategy of the movements, and in fact managing to *relegitimise* themselves; to the World Bank's attempts to present itself as a 'green bank' (Young 2000); all the way to the military's use of climate change to push its agenda of securitisation and expansion (Wagner 2008). Economically, beyond the rather measly 'green' components of recent recovery programmes, the *Financial Times* (24 September 2009) as usual makes the case most convincingly:

If an industrial revolution to produce energy with much lower carbon emissions gathers momentum in Copenhagen in December, there will be fortunes to be made...The scale of the task is vast. Limiting carbon dioxide emissions to the levels scientists suggest would keep global warming to no more than about 2°C would mean building nuclear power stations, wind farms and solar panels at rates never seen before.

Capitalism and the climate: it's economic growth, stupid!

It is therefore quite conceivable, though at this point far from certain, that some kind of green capitalist project (such as the GND) might indeed be able to temporarily solve the economic and other crises. But what it certainly will not be able to do is to solve the biocrisis – for it is at heart a project of

capitalist renovation, which needs must perpetuate capitalism's dynamics, of which Marx wrote, long before the advent of the neo-liberal project that the Green New Deal Group falsely sees as having caused the climate crisis (GNDG 2008: 2): 'Accumulate! Accumulate! That is Moses and the prophets' (Marx 1971: 621). Capital needs, or *is*, accumulation, and 200 years of actually existing capital accumulation has hitherto always destroyed the environment.

Why is that? Because money only becomes *capital* (rather than the coins and bits of paper we have in our pockets to buy stuff in order to satisfy a concrete want, such as hunger) when it is invested in the production of goods that are then sold in order to achieve a return on the initially invested capital. Or in short: money – production – more money. This process involves a whole range of inputs and requirements, from labour to raw materials, from machines to energy. And historically, although the relative resource intensity of capitalist production might have decreased (that is, the same product can now be made with fewer inputs of raw materials), in absolute terms, capitalist production has always required more and more and more inputs – wild-eyed dreams of a capitalist utopia of 'immaterial' growth based on services and the 'digital revolution' notwithstanding (*Guardian*, 4 May 2009). Just as the antagonism between labour and capital cannot be solved within a capitalist framework – it is, after all, the very constituent feature of the capitalist mode of production – the antagonism between capital and life in relatively stable eco-social systems cannot be solved, because there is a necessary contradiction between the infinite accumulation of capital, and life on a finite planet.

Of course, some might now respond that this argument, while possibly correct at a very general level of abstraction (in the infamous Marxist 'last instance' – the one that never comes to pass), ignores some very concrete, positive steps that have been taken in the environmental modernisation of capitalism, which have gone some way towards addressing some concrete needs and urgencies – for example, concerning climate change. International climate negotiations at the United Nations Framework Convention on Climate Change (UNFCCC), however, have precious little to do with the climate, and everything to do with haggling over percentage points of economic growth. Let us be quite clear on what global climate change policies have achieved so far. First, ecologically: since the signing of the Kyoto Protocol, not only have total global greenhouse gas emissions increased, so, too, has their rate of increase.² In addition, a conference held in Copenhagen in March 2009 agreed that the pace of global warming was accelerating more rapidly than hitherto predicted in the Intergovernmental Panel on Climate Change's (IPCC) worst-case scenarios (*Guardian*, 12 March 2009). If progressive supporters of the protocol now deploy the counterfactual argument that, without the treaty, things would have been even worse, then this only reveals their utter strategic despair. We do not need counterfactual arguments, but real and just emissions reductions!

Second, politically: rather than address the full range of activities that negatively impact the climate – say, trade, agriculture and most

2 <http://www.sciencedaily.com/releases/2006/11/061130190831.htm>

fundamentally, the ‘fossilistic’ industrial system – the UNFCCC maintains and reinforces the illegitimate compartmentalisation of ecological concerns into a separate and toothless regulatory regime, thus insulating other institutions such as the WTO from scrutiny and critique. In fact, the WTO’s free trade policies, which usually lead to an expansion of ecologically and socially destructive industrial agriculture and increase the volume of international trade, have significantly more negative impacts on the climate than the UNFCCC’s policies have positive ones. To date, the UNFCCC’s political effect appears to be one of legitimating a destructive and unjust economic and regulatory system by channelling the attention of potentially critical environmental groups into meaningless negotiations; and projecting the impression that ‘something is being done’ about climate change, thus blunting the potential for more widespread, mass movements for climate justice to emerge.

Third, economically, which is where things get interesting. In very short: without the UNFCCC, the idea of emissions trading would almost certainly not have become global ‘best practice’ in official climate politics as quickly, or as universally (recall that the EU was initially opposed to emissions trading, but was convinced to accept it by a man who would later receive a Nobel Prize for a slideshow). But given its relative lack of ecological utility, why has the system become so attractive to so many players? Quite simply because it offers a brilliant (if partial) short- and medium-term fix for the problem of over-accumulated financial capital: the ‘ecological’ consulting firm Point Carbon calculates that the global market for emissions rights will grow from its current

almost measly US\$ 100 billion to US\$ 2,000 billion by the end of this decade. Notwithstanding the uselessness of economic forecasting, particularly in a recession, that is a lot of potential investment of dubious ecological but of definite economic value.

There have, however, been two processes in the last 30 years that have generated ecologically significant emissions reductions. Rather than government intervention or green modernisation, these have been economic crises, that is, drastic reductions in economic growth. First, this occurred during the breakdown of the growth-oriented economies of the Eastern bloc, where a 40 per cent reduction in Soviet GDP coincided with a roughly 40 per cent reduction in emissions (Harrison 2001: 3; Smith 2007: 22). Second, during the current global economic crisis: citing a report by the International Energy Agency (IEA), the *Financial Times* (21 September 2009) writes that ‘CO₂ emissions from burning fossil fuels had undergone “a significant decline” this year – further than in any year in the last 40... Falling industrial output is largely responsible for the plunge in CO₂’. Of course, this is not meant to suggest that an uncontrolled breakdown in the global economy, with all the social devastation this would wreak, is currently desirable. But it does point to the need for a collectively managed, just process of degrowth of the global economy; of, particularly in the global North, *shrinking* our overdeveloped economies.

Open ends

Where to go from here? The call for ‘degrowth’, for the want of a better word, has some unpleasant undertones. On the one

hand, there are its political shortcomings: how would a strategy that aims to shrink the economy gain the support of trade unions, which by and large remain wedded to the Fordist growth compromise (since they are unable to fight for more, what is there for them to distribute but the benefits of growth?)? How do we start leaving fossil fuels in the ground if the miners sitting on top of them are, with good cause, fighting for their livelihoods by trying to extend coal mining and supporting the myth of 'clean coal' (as happened in the British climate camp in 2008)? On the other hand, there is the fear, especially when articulating a critique of growth from a position in the global North, that this ends up resurrecting Malthusian discourses of 'overpopulation', where – generally – 'post-reproductive wealthy white men' lecture 'the poor' on how they should have fewer children (*Guardian*, 29 September 2009). Finally, there is the small matter that we are currently living through an enforced period of degrowth (the world economic crisis), and because in a capitalist economy this necessarily takes the form of a crisis (be-

cause capital that does not grow ceases to be capital), many are likely to ask whether degrowth does not simply mean more crisis, more austerity – and even more upward redistribution of wealth and power.

To be sure, there will not be easy answers to these questions. Clearly, the intellectual task is to create convincing concepts for a global economy that does not rely on constant growth – in other words, for a post-capitalist macroeconomics, if the slight misnomer be allowed (compare, Sustainable Development Commission 2009). But, unsurprisingly, writing papers will not be enough. Whether in regard to the question of North and South, or that of 'environmentalism' and workers' rights, the directions in which we will have to look can only emerge from collective struggle, because it is in struggling together that we become capable of recognising each other and internalising each other's interests. As another movement in another time once put it, *caminamos preguntando*.

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Fixing the world's climate 'foodprint'

Anne Laure Constantin

In the framework of the global climate talks, the international community is struggling to identify agriculture's potential for helping to cool the climate. The discussions are complicated by scientific uncertainties that hamper decision-making.

One thing is certain and unanimously recognised: agricultural production is vulnerable to climate change. Extreme weather events, as well as changes in average temperatures and precipitation levels, are affecting production capacities. A series of droughts in a few key grain-producing regions in 2006-07 contributed to the panic that led to the food price crisis last year. More than 1 billion people are suffering from hunger in 2009, and the impact of climate change on food security is set to become more serious in the coming decades.

Agriculture also contributes to climate change, although the extent needs to be better understood. According to the Intergovernmental Panel on Climate Change (IPCC), agriculture's contribution to global greenhouse gas (GHG) emissions is approximately 12 per cent – the emissions are mainly methane and nitrous oxide. Figure 1 shows the main sources of emissions.



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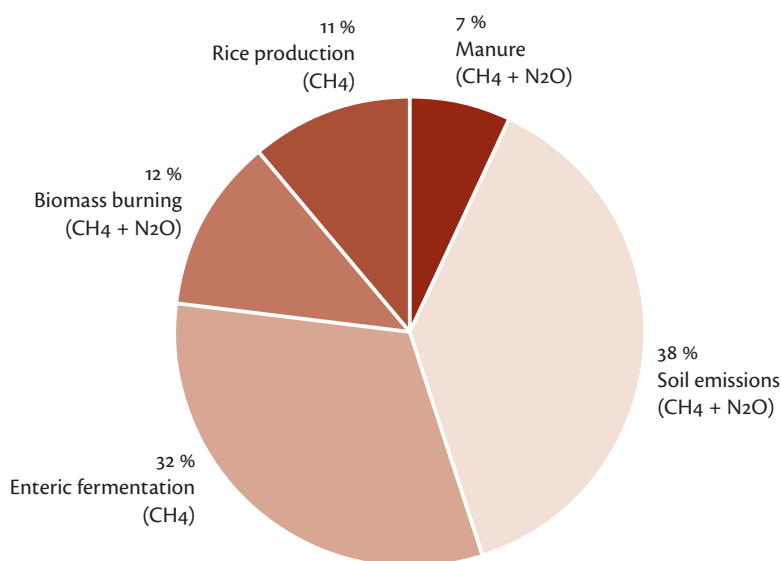


Figure 1: Main sources of GHG emissions in the agricultural sector (ITC - FiBL 2007, based on IPCC figures)

According to Greenpeace International, if land use, transportation, packaging and processing of agricultural products are included in the calculations, agriculture's contribution to global greenhouse gas emissions is somewhere between 16 and 30 per cent.¹ This proportion grows if we take a food system-wide approach (including distribution, consumption and disposal). Under the IPCC's classifications, these other emissions are accounted for by other sectors such as forestry, transport and energy.

In light of the significant contribution our food systems make to climate change and the urgent need to curb global greenhouse gas emissions, addressing our climate 'foodprint' – that is, the contribution of food production

to climate change – is critical. The convergence of multiple crises – a global economic recession, global warming, hunger and the depletion of natural resources, etc. – reinforces the need to identify integrated solutions.

The temptation of quick fixes

There is a strong temptation to hope that 'miracle solutions' will reverse climate change. In the case of agriculture, technical fixes and market-based solutions attract most of the attention, particularly in the framework of the initial discussions at the United Nations Framework Convention on Climate Change (UNFCCC).

Genetic manipulations applied to plants and animals are described as promising ways to reduce emissions from agriculture. In particular, the livestock industry hopes that high-

¹ Bellarby et al. (2008), <http://www.greenpeace.org/international/press/reports/cool-farming-full-report> (accessed 29 May 2009)

tech breeding techniques or the use of vaccines will help curb methane emissions from cows and sheep – those represent about one-third of all agricultural emissions according to the IPCC. New Zealand is leading an ambitious international research network on this topic called LEARN.² The seed industry, Monsanto in the lead, is promoting drought- and heat-resistant crops. Climate change mitigation and adaptation are becoming new arguments in the quest for profits by transnational agribusiness companies.

A newly formed international industry alliance – the International Biochar Initiative – is actively promoting the use of ‘Biochar’ as a way to maximise the potential of soil carbon sequestration, where 89 per cent of agriculture’s mitigation potential lies, according to the IPCC. Biochar is a process consisting of the combustion of biomass, producing charcoal that is then buried in the soil. Supporters claim biochar could help turn unused land into gigantic carbon sinks.

Finally, New Zealand supports the design of an ‘optimal global production pattern for agriculture’. In other words, let those countries whose agricultural production is most efficient in climate terms feed the world. This might be tempting in theory – in reality though, the recent food price hike reminded everyone that food security is about *access* to food, not availability. New Zealand’s proposed focus on trade liberalisation to solve the climate crisis would come at the expense of food security.

At the time of writing, New Zealand is *de facto* leading the discussions on mitigation

from agriculture at the UNFCCC. Few other countries have clear positions in relation to the sector, despite its importance for food security, rural livelihoods and the economic and ecological wellbeing of many of the world’s countries. As a result, most of the options on the table seem only to take us further down the very same energy-intensive path that created the current climate and food crises. It is time for a real paradigm shift to create low input, sustainable and resilient food systems around the world.

Real solutions

Build on agriculture’s multifunctionality

Absent from current international climate discussions is an essential aspect of agriculture’s role in ‘cooling the earth’, multifunctionality. The International Assessment of Agricultural Knowledge, Science, and Technology for Development (IAASTD) – a groundbreaking international and multidisciplinary report endorsed by 58 governments in 2008³ – stressed that ‘multifunctionality recognises the inescapable interconnectedness of agriculture’s different roles and functions’. Not only does agriculture provide the food we all need to live an active and healthy life, it is also a source of livelihood for about 2.6 billion people, an engine for economic development, a part of the culture of many peoples and an integral part of environmental management. Because the climate negotiations fail to take these different dimensions into account in an integrated manner, the technical or market-based solutions currently under consideration are bound to fail.

2 <http://www.livestockemissions.net/>

3 <http://www.agassessment.org/>

Despite its importance, the climate crisis cannot be considered in isolation from other global crises such as the global food security crisis. In this context, it would be misleading to adopt an approach focused on reducing greenhouse gas emissions without considering other social, economic or environmental aspects. Additionally, because agriculture is both a contributor to and a victim of climate change, we need to focus on solutions that contribute to mitigation as well as adaptation – not one or the other.

‘The way the world grows its food will have to change radically’ – IAASTD

There are a number of ways to cut emissions from agriculture. Out of the list of technical options outlined by the IPCC,⁴ some provide numerous co-benefits for agriculture’s other functions. Rather than going through the technical options, we present a few principles to guide a profound reform of food systems that takes into account the need to curb our climate ‘foodprint’ and build resilient food and farm systems.

- *Adopt a rights-based approach to agriculture and climate policies*

Human rights enshrine the principles of participation, accountability and transparency. Democratic decision-making around food and climate policies is a challenge but also a fundamental precondition to achieving sustainable solutions.

A rights-based approach calls for action focused on the needs of the most vulnerable. As Germanwatch and Brot für die Welt put it, ‘it is generally likely that those already suffering from undernourishment and hun-

ger are also among those most at risk from climate change’.⁵ In the wake of the global food price crisis, there is increasing recognition that small-scale farmers and agroecological production methods need to play a central role in solving the global hunger and environmental crises.⁶ IAASTD pointed to the relevance of indigenous and traditional knowledge in building a climate-friendly agriculture system. The UN Environmental Programme (UNEP) and the UN Conference on Trade and Development (UNCTAD) point to the failure of ‘the great technological progress of the past half century’ in reducing hunger in developing countries.⁷ Finally, the UN’s Comprehensive Framework for Action on the 2008 food crisis emphasised the specific role of small-holder farmers in building resilient food systems and eradicating poverty.

For all these reasons, small farmers and indigenous groups need to be central in discussions about agricultural mitigation strategies and policies. Via Campesina, an international network comprised of small farmers’ organisations, is raising serious concerns about the direction of the current climate talks: its call to mobilisation for Copenhagen is entitled ‘Stop! The UNFCCC is going off the rails!’ Ignoring these concerns would be unwise and would compromise the likelihood of an effective outcome.

- *Prioritise soil fertility, low-input farming systems*

Nitrous oxide emissions from soils represent about 38 per cent of emissions from agri-

⁵ Bals et al. (2008).

⁶ See, for instance, the UN’s *Comprehensive Framework for Action* (2008) or UNEP-UNCTAD (2008).

⁷ UNEP-UNCTAD (2008).

⁴ For that, see Smith et al. (2007).

culture. The excessive use of agrochemical products, particularly synthetic fertilisers, is a major contributor. Greenpeace stresses that 50 per cent of the nitrogen used in farming is lost to the environment⁸ – there is a critical need to get rid of this overuse. Chemicals are also responsible for land degradation and water pollution. Reducing the quantities used, or using organic fertilisers where possible, would have multiple benefits: reducing greenhouse gas emissions, but also restoring water quality or reducing production costs for farmers. Agricultural policies – particularly in Annex I countries, China and India – need to move away from subsidising harmful fertiliser-use towards incentives for low-input farming systems.

In many developing countries, productivity will need to increase significantly in the coming decades to meet the food needs of a growing population without increasing the demand for new productive land that puts pressure on forests – conversion of forest into agricultural land is a major source of CO₂ emissions. Restoring or maintaining soil fertility can contribute to this effort. More attention needs to be paid to numerous studies which have shown that sustainable agriculture, including organic agriculture, has significant potential to increase yields.⁹ Organic agriculture also allows an increase in the amount of carbon sequestered in soils, as do agroforestry systems and the use of cover crops, for instance. Methods of production which protect the carbon that is stored in soils need to be given priority, particularly since they also provide benefits for productivity by enhancing soil fertility.

- *Move away from monoculture, towards diversified production systems*

Over the past three decades, the development of commercial agriculture around the world has favoured large, specialised farms organised around a monoculture. The development of soy cultivation is a particularly illustrative case: the crop now occupies about half the agricultural land in Argentina, Bolivia, Brazil and Paraguay. Soy is mostly used as animal feed in livestock operations.

There are numerous reasons why the viability of such a model is questioned. In terms of climate policy, these farms are of particular concern because of the energy they require (machinery, fuel, chemical fertilisers) and because of their vulnerability to climate shocks.

In contrast, diversified systems provide the opportunity to develop synergies between different types of production (for example, crop rotations, use of animal waste to fertilise crop production) and increase the farm's resilience in the face of climate shocks.

- *Address livestock's long shadow*

The FAO's groundbreaking report *Livestock's Long Shadow*, released in 2006, traced all emissions related to meat production: from deforestation to the use of fossil fuel in production and transport of processed and refrigerated animal products, to the production of feed, to land degradation in grazing areas, etc. It concludes that 'overall, livestock activities contribute an estimated 18 percent to total anthropogenic GHG emissions'. In a recent *New York Times* editorial, Nicholas D. Kristof stressed that '[a]n industrial farm with 5,000 hogs produces as much waste as a

⁸ Bellarby et al. (2008).

⁹ UNEP-UNCTAD (2008).

town with 20,000 people'.¹⁰ Methane emissions from liquid slurry are only one aspect of this contribution to environmental contamination.

The FAO report presents a series of options for mitigation that need to be considered urgently. It is also clear that serious reconsideration of meat-based diets that prevail in Western countries, and are growing in developing countries, is much needed. Dr Rajendra Pachauri, chair of the IPCC, himself launched this call: 'Please, eat less meat: it's a very carbon intensive commodity!'

- *Rethink the organisation of the food chain, and cut waste*

Measuring the climate impacts of the post-production stages of the food chain (transportation, refrigeration, cooking) poses challenges. The emergence of the 'food miles' concept – to identify emissions associated with the air-freight of fresh products – has triggered considerable controversy, emphasising the need for further research and discussion of the issues.

In a recent report,¹¹ the UNEP emphasises that '[c]hanging the ways in which food is produced, handled and disposed of across the globe – from farm to store and from fridge to landfill – can both feed the world's rising population and help the environmental services that are the foundation of agricultural productivity in the first place'. Over half the food produced globally today is lost, wasted or discarded as a result of inefficiency in the human-managed food chain. In the

US, the retail sector has loss rates of about 26 per cent. This represents an enormous amount of wasted energy and emissions as well. The multiple crises we face today call for a fundamental reorganisation of the way food chains are organised. Climate-related concerns will need to be central in this reorganisation, without underestimating other benefits for consumers and producers associated with a decrease in the number of intermediaries.

Conclusions: next steps

A shift towards practices that diversify marketable products, close waste loops and reduce the need for external energy and fossil fuel inputs will help mitigate the climate problem, reduce energy use and pollution and create more adaptive food and agricultural systems. This shift is ambitious and requires the development of strong agriculture and food policies, with incentives for climate-friendly practices and sanctions against harmful practices. To pave the way for this shift, below are a few recommendations for more immediate measures.

a. An agenda for agriculture research

Too much uncertainty still exists about the interactions between agriculture and climate change – more research is certainly needed to overcome this gap. However, the focus of the research matters. Following the assessment of the IAASTD, governments need to recognise both that the multifunctionality of agriculture calls for multidisciplinary approaches to the sector, and that local, indigenous knowledge must be respected and more highly valued than it has been to date.

¹⁰ *New York Times* (2008), 'Obama's "secretary of food"?', 11 December.

¹¹ UNEP, *The Environmental Food Crises: Environment's Role in Averting Future Food Crises* (2009).

Research needs to focus on how to make agroecological methods more productive and on how to disseminate better what we already know these methods can achieve. In a recent report on organic agriculture and climate change, the International Trade Centre stresses, 'as 99 percent of the world's public and private research funds have focused on optimizing conventional and integrated food and farming systems during the last decades, major progress and solutions can be expected as a result of agro-ecological and animal welfare research activities'.¹² Substantial funding will be needed to support this new research agenda.

b. Raise awareness and mobilise public opinion

'History shows that most struggles for great change – such as the abolition of slavery or the emancipation of women – started not as the initiative of states but as the endeavour of ordinary people.' These words of Amnesty International Secretary General Irene Khan are particularly relevant to the climate challenge. There are many cases where ordinary people are ahead of their governments in implementing climate-friendly practices, in particular in their consumption habits. Food is a sector where more outreach and dissemination effort is needed so that consumers can make choices that will ultimately put pressure on policies. But more can and needs to be done to raise public awareness about the relationship between their food and the climate. A good mix of ambitious leadership and grassroots mobilisation will be necessary to move us in the right direction.

c. Refocus international climate negotiations

There is no getting around the fact that climate change is a global problem. It requires global solutions and fair systems to support those who are most at risk (generally those least responsible for the problem). Multilateral negotiations are thus critical.

But existing proposals and the dynamics of the negotiations at the UNFCCC fall far short of the challenge and the emergency. The global climate talks need to be refocused. First of all, governments must ensure the meaningful participation of affected groups, such as farmers' organisations, indigenous peoples and environmentalists. At the same time, industry's activism in promoting quick fixes needs to be controlled. The private sector's contribution is vital, not least their capacity to innovate and disseminate new technologies. There must be criteria in place for any public support for such initiatives, however, to ensure a desirable outcome beyond quick profits for the firms involved.

The push to include agriculture as a specific sector in the framework of the negotiations strictly so that it can benefit from carbon credits is troubling. Without even going into the reforms that would be needed to make the Clean Development Mechanism work for sustainable agriculture, it is clear that carbon prices would crash under the associated explosion of credits. The recent financial crisis should be enough of a warning against the risks of excessive speculation on carbon markets. More research, scientific evidence and pilot projects are needed before making decisions that could overhaul the global landscape of agriculture.

¹² ITC-FiBL (2007).

Finally, UNFCCC Annex I countries need to confront their historic responsibility, particularly in shaping existing food systems. They need to contribute proportionately to the identification and implementation of comprehensive solutions. This can be done through policy reforms, research and more support to developing countries to build climate-friendly food systems.

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The right to the city – energy and climate change

Mike Hodson and Simon Marvin

Introduction

Cities are critical sites in our understanding of both energy and climate change. They are often simultaneously represented as being a significant part of the ‘cause’ of climate change, since urban areas and their inhabitants may be responsible for up to 75 per cent of global human energy consumption and carbon emissions; as foremost among the ‘victims’ of climate change, particularly the vulnerable coastal megacities of the global South; and, as key sites of ‘innovative responses’, such as through the actions of the representatives of large cities in the C40 network.¹ All cities face the critical challenge of how to ensure they can guarantee their long-term ecological *and* economic survival in a context of human-made global ecological change – referred to as the Anthropocene period (see below) – that implies greater uncertainty about climate change and the availability of critical resources such as food, water and energy (see Dalby 2007).



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may or may not happen and understandings of the lessons to be learned from such processes.



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¹ The C40 was formed in 2005 and is a group of the ‘world’s largest cities committed to tackling climate change (because) cities and urban areas consume 75 per cent of the world’s energy and produce up to 75 per cent of its greenhouse gas emissions’, see <http://www.c40cities.org/>

Strategically, we are interested in trying to understand whether emerging ecological and resource constraints lead to particular types of response and to what extent these responses imply quite different cities (Hodson and Marvin 2009). In what follows we present two different pathways that are currently being discussed. The question is: Is the response to environmental crises and resource constraints based on the desire to develop relative autonomy for a city, as it seeks to withdraw from reliance on national and international infrastructure to by-pass uncertain and vulnerable resources and develop its own local resources and thereby create a form of bounded security? For that response, eco-cities are the iconic examples. Or alternatively, are responses to constraint based on a wider concept of social needs, the right to a minimum level of energy service, and more collective ecological security that addresses the needs of all communities and attempts to build a concept of global security? Here, the idea of relocation movements is key. In this brief review we critically assess emerging responses and the unsettling implications they have for the conception of our collective rights to the city. As David Harvey (2008) argues:

The question of what kind of city we want cannot be divorced from that of what kind of social ties, relationship to nature, lifestyles, technologies and aesthetic values we desire. The right to the city is far more than the individual liberty to access urban resources: it is a right to change ourselves by changing the city. It is, moreover, a common rather than an individual right since this transformation inevitably depends upon the exercise of a collective power to reshape the processes of urbanization. The freedom to make and remake our cities and ourselves is, I want to argue,

one of the most precious yet most neglected of our human rights. (p.23)

Critically, the questions we want to ask are: What does urban energy security mean? Which social interests are dominating the search for urban energy security, which social interests are excluded and what consequences does this have?

Cities as planetary terracidors/terraformers – Urbanatura in the Anthropocene

Cities are the material representation of today's energy-intensive economies, where carbon-based energy systems – oil, electricity and mobility systems – have made the huge agglomerations of cities and modern industrial systems possible. Urbanisation completely dominates the huge metalogistical systems made up of resource flows, energy, water, waste foods as well as flows of people and goods that make up the contemporary world. The prefix 'meta' helps us to view the city as an active intermediary, as a site of material transformation that anticipates, modifies and excretes the movement of resources, materials and people

Cities are connected through intensive airline networks, logistical transportation systems, enormous energy and water grids as well as communication and ICT systems interconnecting markets, production and consumption systems, people, organisations and governments. Yet in the contemporary period there is a recognition that these industrialised systems – not all located in cities, but certainly largely controlled by organisations located in large global cities – have ecological effects that are beginning to change the global ecological context within

which cities attempt to ensure their continued reproduction (Luke 2003).

Geologists at the University of Leicester have suggested that a new epoch has begun, which they call the Anthropocene (see Zalasiewicz et al. 2008). It is proposed that this is the result of human actions whose critical markers include disturbances of the carbon cycle and global temperature, ocean acidification, changes to sediment erosion and deposition, and species extinctions. This period coincides clearly with the development of industrialisation and the global growth in urbanisation that resulted in an estimated 50 per cent of the world's population living in urban areas by 2000. Indeed, 'the cover of *GSA Today* in which this work appears makes the case rather strongly, showing the high-rise buildings of Shanghai fading out into the distance. It's a stark reminder of how megacities like this one are transforming the planet'.²



Cover of Geological Society of America.

There is increasing recognition of the fact that the metalogistical systems that make the very notion of cities possible are actually reshaping global planetary ecologies through resource depletion, carbon production and pollution. In turn, these effects themselves reshape the context within which contemporary cities then have to ensure their own economic (and ecological) reproduction. It is possible to see that there are multiple ways in which cities can be represented in relation to climate change and resource constraint, but that these need to be understood through an existing system of uneven economic divisions of labour between and within cities.

While cities exist within a highly unified and integrated global space of capital flows, particular cities vary widely in their access to ecological resources. Highly energy-intensive urban environments in the US contrast with the cities of the global South, where millions do not have access to clean water, energy and basic telephones. The US has almost 5 per cent of the world's population, but it generates about 25 per cent of greenhouse gases. Americans' ability to tap into and control global ecosystems of fossil fuel means that US cities are able to be far more spatially expansive and destructive than if they had to survive solely on the resources available in their national space. Clearly then, global cities are able to exert control over critical resources in competition with residents and refugees in other less important and more ordinary cities.³

² See <http://www.centaury-dreams.org/?p=1701>

³ As well as the differences between cities of the North and South, there are of course also significant internal differences within all cities in terms of levels of social access to critical resources such as energy, water and a clean local environment.

Consequently, we would expect significant differences in the capability of cities to respond effectively to energy security and climate change. Critically, which cities have the resources, knowledge and expertise, social and institutional relationships, wider governance capacity to shape systemic and managed (rather than project and piecemeal) change in the social and technical organisation of their cities and infrastructure? Anthropocenic change creates a new urbanatura – a much more unpredictable context for the longer-term development and reproduction of cities marked by climate change, resource constraint, as well as energy, water and food security issues (see Luke 2008). Now, cities’ ability to ensure their longer-term economic and material reproduction will be dependent on their ability to guarantee their ecological

security and access to energy sources under the changed ecological conditions of climate change and resource constraint.

Urban energy security – Relocalisation as divisible or collective security?

Urban responses to the mentioned pressures are being developed in two quite different ways. First, there is a set of responses to these pressures focused on the development of ‘new-build’ eco-developments. The second set of responses focuses on more bottom-up community-based approaches around relocalisation. Figure 2 compares these approaches. Let’s look at each of these in turn in more detail.

The first focuses on new styles of development projects, sometimes called eco-cities

Figure 1: Urban Energy Security Compared

NEO-LIBERAL RESPONSES	FEATURE	‘ALTERNATIVE’ RESPONSES
Transcendence of limits	Ecological constraints	Work within limits
Commercial – banks, developers architects, utilities	Social interests	Community – NGOs, environmental groups, charities
Divisible	Concept of security	Collective
Productionist-scale economies	Scale of solution	Consumption – small local
Eco-urbanism – eco-cities, regions, blocks and towns	Type of build	Retrofitting – existing and new
Product of bounded security and by-pass	Consequences	Mutual interdependencies
Dongtan (Shanghai), Masdar (UAE)	Exemplars	Transitions Towns, Relocalisation

but replicable to other scales – eco-regions, eco-blocks, eco-towns, eco-villages. These responses have at their core the claim that they are able to transcend conventional notions of ecological constraint – climate change and resource constraint – as they build ecological security by internally producing their own food, energy and other critical resources. The 24 September 2008 issue of *Scientific American* announced that ‘massive developments proposed for the US, China and Abu Dhabi aim to reduce or even *eliminate* the environmental cost of city living’ (added emphasis, Biello 2008). Eco-blocks have been developed as a new type of urban ‘gated community’ development that is ‘resource self-sufficient (i.e. carbon neutral) in its operation (or close to it), and if it could replicate and spread throughout the world, this would be a major force in reversing global climate change’ (Fraker 2006).

Scientific American then goes on to look at three examples of eco-city development: Treasure Island in San Francisco, Dongtan in Shanghai and Masdar in the United Arab Emirates. What all these cities seek to do is to reduce their reliance on external resources of food, water and energy and extract value from waste streams, although the extent to which this is possible varies between developments. For example, Dongtan and Treasure Island are seeking to reduce external energy and water requirements by up to half, whereas in the longer term Masdar aims to be carbon neutral.

A sheikhdom whose wealth rests on black gold is building a city that will not rely on any of it. Subterranean electric cars – dubbed Personalized Rapid Transit – will ferry passengers from point to

point because the city of Masdar, whose name translates as ‘the source’, will be off-limits to automobiles. Solar power plants in the surrounding sand, already in early construction, will provide electricity for lighting and air-conditioning and for desalinating ocean water. Wind farms will contribute, along with efforts to tap geothermal energy buried deep underneath the earth. The municipality, which will ultimately aim to be zero carbon and zero waste, will boast a plant to produce hydrogen as well as fuel from the residents’ sewage, according to planners Foster + Partners. Perhaps most important for the desert city, all water will be recycled; even residents’ wastewater will be used to grow crops in enclosed, self-sustaining farms that will further recycle their own water. (Biello 2008)

Common to these different developments – promoted by different sets of commercial, developer, architectural and engineering interests – is the notion of test beds, demonstrations or experiments of what might constitute new models of sustainable cities. Critically, it is not clear whether at these scales it is possible to achieve their energy and ecological objectives, given the disappointments with large multi-user buildings. But these developments are also designed to be financial as much as eco-technical projects. Masdar’s property developer was quoted as saying: ‘We want Masdar city to be profitable, not just sunk cost. If it is not profitable as a real-estate development, *it is not sustainable*’ (added emphasis, quoted in Bullis 2009). There are, then, clearly commercial limits to the development of eco-cities. As Gary Lawrence argued, the reason that Dongtan did not aspire to carbon

neutrality was partly technological but also because of the 'need for the owner to make a profit' (quoted in Biello 2009). The intention is to develop new models of development whereby the developer can extract value from being an infrastructure provider by internalising and commodifying resource flows within the development. Ultimately, the objective is to turn the whole development process, including the energy and infrastructure, into a single financial product that is replicable in other contexts.

In this sense, eco-urbanism may represent an attempt to build privatised and bounded ecological spaces that can anticipate and transcend ecological constraint and climate change for their users. Consequently, there are clearly limits involved in developing transcendent urbanism. While it may be possible to create contexts where it is commercially viable, this is likely to mean these are designed, as in the case of Masdar, 'as a playground for the rich' (Friend quoted in Bullis 2009).

For the developers of these cities, it is critical to develop and test new models of urbanism and then roll these out in other contexts as a form of replicant eco-urbanism. Yet these new models assume a number of key features that raise worrying issues about the degree to which we can talk about *fair* cities. First, they are being developed by a limited range of commercial interests that explicitly seek to develop eco-cities as potentially replicable global financial products that can be developed in any context and transcend ecological limits. Second, their success is partly measured by the degree to which they can be profitably reproduced, therefore reducing their replication to specific market-based circumstances, which in

any case will be developed for elites in order to help ensure their replicability. Third, they are strongly technocratic and productionist-oriented, and fit logically with the claim that, by incorporating clever eco-technics within the design of cities, it is possible to carry on reproducing cities largely without changing the organisation of society or the economy. Given such issues, one wonders about the relevance of new styles of urbanism that are promoted for their ability to remarkably transcend eco-limits yet at the same time do so in such a socially regressive and market-oriented way, where success is reduced to their economic replicability.

Our concern then is that eco-cities represent one particular response to the problems of climate change, resource constraint and energy security in a period of particular ecological emergency and economic crisis. As such, we should see them as the purest attempt to create neo-liberalised environmental security, not at the scale of the whole city or even the planet, but in the form of a more bounded divisible security in order to try to guarantee ecological security for elites.

But there are also other debates that include wider sets of social interests and try to put other social objectives on the urban policy agenda. These include the Transition Towns and Relocalisation movements being developed as local social and behavioural responses in a number of urban contexts in the UK and US. For example, there are now 28 Transition Towns in the UK:

A Transition Initiative is a community that is unleashing its own latent collective genius to look Peak Oil and Climate Change squarely in the eye and to dis-

cover and implement ways to address this BIG question: 'for all those aspects of life that this community needs in order to sustain itself and thrive, how do we significantly increase resilience (to mitigate the effects of Peak Oil) and drastically reduce carbon emissions (to mitigate the effects of Climate Change)?' The resulting coordinated range of projects across all these areas of life leads to a collectively designed energy descent pathway.⁴

Such strategies seem to imply a more collective approach to innovation around climate change and resource constraints, one that is not solely oriented towards technical fixes, and a more socially and culturally driven approach to new solutions and configurations. Critically, these are designed in context and cut across all aspects of urban life. A key focus is on resource reduction rather than reproducing the productivist bias of commercial approaches. To take another example, a US network draws together over 172 urban post-carbon groups world-wide. What is interesting about this network is that:

The Relocalization strategy developed in response to the environmental, social, political and economic impacts of global over-reliance on cheap energy. Our dependence on cheap nonrenewable fossil fuel energy has produced climate change, the erosion of community, wars for oil-rich land and the instability of the global economic system.⁵

This implies a more critical view of our reliance on energy and the resultant implications. Evidently, there would be significant benefits in looking further at such alternatives and how they compare and contrast with the strategies involved around ecocities. There would be value in contrasting the different logics in terms of the social interests, the solutions developed, the balance between productionist and demand solutions and the implications of such strategies. More widely, there would be benefits in considering how other constructions could be based on concepts, such as mutual interdependence, relationality, trading and trade-offs, fair shares and environmental justice.

Conclusion

There are a range of critical pressures to re-internalise energy and other infrastructure flows within the conception of urban development. A new set of eco-technics is seeking to develop internalised metabolisms that are simultaneously an attempt to build ecological security for the few and an attempt to create new mobile financial products of integrated urban development as a new opportunity for capitalist reproduction. Our argument is that the dominant logic of neo-liberal responses is the creation of 'bounded' security in new ecological enclaves for premium users that ignore wider distributional questions about uneven access to resource politics. These are the ecologically secure gated communities of the 21st century that seek to internalise ecological resources and build strategic protection from climate change and wider resource constraints.

4 <http://www.transitiontowns.org/>
(accessed 29 January 2008).

5 <http://relocalize.net/about/relocalization>
(accessed 29 January 2008).

Consequently, at the moment markets for new eco-developments are likely to exist only in premium sites – that is, world cities – where the premium product that is produced is largely irrelevant to the claims of reproducibility made by its proponents. It is likely that eco-funding through bailouts may be used to accelerate the development of such solutions in an attempt to reconfigure capitalist urban development. Of course, such premium ecological environments have relatively little to offer to the real challenge of re-engineering and systemically retrofitting existing urban environments to reduce energy and water use, accelerate low-carbon technologies and provide affordable energy for all users.

At the same time, it is not even clear if the claims made about the new self-reliant and autonomous developments are achievable. There is a long history of eco-buildings and districts not achieving the savings claimed for them, as users behave in unanticipated ways. In any case, we are usually only talking about forms of greater autonomy and self-reliance – therefore, only relative forms of ‘by-pass’. Will centralised infrastructure networks act as the provider of last resort when local technologies fail? Critically, what about forms of mobility – especially internationally: how will these be provided?

In contrast to these conventional responses, there are alternative movements that are less commercially focused, more locally based, less technologically fixated, which are also trying to put questions about relocalisation

back on the urban agenda. Movements such as green jobs, Transitions Towns and Relocalisation are trying to develop an alternative discourse about greater self-reliance. Part of this discourse are questions of social control – technology for whom by whom –, attempts to link investment to local need and the development of interdependencies and mutuality rather than securitisation, although these are more marginal and external to the dominant responses.

Finally, if we are to build fair cities that advance collective planetary security, we need to think about linking these disconnected logics of development together rather than allowing a dominant security-led approach to sit alongside a much more marginal set of approaches. We need more interaction in the following five ways. First, to bring together questions about which social interests are involved and excluded – we need to bring users back into questions about resource futures. Second, to bring together over-technicised and over-socialised responses – we need socio-technical change. Third, to develop knowledge and expertise that is not just about ‘new-builds’ and security, but about retrofitting the existing city. Fourth, we need to emphasise questions about need and the politics of interdependencies rather than bounded security for some. Fifth, it is crucial to develop a debate about the consequences of a new style of urbanism rather than the creation of new urban eco-technic and financial products as a response to ecological crisis.

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PART III »

Mapping (and
walking) the terrain
of climate justice

Climate justice in the US

Gopal Dayaneni

Between a rock and a hard place, or the global trash compactor

Most readers are probably familiar with the 1977 science fiction blockbuster movie, *Star Wars*. Remember the trash compactor scene? That scene provides a nice metaphor for the state of global economic and ecological crisis. We are all trapped in a global trash compactor. The walls are closing in. On one side, we have climate chaos with all its myriad consequences. On the other, we have the wall of racial, gender, economic and environmental injustice also closing in on us. In the middle, we have us – everyone. And as the walls begin closing in, what is the first thing you do? You try to push back. Many people concerned over the past 30-plus years with the rapidly increasing concentrations of greenhouse gases in the atmosphere have been pushing against the wall of climate chaos. Armed with the best science, they have been demanding, and sometimes taking real action to slow the release of carbon into the atmosphere and/or get carbon out of the atmosphere.

Up against the other wall are the communities attempting to push back against the advance of ever increasing inequity, poverty, violence and injustice. Those folks (for the



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sake of the metaphor, we'll call them the rebels) are primarily peoples in the global South and indigenous peoples worldwide and poor communities and communities of colour in the North. These are the people who have been the victims of colonisation, environmental racism, destructive development and economic impoverishment in the name of progress. The North (and elites in the South), instead of pushing back, are running to the centre, staying as far away from the walls closing in as they can, buying themselves some time, *but only time and not very much of it*. As they crowd the centre space, more and more folks are forced up against the walls, allowing those in the centre to ignore both the walls closing in and the folks getting crushed. But we are now at a place in which the walls are so close they can no longer be ignored. So what do we do?

We grab some big piece of metal and try to jam it up there, thinking that a system designed specifically to crush that stuff might be thwarted by it. Let's call these the false solutions. They are everything from the techno-fixes such as biofuels, 'clean coal' and geo-engineering, to the kinds of market-based climate policies that we know won't work, but might, at best, *slow* the rate of collapse. *Slowing down the collapse* – that is the best we can hope for from these false solutions. And the best evidence we have right now says that those false solutions will make the situation worse – accelerating both the ecological collapse and the inequity, thereby making mitigation and adaptation that much harder for the most vulnerable and least responsible.

So what do we do? We need to do exactly what they do in *Star Wars*. Shut the system

down. We need to go R2D2 on a systemic level and address the root causes of the problem. That is what climate justice is about. As David Pellow and Lisa Sun-Hee Park (2009 forthcoming) of the University of Minnesota write:

People of color, indigenous communities, and global South nations bear the brunt of climate disruption in terms of ecological, economic, and health burdens. In addition, climate change infers a naturally occurring process rather than a disruption *created* by specific human activity. For these reasons, activists and scholars have developed the concept of climate justice, which recognizes that the struggle for racial and economic justice is inseparable from any effort to combat climate change. Climate justice begins with an acknowledgement of climate *injustice* and views this problem not as an unfortunate byproduct of climate disruption, but as one of its core elements, and one that must be confronted if climate disruption is to be reversed.

Rights-based climate justice

But what is the R2D2 of climate justice? Here is where the metaphor breaks down. Our solutions will not come from folks on the outside of the crisis, but from coordination of forces within the climate justice movement – where we recognise that we have multiple strategic points of leverage and that we must align these approaches. Currently, the term 'climate justice' is used in many ways, but without some level of strategic alignment in interventions, we will not achieve the level of impact necessary to lead us towards the real solutions we need.

While there is some alignment, and the different approaches to climate justice are in no way mutually exclusive, greater alignment is critical. Let's explore these different takes on climate justice.

As we approach Copenhagen, the question of what kind of global policy on the climate crisis can emerge has very much dominated the political imagination, and in this context climate justice refers to a rights-based/justice-based approach to climate policy. Organisations that take positions that are broadly in line with declarations and statements in the international context on climate justice such as the Bali Principles (2007), the Belem Declaration (2009) and others, are within the climate justice fold. Additionally, a key theme is the subordination of climate policy to UN rights declarations and conventions, such as the Declaration on the Rights of Indigenous Peoples. Policy initiatives emerging from this approach include broad opposition to a markets-based approach to carbon (carbon trading), and even more adamantly, opposition to exotic market instruments, namely, offsets; ramp-down to low-carbon economies; a phase-out of fossil fuels; and, probably most importantly, an ecological debt-based mechanism for financing and technology transfer from the North to the South. In this category we include a broad range of groups who share positions, who work domestically and/or internationally and use a broad range of strategies, including research, international solidarity, analysis, public education, advocacy and organising. This approach to climate justice is also present in US climate policy.

In the US, the environmental justice movement has given rise to a climate justice movement that has simultaneously fought to raise

the voices of those communities least responsible for and most severely impacted by climate change, namely poor people of colour and indigenous peoples, and demanded that climate policy does not further exacerbate existing economic and environmental inequality, but redress it. According to Nia Robinson, director of the Environmental Justice and Climate Change Initiative, in an interview with the author, 'the successful creation of climate policy can not happen without the input of communities that have suffered as a result of the US fossil fuel addiction. Our government must begin to recognize these communities as experts or run the risk of creating policies that will do as much harm if not more than climate change itself'. Just as the environmental justice movement transformed the environmental movement by repositioning human communities and equity at the centre of environmentalism and brought a racial and economic justice lens to that work, the climate justice movement has pushed the climate movement in the US. Through the movement's orientation embodied in this use of the term 'climate justice', we see emerging a 'popular movement of movements', led from the grassroots. A key issue for the climate justice/environmental justice movement in the US is articulating that even within the North, there is a South; that this 'South in the North' is owed the same ecological debt (to indigenous peoples, to African Americans for the legacy of slavery and others); and that there are communities disproportionately impacted due to race and class.

Struggles-based climate justice

In recent years, also stemming from the environmental justice and environmental health movements, the use of climate justice has

emerged as referring to the grassroots struggles of communities in the US and Canada who are fighting against the root causes of climate change in their own backyards/frontyards. Put another way, Fenceline and Frontline communities fighting oil, coal, gas, tar sands, incineration, deforestation, etc. Only more recently have these folks emerged on the scene as part of the ‘climate’ issue. For example, communities fighting refineries and power plants across the country as environmental justice struggles against point-source pollution have focused on health, poverty and environmental racism as the core themes of their struggles. Now, confronting the root causes of climate change has emerged as a critical, *unifying* theme. This started in the late 1990s, and really took hold after the 2nd People of Color Environmental Leadership Summit in Washington DC in 2002 (10 years after the 1992 Environmental Justice Leadership Summit). Examples are the struggle against ‘mountain top removal’ in Appalachia (the practice of blowing off entire mountaintops to reach underlying mineral deposits), coal mining on indigenous lands and tar sands development in Canada. These struggles have long been fought locally and are now flashpoints of climate justice as local fights to address the root causes of climate change, while fighting for concrete improvements in the daily lives of communities. There is a strong focus here on accountability to communities and on communities speaking for themselves, while there has been less emphasis, until recently, on the questions of climate policy.

Climate action as climate justice?

Also developing more in recent years is the conflation of climate justice with climate ac-

tion. Some of this is emerging from mainstream environmental organisations and some from the youth climate movement. While we see lots of young people holding posters that say ‘Climate Justice’, we did not see a clear articulation of a justice/rights-based agenda on climate. In fact, many groups that are driving the youth climate movement support policies that run counter to the established principles of climate justice. We are seeing more and more of this use of the term by a broad range of groups who are now using direct action in some form or other to address climate change. There is, again, overlap. Many groups that are engaging in creative direct action or civil disobedience as part of their strategy are also advancing a rights-based framework, are supporting the leadership of those most directly impacted and are attacking the root causes of climate change. But many are not, and differentiating between the two becomes critical. One way to think of this is that climate action is not always action for climate justice. Depending on the theory of change and strategies you are employing, the action must either, and ideally in combination advance a rights-based agenda consistent with the frameworks established collectively by the international climate justice movement; take leadership from and be accountable to those most directly impacted and least responsible; or engage in community struggles on the root causes of climate change.

The strongest movement for climate justice coming out of the US will be one where we have strategic alignment between these groups, and there are many organisations and networks that represent this alignment, particularly the Mobilization for Climate Justice, the Indigenous Environmental Network, the Environmental Justice and

Climate Change Initiative and the Environmental Justice Leadership Forum on Climate Change, among others. We need a rights-based approach to climate policy led by directly impacted communities and grassroots organising that takes direct action in support of and with leadership from communities on the frontlines of the chain of production of climate change. As Clayton Thomas-Muller of the Indigenous Environmental Network observed in an interview with the author:

In the US and across the globe, the movement for Climate Justice has been steadily growing, not simply demanding *action on climate*, but demanding *rights-based and justice-based action on climate* that confronts false solutions, root causes of climate change and amplifies the voices of those least responsible and most directly impacted. Not only are we the front-line of impacts, we are the front line of survival. As Indigenous Peoples, all of humanity is dependent on our traditional, sacred, evolved knowledge of Mother Earth.

If we can create a people-powered, inside-outside approach both in the US and internationally, we have a chance for a just transition to a sustainable future.

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Climate change and human rights

Wolfgang Sachs

Tulun and Takuu, two tiny islands off the coast of Papua New Guinea, are close to being swallowed up by the Pacific Ocean – victims of global climate change. The government has sent emergency food supplies to the islands, as the inhabitants have had to live on fish and coconut since salt water flooded their fields. Many fear that a distinctive culture will vanish if the people of Tulun and Takuu are forced to give up their native land.

Who are the winners and who the losers in climate change? Burning fossil fuels (as well as forests) has both huge benefits and huge costs. As to the first, access to fuel provides economic power. Thus, we see in the negotiations for a post-Kyoto agreement nations scrambling for allowances to use the atmosphere as a dumping-ground for greenhouse gases. Climate equity in this context is about equality among nations. As to the second, however, causing the dumping ground to overflow gives rise to numerous climate threats, possibly to such a degree that fundamental rights might be violated. Climate equity in this context is about human rights.

Dangerous to whom?

The 1992 United Nations Framework Convention on Climate Change calls for the sta-



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bilisation of greenhouse gas concentrations at levels that 'would prevent dangerous anthropogenic interference with the climate system' (Article 2). But what increase in global mean temperatures is tolerable? Climate negotiations have largely refrained from defining what may constitute dangerous anthropogenic interference with the climate system (Hare 2003). What kind of threat qualifies as 'dangerous'? If the sea level rises by 20 centimetres? By one metre? A one degree rise in average global temperature, or three degrees? And in what timeframe: in 20 years, or in 80 years?

These questions appear to be technical, but in reality are highly political. What lurks behind them are basic decisions regarding the coexistence of people and nations on earth. Because different impacts are associated with different levels of temperature rise, who will be affected, how and to what extent largely depends on how far global warming is allowed to proceed. The dire effects of climate change will intensify global poverty and deepen social polarisation, since they affect the poor more than the rich. Particularly the countries of the South, especially rural communities that depend directly on nature, will come to feel the destabilising effects of global warming much more abruptly than overdeveloped countries and urban populations. Therefore, any decision about what is to be considered a dangerous level of impact is clearly a political and ethical issue. It basically implies two valuations: what kind of danger is acceptable, and what kind of danger to whom is acceptable? It is the response to the latter question that determines the degree of environmental injustice involved in climate politics.

Impacts

When the earth's atmosphere grows warmer, nature becomes unstable. It is no longer possible to rely on rainfall, groundwater levels, temperature, wind or seasons – all factors that, since time immemorial, have made biotopes hospitable for plants, animals and humans. The most important impacts are likely to affect the natural assets that underpin human existence – water, food and health.

With regard to *water*, it is important to note that 30 countries with a combined population of over 500 million are currently considered to be affected by water scarcity, a condition that by the year 2025 is likely to affect some 50 countries with a combined population of about 3 billion. The hydrological cycle is expected to intensify, which essentially means more droughts and floods and more variable and extreme rainfall. Generation-old patterns of rainfall may be shifting, severely impacting plants, animals and people. Several hundred million to a few billion people are expected to suffer a reduction in their water supply of 10 per cent or more by the year 2050 in climate change projections corresponding to a 1 per cent per year increase in CO₂ emissions. Regions where water stress is likely to increase due to climate change include Central and Southern Africa, Central and Southern America and the watersheds around the Mediterranean, while South and East Asia are likely to see an increase in water resources (Arnell 2004). Finally, too much of the wrong water can be dangerous as well. Rising sea levels obviously increase the risk of coastal flooding, which could displace large numbers of people. Some of the most vulnerable regions

are the Nile delta in Egypt, the Ganges-Brahmaputra delta in Bangladesh and many small islands, such as the Maldives, the Marshall Islands and Tuvalu.

Furthermore, climate change will leave its imprint on the conditions for *food* production across the globe. In temperate zones, small increases in temperature might boost yields for some cereals, while larger changes are likely to decrease yields. In most tropical and subtropical regions, potential yields are projected to diminish with most increases in temperature. For instance, damage to the world's major crops begins when daytime temperatures climb above 30°C during flowering. For rice, wheat and maize, yields are likely to decline by 10 per cent for every 1°C increase over 30°C (Halweil 2005). If, in addition, there is also a large decrease in rainfall in subtropical and tropical dryland/rain-fed systems, crop yields would be even more adversely affected. In tropical agricultural areas, yields of some crops are expected to decrease even with minimal increases in temperature (IPCC 2001). Moreover, it is expected that the income of poor farmers will decline with a warming of 1.5°C–2°C above preindustrial levels (Hare 2003). In fragile rural areas, such a change will aggravate the circumstances of people who derive their livelihood from direct access to forest, grasslands and watercourses. While global production appears to remain stable, differences in crop production between temperate and tropical regions are likely to grow over time, leading to a significant polarisation of effects, with substantial increases in the risk of hunger among the poorer nations, especially under scenarios of greater inequality (Parry et al. 2004). Declines in food production will most likely hit

regions where many people are already undernourished, notably Africa.

Finally, as public health depends to a large extent on safe drinking water, sufficient food and secure shelter, climate change is bound to have a range of *health* effects. On the first level, a shortage of freshwater caused by climate change will increase the risk of waterborne diseases, just as food shortages will increase the risk of malnutrition. On a second level, climate change, by way of a shift in background climate conditions and changes in regional climatic variability, will affect the spatial and seasonal patterns of the potential transmission of various infectious diseases. With global warming, the geographic range of potential transmission of malaria and dengue is likely to increase. A rise in temperatures, for example, would result in an increased prevalence of malaria in higher altitudes and latitudes. The human-induced warming that the world is now experiencing is already causing 150,000 deaths and 5 million instances of disease each year from increased malaria and diarrhoea, mostly in the poorest nations (Patz et al. 2005), though actual disease occurrence is strongly influenced by local conditions. On the third level, climate change will be accompanied by an increase in heat waves, often exacerbated by increased humidity and urban air pollution, which would cause an increase in heat-related deaths and episodes of illness, particularly among the elderly and the sick.

Summing up these possible effects of global warming on sea levels, water availability and the incidence of malaria, it has been estimated that with an increase of global mean temperature of 2–3 degrees above preindustrial levels, 20–30 per cent of all higher plants and

animals will be threatened with extinction; more than 100 million people living in delta areas will, under conservative estimates, be threatened with flooding and will have to move; and water stress is likely to increase for 1 billion more people every 30 years between 2020 and 2080 (IPCC 2007).

Human rights

There has been injustice in the world since time immemorial. Similarly, the expulsion of people from their land, the assault on their physical wellbeing and the withdrawal of their means of subsistence have been standard instruments in the repressive exercise of power. But only since the middle of the 20th century have such ways of degrading others been thought to involve contempt for human rights. In today's world, there is an international consensus that instances of humiliation and impoverishment have to be measured against the norm of guaranteeing the fundamental rights of every human person. By birthright, people are considered bearers of rights that protect their dignity, regardless of their nationality or cultural affiliation. These rights are equal, that is, everyone enjoys the same rights; they are inalienable, that is, they cannot be forfeited; and they are universal, that is, every human being is a holder of fundamental rights. Especially in an age of globalisation, it is increasingly the discourse of human rights that defines the terms of reference for disputes over power and its victims.

When human beings do not have the basic capability to support themselves with dignity, their human rights are under threat. The International Covenant on Economic, Social and Cultural Rights declares that 'the

State Parties to the present covenant recognise the right of everyone to an adequate standard of living for himself and his family, including adequate food, clothing and housing...' (Article 11) and 'the right to the highest standard of mental and physical health' (Article 12). Influenced by this formulation, which echoes Article 25 of the Universal Declaration of Human Rights, the debate on development has changed tack in the past decades: overcoming hunger, illness and misery is no longer seen as a matter of charity or solidarity, but as a matter of human rights. The needs-based approach in development has been more and more replaced by a rights-based approach.

Rights-based climate policy

The dire consequences resulting from climate change – in particular, several decades from now – will spread across the globe, albeit in varying degree. Countries – and regions within countries – are disproportionately affected for basically two reasons: higher impacts and higher vulnerability. As indicated above, the adverse impacts of climate change are likely to be more concentrated in areas of Africa, South America and Asia than in the global North. Impact profiles differ according to the kind of impact and geography, but water stress and flooding, declining agricultural productivity and weakening ecosystem services, crop pests and human diseases are more likely to occur in subtropical and tropical countries, in coastal areas and in arid and semi-arid agricultural areas. Higher vulnerability, however, derives from the fact that in many places at risk a great number of people already live in fragile conditions, economically and with regard to their health. The ability to prepare

for and to cope with threats varies widely according to income and living conditions. The impact of a hurricane in Orissa, India, for example, may be much more severe than the impact of a similar hurricane in Florida, USA. The poor generally tend to have much lower coping capacities: they are more exposed to disasters, drought, desertification and slow economic decline.

Climate perturbations are likely to be superimposed on economic insecurity. As people already living at the edge see themselves pushed into disaster, climate effects may trigger an infringement upon economic and social human rights. This is not to say that climate-related threats (hurricanes or heat waves, for instance) to human physical integrity under conditions of greater affluence may not constitute a human rights violation as well, but impacts in poorer regions often exacerbate an already structurally precarious livelihood situation. It is the compounded effect of economic insecurity and climate stress for large numbers of people that is at the centre of the question of how much climate change should be allowed as a human rights issue.

However, climate-related human rights are matched by only imperfect, not perfect, duties. Just as a violation of the right to food, health or shelter can often not be traced back to the action of a clearly identifiable duty-bearer, so can climate effects not be attributed to a culprit with a name and address. Who exactly should be held responsible for hunger and widespread illness? But the absence of culprits or judges does not nullify rights. A strictly legal conception, which maintains that there are no rights unless they can be enforced in a court of

justice, misses out on the universalist nature of human rights entitlements.

Furthermore, climate rights call for extra-territorial responsibility. Climate disturbances obviously exceed the jurisdiction of individual states: they are, in fact, a striking example of the transnational character of threats in a highly interdependent world. Under such circumstances, the human rights obligations of states and non-state actors cannot simply stop at territorial borders. Rather, they must reach into other countries as well. As the special rapporteur to the Human Rights Commission on the Right to Food has recently stated: 'Governments must recognise their extraterritorial obligations towards the right to food. They should refrain from implementing any policies or programs that might have negative effects on the right to food of people living outside their territories' (UNCHR 2005). When the right to food is threatened by climate change, the principle of extraterritorial obligations becomes even more relevant, given that rich countries are largely responsible for climate perturbations in poorer countries. Just as climate effects reach to the ends of the earth, the geographical scope of responsibility has become global as well.

However, this responsibility is in the first place a negative one: it implies avoiding harmful action rather than intervening to provide the conditions for a life without privation. Under human rights law, governments are supposed to carry out a triple task with regard to the rights to food, health and housing: they have the duty to respect, protect and fulfil them. It would follow that the same hierarchy of obligations applies to climate rights: the right to live in freedom

from human-induced climate perturbations has first to be respected by avoiding harmful emissions nationally; it has, secondly, to be protected against third-party emissions by countries or corporations through international cooperation; and, thirdly, it has to be fulfilled by upgrading people's capability to cope with climate change through adaptation measures, such as dam building, resettlement or land redistribution.

Mitigation and adaptation

In 2005, the Inuit Circumpolar Conference filed a legal petition to the Inter-American Commission of Human Rights demanding that the US limit its emissions. This move by the people living in the Arctic represents the first legal case brought against a high-emitting nation in defence of economic, social and cultural human rights (Watt-Cloutier 2004). Many indicators suggest that global warming is threatening the ability of the Inuit to survive as a hunting-based culture.

From a human rights point of view, the classical policy responses to dangerous climate change, mitigation and adaptation, ought to be pursued with additional urgency. As to mitigation, human rights considerations need to enter into the definition of what constitutes dangerous climate change and recent moves in the UN Human Rights Council point in this direction. They direct attention to the most vulnerable sections of the world population, suggesting a frame of evaluation that is consistent with the basic law that governs world society. A survey of possible impacts (Exeter Conference 2005) suggests a target that avoids systematic threats to human rights would need to keep the global mean temperature increase below

2°C above preindustrial levels. It is obvious that such a target calls for mitigation commitments far beyond the Kyoto Protocol. Finally, human rights considerations also imply vigorous measures to facilitate adaptation to unavoidable climate change. Inasmuch as mitigation is insufficient, the polluter-pays principle requires that high-emitting nations prevent rights violations and offer compensation for damages caused. Measures may range from upgrading health-care, to investments in construction, to the building of dams. Recent calculations suggest that US\$ 10-40 billion annually will be required to finance such adaptation measures. And, of course, the polluter-pays principle requires that high-emitting nations offer compensation for damages caused.

Compensatory payments are necessary, but they leave the causes of pollution untouched. Cuts in fossil fuel use are imperative not only to protect the atmosphere but also to protect human rights. Since the Bill of Rights was won during England's 'Glorious Revolution', freedom from physical harm has been the core of the basic legal canon that states have an obligation to guarantee. Yet millions of people are in the process of losing this core of civil rights – food, shelter and an infection-free environment. Only this time, the threat of physical harm comes not from the state but from the cumulative long-range effects of energy consumption in the prosperous parts of the world. The need for low-emission economies in the South and the North is therefore far more than a question of an appeal to morality: it is a core demand of cosmopolitan politics. Climate protection is not simply about crops and coral reefs – it is, fundamentally, about human rights.

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Energy, crisis and world-wide production relations

Kolya Abramsky

Changes within the energy sector are accelerating dramatically. A variety of ecological, political, economic and financial factors are converging to ensure that energy production and consumption become central to the global restructuring of social relations in the years ahead. This is true of energy in general and the globally expanding renewable-energy sector in particular. The way in which the world's energy system evolves in the years ahead will be intimately intertwined with different possible ways out of the world financial-economic crisis (which is also increasingly becoming a crisis of legitimacy and political control).

The multiple intersecting and mutually reinforcing crises starkly pose the need to construct new world-wide relations of production and exchange that are substantially more decentralised, participatory and egalitarian than the relations that currently exist. However, climate change and peak oil require a massive and rapid reduction in CO₂ emissions and energy use, and hence also a fundamental change in how humans interact with nature and the ecology they are a part of.

The process of building a new energy system based on a greatly expanded use of re-

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newable energies has the potential to make an important contribution to the process of constructing new relations of production, exchange and livelihood that are based on solidarity, diversity and autonomy and are substantially more democratic, egalitarian and ecologically sensitive than those that currently exist. Furthermore, the construction of new social relations along the above lines is also likely to be crucial in avoiding disastrous 'solutions' to the financial-economic and political crises.

Some kind of transition to post-petrol energy sources is virtually inevitable. However, the outcome is not a technical given. It is no longer a question of whether a transition to a new energy system will occur, but rather what form it will take. Will it involve a dramatic and rapid collapse, or will it be a smoother and more gradual process? Which technologies will a transition include, and on whose terms and priorities? Who will be able to harness the necessary global flows of capital, raw materials, knowledge and labour? Indeed, will people even let their resources, knowledge, skills and labour be ‘harnessed’ from above and outside, or will they strongly assert the possibility of using their skills and energy to their own benefit and on their own terms? And, above all, will the process be chaotic, reinforcing already existing hierarchies, or will it be part of wider process of world-wide emancipatory social change based on the construction of new social relations?

Energy: key to production, but also to life

As the world’s energy system is on the verge of far-reaching changes, it is also coming up for grabs. In other words, a struggle over who controls the sector and for what purposes is intensifying. It is becoming increasingly clear, both to capitalist planners and those involved in anti-capitalist struggles, that some form of ‘green capitalism’ is on the agenda. We are told from all sides that it is finally time to ‘save the planet’ *in order* to ‘save the economy’. In effect, this means that the transition process to a new energy system will be central to the next round of global class struggle over control of key means of production and subsistence, since

energy is essential to both production and sustaining life.

However, class struggle is inherently uncertain, and this is the central uncertainty of the transition process itself. Who will bring it about, and for what purposes, for whose benefit, and at whose expense? Importantly, given that energy is relevant to class relations in general (since energy both replaces and enhances human labour), energy ‘crisis’ and ‘transition’ are also relevant to class struggles in general, not just those that exist within the energy sector itself.

Many years will elapse before it is clear whether capital can harness new combinations of energy that are capable of imposing and maintaining a certain stable (and profitable) organisation of work the way fossil fuels did; or whether in fact a new energy system will not allow for this to occur, and could actually strengthen the material basis for anti-capitalist struggles. We are in the early stages of what is likely to be a lengthy and complex struggle, the outcome of which will determine whether capital will be successful in its efforts to force labour (that is, people throughout the world, as well as the very environment itself that green capitalism proclaims it wishes to save) to bear the costs of building a new energy system, or whether labour, understood in its broadest sense (namely, social and ecological struggles over production and reproduction throughout the world) is able to force capital to bear the costs. This struggle is already becoming central in shaping social relationships and is likely to become ever more so in the coming years.

*A question of relations of production,
reproduction and consumption,
not regulation and policy*

The kind of massive and rapid reductions in CO₂ emissions (and the corresponding changes in the system of energy production and consumption that are necessary for this to occur) will not be possible without very far-reaching changes in production and consumption relations at a more general level. However, dominant approaches to climate change focus on promoting regulatory reforms. This is true of governments, multilateral institutions and also large sectors of so-called 'civil society' (especially the major national and international trade unions and their federations, and NGOs).

The stark reality is that the only two recent periods that have seen a major reduction in global CO₂ emissions have coincided with periods of very sudden, rapid, socially disruptive and painful periods of forced economic *degrowth*: namely the breakdown of the Soviet bloc and during the current financial-economic crisis. In May 2009, the International Energy Agency reported that, for the first time since 1945, global demand for electricity was expected to fall. Experience has shown that much time and political energy have been wasted on developing a highly ineffective regulatory framework. Years of international climate negotiations, the institutional basis for global regulatory efforts, have simply proven to be hot air. Unsurprisingly, hot air has resulted in global warming. Only *unintended* degrowth has had the effect that years of intentional regulations sought to achieve. Regulatory efforts will certainly be pursued, and they may well contribute to shoring up legitimacy, at least for a time, especially in

Northern countries where the effects of climate changes have less immediately visibility and impact. Nonetheless, it is becoming increasingly clear that solutions will not be found at this level.

The problem is one of production. The current world-wide system of production is based on endless growth and expansion. This is simply incompatible with a long-term reduction in emissions and energy consumption. Despite the fact that localised and momentary reductions may well occur, energy consumption and greenhouse gas emissions of the system as a whole can only increase in the long run. All the energy-efficiency technologies in the world, though undoubtedly crucial to any long-term solution, cannot *on their own* square the circle by reducing total emissions from a system whose survival is based on continuous expansion. Leadership in an emancipatory transition process is unlikely to come predominantly from above from international regulatory forums, but is more likely to come from autonomous movements self-organising from below in order to gain greater control and autonomy over energy production and consumption. This is not to say regulation is not important. It is essential. However, the regulatory process is unlikely to be the driving force behind the changes required, but rather a necessary facilitation process to secure a legal and institutional framework (as well as financial support) conducive to a grassroots process led from below, which enables wider changes to occur and deepens ones already under way. Furthermore, it is highly unlikely emancipatory regulation that is strong enough to be effective could even come about without major pressure, far greater than currently exists, from below.

The need to construct new relations of production

Leaving the necessary changes in the social relations of production and consumption (of energy, and more generally) to the logic of accumulation of profit in the world market is likely to be both far too slow, given the urgency of the climate crisis, and immensely socially disruptive. And, given the abovementioned effectiveness of unplanned degrowth in reducing emissions relative to international negotiations, an urgent question facing emancipatory social and ecological struggles is how collectively and democratically to construct a process of planned rapid and broad degrowth, based on collective political control and democratic and participatory decision-making over production, consumption and exchange.

‘Peak oil’ starkly poses the question of how to manage scarcity collectively in a fair manner in order to avert extremely destructive power struggles that exacerbate existing inequalities (especially in relation to class, race, gender and age). It will also be crucial to seek to avoid the imposition of austerity measures on people. Solutions that do not actively strive to avoid pitting different workers, both waged and unwaged, in different regions of the world against one another are almost certain to result in a transition being carried out on the back of these workers and their communities. The failure of emancipatory movements to force capital to pay the burden would, in all likelihood, prove immensely divisive and destructive.

Of particular importance in relation to building a new energy system are the key means for generating society’s wealth and

human subsistence. These include land, seeds, water, energy, factories, universities, schools, communication infrastructures, etc. Especially significant in this context are the major energy-intensive industries, such as transport, steel, automobiles, petrochemicals, mining, construction, the export sector in general and industrialised agriculture.

It is, however, very difficult to imagine that it will be possible to bring about a rapid and far-reaching process of collectively planned emancipatory change at the necessary pace and scale unless these key means of generating and distributing wealth and subsistence are under some form of common, collective, participatory and democratic control, decision-making and ownership. Furthermore, it is crucial to make sure that they are used to meet the basic needs of all the world’s population, rather than the profit needs of the world market and the select few workers and communities able to reap the benefits of this. In other words, there is an urgent need to *decommodify* these sources of wealth as much and as fast as possible.

However, following years of market-led reforms and an unprecedented concentration of wealth and power, we are still very far from this reality. This is true both in concrete terms and in terms of our collective aspirations and strategic approaches. Dominant political strategies for achieving change are entrenched in seeking minor regulatory reforms (at best, including state ownership) rather than a more fundamental shift in power relations pertaining to structures of ownership and control.

Consequently, an urgent task for the years ahead is to discuss what kind of short-term

interventions might help to make such a political agenda more achievable in the near- and medium-term future. It is not a new discussion. In the past, collective ownership, management and control of key means of production (either in the form of worker, community, cooperative or state) have been at the heart of radical proposals for social struggles. Furthermore, emancipatory left-wing critiques of state communism, socialism, social democracy and their respective bureaucracies have not been based on a rejection of collective ownership of key means of production. Instead, they were based on a strong critique of the fundamentally limited nature of state ownership as a model for democratic, participatory and self-organised social change from below – on an understanding, in other words, that state control is in some ways simply a modified form of private ownership and capitalist class relations.

Struggles for control of the means of (re)production in the energy sector and energy-intensive industries

Within the energy sector itself, the picture is one of intense struggle. Important struggles over ownership and control of energy production and extraction processes, as well as over access and price are under way throughout much of the world. This has entailed developing a range of different forms of ownership, including by communities, users, workers, cooperatives, municipalities and states, which in differing degree challenge private ownership and commodification. Broad social sectors have been involved: energy users, affected communities, peasants, indigenous peoples and workers both in the energy sectors and more generally. Frequently, for example, in Colombia,

South Africa or Iraq, they have faced harsh repression from state and military forces. In many areas, what is at stake in these struggles is literally life and death. On the one hand, struggles over energy ownership have been at the heart of foreign military occupations, such as in Iraq, but have also provided a key material resource basis for wider emancipatory or even revolutionary social processes, such as in Venezuela or Bolivia. These are the struggles that currently define the world-wide energy sector. They are a central, and frequently overlooked, aspect and cause of the so-called ‘energy crisis’. In no small way what is emerging is a crisis of capitalist control over the sector – though this is certainly not the only cause of the energy crisis. Importantly, these struggles are likely to intensify in the future. Furthermore, they have by no means already been lost by emancipatory movements.

While there are widespread and ongoing struggles over the control of fossil fuel reserves, such as oil in Nigeria, Iraq, Ecuador, Venezuela or Colombia and Bolivia (to name but a few examples), similar processes are also under way in relation to electricity generation and distribution, infrastructure and pricing. Such struggles are occurring in South Africa, France, Germany, Dominican Republic, India, South Korea or Thailand (again, to name just some of the struggles in the sector). Similarly, there is a world-wide process of resistance to the privatisation of forests, one of the main sources of the non-commercial biomass fuels that meet the domestic energy needs of approximately 2 billion people worldwide. Women, who mainly collect and process these fuels, are often at the heart of such resistance, especially in Africa, Asia and Latin America.

Importantly, such struggles are also intensifying in relation to the globally expanding renewable energy sector. Since the 1970s, many pioneering initiatives in renewable energy have strongly emphasised cooperative and local control. This has included farmers' wind energy cooperatives in Denmark, citizen energy projects in Germany (including cooperatives, buying local grids and all-women's initiatives); or a worker-owned cooperative in Spain that became one of the important producers of wind turbines for the world market and was a member of the Mondragon industrial cooperative group – a group that has existed for over half a century, involves many different industrial sectors and has over 100,000 worker-members. These local and democratic ownership structures mainly emerged in Northern countries, the major pioneers of new renewable energy technologies in this period. However, there have also been interesting examples in Southern countries, such as in relation to micro-hydro in Nepal, wind in Argentina and household- and village-level biogas digesters in India.¹

However, the processes that emphasised democratic and participatory community-controlled development of renewable energies and that contributed importantly to the ability of the inhabitants of territories rich in such energy resources to build somewhat autonomous and empowering development paths, are now being frequently undermined. This is because of the threats posed by private investors, companies and free

trade agreements, all with the full support of national policies aimed at undermining previous forms of democratic and participatory control.

The question of ownership of and control over territories rich in renewable energy resources is becoming increasingly important. In Mexico, indigenous communities are being deceived and displaced so that the country's wind resources (among the best in the world) can supply electricity to major multinational companies, such as the Mexican arm of Walmart. In China, police have killed peasants protesting against inadequate compensation for wind turbines installed on their land. In Denmark, rural wind energy cooperatives are finding it increasingly hard to compete with private investors and are being taken over.

Importantly, labour struggles are also emerging in the sector, especially in relation to the production of the raw materials for agrofuels. This includes sugar in Brazil or Colombia; palm in Colombia, Indonesia and Malaysia; and soya in Argentina and Paraguay (among others). In Germany, a leading country in the production of wind and solar energy infrastructure, the major trade union IG Metall is organising workers in the face of poor working conditions in the plants where the infrastructure is produced. So far, these struggles are more centred on working conditions, rather than workers' ownership. However, there are some exceptions to this. In Indonesia, workers in the palm plantations have also taken steps to take over the mills. And in the weeks between the first and final drafts of this article were written, what is likely to be a historic turning point in the wind industry is unfolding in the UK.

¹ Collective and locally controlled renewable energy infrastructure played a significant part in China's rural energy development during the early years of the Chinese revolution, but this is a very different story, requiring more time to go into than is available here.

The country's only wind-turbine component manufacturing plant (owned by Vestas, the world's largest producer of wind turbines) currently faces closure, with the sackings of 600 workers. The workers occupied the plant for about three weeks. Demands from workers and their supporters have included government nationalisation of the plant, as well as converting it into a workers' cooperative. The workers have met with a combination of widespread social support as well as (limited) use of riot police and court rulings. The issue remains unresolved.

Finally, it is worth mentioning the importance of patents and the ownership of knowledge and technologies. Despite initial murmurings about 'open source' technology and non-commercial technology transfers arising in the renewable energy sector, inspired by the open-source computer software movement, such a process is still virtually non-existent.

On a more general level, it is worth looking at contemporary struggles over land and energy-intensive industries. Land is one of the most basic elements of subsistence for humans throughout the world, and is also essential for capital accumulation. It is both a key means of production and of the reproduction of human life. Collective ownership and decommodification of land are still at the heart of many, if not most, rural and indigenous struggles throughout the world today. It is in these struggles that the clearest political discourse surrounding control of the means of production can be found.

However, the outlook for struggles over ownership and decommodification in energy-intensive industries such as cars, avia-

tion, transport or tourism is more pessimistic. The dominant strategic discourse in this regard from major organisations in these sectors is equally pessimistic. Ownership struggles have, by and large, already been lost. Over the last several years, most struggles in these sectors have revolved around demanding certain reforms in the production and labour process, as well as improved user access. However, little space remains for serious struggle over (or even discussion of) major changes to patterns of ownership and control.

At the more radical end of ecological critique, there are many discussions about the need for profound change in production relations. However, the organisations and collectives with such perspectives frequently lack the social base necessary for such a process of change to happen. In particular, they have little capacity (and sometimes even will) to contribute to serious debate within trade unions and other worker organisations within these sectors, so their more sophisticated critique amounts to just that: a critique without an accompanying process of change. On the other hand, the dominant 'green' discourse, though often well-connected to trade union organisations working on sustainability from a worker perspective, hardly talks about ownership of key means of production. Most campaigns from this broad group of organisations push for change within the existing framework of social relations. Finally, the dominant trade union discourse in these sectors favours tripartite bargaining, 'decent work' and social peace, based on regulating production for private profit in an expanding world market.

Crisis as an opportunity for reorienting our struggles

However, the current economic-financial crisis also offers an opportunity to reopen this discussion, since the old model of Keynesian class compromise and stabilisation of struggles aimed at changing ownership patterns of key means of production is dead, and in all probability will not be resurrected. Furthermore, *unless* the discussion on production is reopened, it is very likely that the ‘solutions’ found to the economic-financial crisis will be authoritarian.

Starting with the economic and financial collapse of Argentina in 2001, factory occupations and self-managed industrial production and exchange have returned to the political landscape. In the wake of the current worldwide financial and economic crisis, a ripple of factory struggles, including worker occupations and kidnapping of bosses, have spread around the world, including in the US, the UK and numerous countries in Eastern Europe. Such struggles are largely defensive, related to redundancy conditions, rather than proposing a new model of ownership, production and control, and are still on a very small scale. Notably, the Detroit car factories have virtually been left to go under, or been given lifelines in order to draw out their demise. Certainly, they have not been taken over by workers and communities and converted into renewable energy production plants. Yet, albeit way too little, way too late, even the head of the United Autoworkers Union made a fleeting and cautious reference to worker occupations of the plants. This is a rhetoric that has not been used in such places for many decades. In South Korea, workers in the car

industry have recently sustained an occupation of a car factory that lasted over two months, involving close to 1,000 workers and armed self-defence. It was only defeated after a prolonged struggle involving several thousand riot police. For the most part, with the exception of the Korean car plants, these have been small processes. Nonetheless, they are of great importance and appear to be on the upsurge. Importantly, the industries in crisis are some of the key energy-intensive industries, such as cars and steel, that are especially relevant to the issue of energy transition and worker/community-led conversion processes.

The stark reality is that we are very far from bringing about the kind of change in production and consumption relations that is needed to solve the climate/energy crisis. We may in fact never be in a position to do so. However, if we are to have any chance of avoiding a socially and ecologically disastrous process of climate change and enforced change in social relations, it will be important to at least pose the question of how this might come about. Until we face up to this, efforts to tackle climate change will go nowhere. The task of collectively taking over the key means of production and decommodifying the major productive processes is immense. We are certainly not yet ready. However, what is both possible and long overdue is, at a minimum, to take some initial steps towards deepening a long-term strategic debate about how, and for what purposes, wealth is produced and distributed in society, and how people’s subsistence needs are met, as part of a shift to a new energy system. Through a process of debate, we will hopefully be able to slowly develop collective interventions that contribute to

these goals, so that in the medium term, as the economic-financial and ecological crises deepen, we may be able to do what is not possible now and collectively plan the process of production and consumption based on a clear process of class struggle that brings together workers (both waged and

unwaged), communities and users of energy and energy-intensive sectors across the hierarchically divided world-wide division of labour. This will already be an important step towards bringing about a profound democratisation of how wealth is produced and distributed throughout society.

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Degrowth, or deconstruction of the economy: Towards a sustainable world

Enrique Leff

The degrowth wager

The 1960s were a period of turbulence in the modern world. At the same time as emancipatory and countercultural movements (labour, youth, students, gender) interrupted, an alarmist discourse emerged that warned of the ‘detonation’ of a so-called ‘population bomb’, and suggested that rapid demographic growth was the main cause of the ecological crisis. For the first time since a nascent capitalism in the Renaissance set in motion the machinery of production and market mechanisms, since the West had opened history to a modernity guided by the ideals of freedom and enlightened reason, one of the pillars of Western civilisation cracked: the myth of progress impelled by the power of science and technology, converted into the most servile – and serviceable – tools of capital accumulation, and of unlimited economic growth.

The environmental crisis thus questioned some of our most ingrained beliefs: not only human supremacy over all other creatures on the planet and the right to dominate and exploit nature for the profit of ‘man’, but the very meaning of human existence, grounded in economic growth and technological progress. This progress was forged



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in economic rationality, shaped by the tools of classical science, and set up a structure, a model, that established the conditions for a notion that progress was no longer based on the co-evolution of cultures with their environments, but on an economic development based on a mode of production that carried in its genetic code an imperative of growth – of limitless growth!

The pioneers of the bio- and ecological economy raised the problem of the relationship between economic process and the degradation of nature, the necessity of internalising ecological costs and deploying distributive countermeasures to the market's unbalanced machinations. In 1972, a study by MIT and the Club of Rome for the first time highlighted the *Limits to Growth*. This is where proposals for 'zero growth' and a 'steady-state economy' first appeared. At the same time, Georgescu-Roegen (1971) established the fundamental link between economic growth and natural limits in his book, *The Entropy Law and the Economic Process*. The process of production generated by the economic rationality that nests in the machinery of the Industrial Revolution is defined by an impulse to grow or die (unlike living beings, who are born, develop and die, and human populations, which usually stabilise their growth). Economic growth, industrial metabolism and exosomatic consumption imply a permanently growing consumption of nature (matter and energy), which not only runs up against the limits of the planet's resources, but also becomes degraded in the process of production and consumption, following the second law of thermodynamics.

More than four decades after the eye-opening book *Silent Spring* by Rachel Carson

(1962) on the effects of the insecticide DDT, ecological destruction has increased dramatically, accentuating global warming caused by greenhouse gases and by the inescapable laws of thermodynamics, which have set in motion the planet's entropic death. The remedies generated by critical thought and technological ingenuity have been shown to be hard to integrate into the economic system. Sustainable development has been shown to be short-lived, because it is not ecologically sustainable (Park et al. 2008).

In its globalising drive, the economic system has continued to obscure the fundamental problem. Thus, rather than internalising the ecological conditions for genuinely sustainable development, the geopolitics of 'sustainable development' ended up commodifying nature and over-economising the world: 'mechanisms' for 'clean development' were put in place, alongside economic instruments for environmental management that have gone a long way towards establishing (private) property rights over and the monetary value of environmental goods and services (Brand/Görg 2008). Free nature and natural commons (water, oil) have been progressively privatised, while an entire market has been created around buying and selling pollution rights (carbon trading) and giving a price to nature (carbon offsetting).

Today, confronted with the failure of all efforts to mitigate global warming, awareness of the limits to growth returns and, with it, a clamour for degrowth. The degrowth wager is not a merely critical and reactive moral position; resistance to an oppressive, destructive, unequal and unfair power structure; a manifestation of alternative beliefs, tastes and lifestyles. Degrowth

is more than a simple loss of faith, it is the active awareness of the existence of a force right at the heart of the civilising process that puts the quality of human life and life on the planet as a whole at risk. The call for degrowth should not be a rhetorical recourse in the arsenal of the critique of the present model's unsustainability, it must be grounded in solid theoretical argument and political strategy.

The call for degrowth is not a mere ideological slogan against a myth, a *mot d'ordre* to mobilise society against the evils of growth, or its deadly conclusion. It is not a counter-order that flees from growth, in the way the hippies could extract themselves from dominant culture, nor a celebration of communities marginalised by 'development'. Today, not even the most isolated indigenous cultures are safe from or can unlink themselves from the effects of a globalisation driven forward by the engine of economic growth. But how to defuse growth in a process that has in its original structure and genetic code a force that impels it to grow or die? How to do it without generating an economic recession with disastrous social and environmental consequences on a planetary scale? For if the economy itself, through its internal crises, cannot arrive at the level of growth desired by heads of state and entrepreneurs, then to deliberately brake growth would amount to willingly kicking off a crisis with incalculable effects. It is for this reason that we must think not only about degrowth, but also about a transition towards a sustainable economy. The latter must be more than a mere ecologisation of existing economic rationality, it has to be another economy, grounded in other productive principles. Degrowth thus implies a deconstruction of the economy, together

with the construction of today's productive rationality (Leff 1995).

Degrowth implies not only downshifting or unlinking from the economy. It is not synonymous with de-materialising production, since that would not prevent a growing economy from going on consuming and transforming nature until it reaches the very limits of the planet's own sustainability. Abstinence and frugality on the part of some responsible consumers do not defuse the mania for growth at the centre of economic rationality, which has inscribed in itself the impulse towards capital accumulation, economies of scale, urban agglomeration, globalisation of the market and concentration of wealth. To jump from a moving train is not to change track. Degrowth does not entail moving down in the economy's wheel of fortune – it is not enough to wish to make it smaller or to stop it. Beyond the refusal of the commodification of nature, it is necessary to deconstruct the economy.

From degrowth to deconstruction

The economic strategy that purports to contain the overflowing of nature by constraining it in the cage of modern rationality, restraining it within economic instruments and market mechanisms, submitting it to dominant forms of calculation and valuation, has failed. From anxiety in the face of ecological disaster and disbelief in the efficacy and morality of the capitalist market, the restlessness that demands degrowth is born. However, the solution to the problem of growth is not degrowth, but the deconstruction of the economy and the transition towards a new rationality that can guide the construction of sustainability.

The deconstruction of the economy implies more than a mental exercise in order to unravel and identify the ideas and social forces that came together in giving birth to the modern economy, daughter of the Enlightenment and of the commercial exchanges of nascent capitalism. It entails a much more complex philosophical, political and social exercise. The economy exists not only as theory, as supposed science. The economy is a rationality – a form of interpreting and acting in the world – that has become institutionalised and incorporated into our subjectivity. The drive for ‘having’, ‘controlling’, ‘accumulating’ is in itself a reflection of a subjectivity constituted within modernity’s rationality and economic structure.

Deconstructing the unsustainable economy means questioning the thought, science, technology and institutions that create the cage of rationality of modernity. Economic rationality is not merely a superstructure to be investigated and deconstructed in thought, it is a mode of production of knowledges and commodities. It is the nature-swallowing monster whose jaws exhale Faustian fumes into the atmosphere, contaminating the environment and warming the planet.

It is not possible to maintain an infinitely growing economy that feeds on a finite nature: especially not an economy based on oil and coal, which the metabolism of industry, transport and the family economy transform into CO₂, the main culprit in global warming. The problem with the oil economy is not fundamentally that of its management as a public or private good. It is not the increase in its supply, exploiting protected reserves and submarine fields, so as to bring

fuel costs down again. The end of the oil era will not be the result of oil’s growing scarcity, but of its abundance in relation to nature’s capacity of absorption and dilution, of its transmutation into CO₂. The search for economic balance by way of the overproduction of hydrocarbons in order to continue feeding the machinery of industry (and the production of agro-fuels) puts at risk not only the sustainability of the planet, but that of the economy itself. To free the economy from its dependence on oil is imperative in light of the catastrophic risks of climate change.

Degrowth of the economy implies not only the theoretical deconstruction of its scientific paradigms, but also of its social institutionalisation and the subjectivisation of the principles that try to legitimate economic rationality as the ultimate, inevitable mode of being in the world. Nevertheless, the various reasons for deconstructing economic rationality do not directly translate into strategic thought and actions that can defuse the capitalist machinery. It is not simply a matter of ‘greening’ the economy, moderating consumption or enhancing alternative and renewable sources of energy within the niches of opportunity that appear profitable in the context of the increase in energy costs. These principles, even if converted into social movements, do not in and of themselves effect a defusing of production. Rather, they constitute a mere normativity and a flight from the system, a counter-current that fails to arrest the overflowing torrent of the machinery of growth. This is why we need to deconstruct economic reasons by legitimating other principles, values and non-economic potentials. We must forge a strategic thought and a political programme

that allow us to deconstruct economic rationality at the same time as an environmental rationality is constructed.

Beyond the task of dismantling the dominant economic model, it is a matter of unravelling economic rationality while weaving new matrices of rationality to fertilise new territories of life. This leads to a strategy of deconstruction and reconstruction; not making the system crumble, but reorganising production and consumption based on the principles of environmental rationality; unlinking from the cogs of capitalist market mechanisms and economic valuation of environmental goods and services as the dominating principle that organises the global economy; incorporating what would be the waste product into new ecological cycles through 'clean technologies', as promoted by an emergent geopolitics of sustainable development (Leff 2002). This reconstruction, however, is not only guided by an 'ecological rationality', but by cultural forms and processes of resignification of nature. In this sense, the construction of an environmental rationality capable of deconstructing economic rationality implies processes of reappropriation of nature and re-territorialisation of cultures.

Economic growth carries with it the problem of its measure. The omnipresent measure of GDP, by which national economies are evaluated in their success or failure, does not measure negative externalities. But the fundamental problem cannot be solved with a multiple scale or multi-criteria methods, or with 'green accounts', the calculation of the hidden costs of growth, a 'human development index' or an 'indicator of genuine progress'. The point is to defuse the internal

device (the genetic code) of the economy, and to do it without provoking a recession of such magnitude that it would bring about yet more poverty and environmental destruction.

The decolonisation of the imaginary sustaining the dominant economy will not emerge from responsible consumption or a pedagogy of socio-environmental catastrophes, as Latouche suggested when focusing on the degrowth wager. Economic rationality has become institutionalised and incorporated into our way of being in the world, *homo oeconomicus*. What is needed then is a change of skin. The really-existing economy cannot be deconstructed by an ideological reaction or a revolutionary social movement. It is not enough to moderate it by incorporating other values and social imperatives. Deconstruction entails practical measures, or we will forever stay at the purely theoretical level, striking blindly in the dark with our desires for a better and more sustainable world.

The limit to growth, the resignification of production and the construction of a sustainable future

The limit is the end-point from which life is constructed. It is from death that we reorganise our existence. The law of the limits of nature has refounded the sciences and the human world is sustained by the recognition of its cultural and genetic limits in the prohibition of incest. In the face of this panorama of culture and knowledge of the world, one should ask by which strange design the economy has managed to bypass the question of limits, as it attempts to rule the

world as a system of mechanical equilibrium among factors of production and circulation of value and market prices. The limit to this unbridled process of accumulation has not been the 'law of value', nor the cyclical crisis of overproduction or under-consumption of capital.

The limit is marked by the law of entropy, which, as indicated by Georgescu-Roegen, functions as the limit-law of production. The law of entropy reminds us that every economic process, as productive process, is trapped in an ineluctable process of degradation that advances towards *entropic death*. What does this mean? That every productive process (like every metabolic process in living organisms) feeds on matter and low-entropy energy; that in its process of transformation it produces consumer goods with a residue of degraded energy, which finally expresses itself as heat; and that this process is irreversible. The advance of recycling technologies notwithstanding, pollutant residues are only partially reconvertible into useful matter and energy. And this is what manifests itself as the limit to the accumulation of capital and economic growth: the de-structuring of productive ecosystems, and their saturation with regard to their capacity to dilute contaminants in common environments (seas, lakes, air and soils), which ultimately appears as a process of global warming and the possibility of an ecological collapse that crosses the thresholds of the planet's ecological equilibrium.

While the bioeconomy takes the material conditions of nature as the root of production, the 'economy' searches for a way out through the dematerialisation of production. The economy flees towards the ficti-

tious and the speculation of financial capital. Nonetheless, for as long as the economic process must produce material goods (houses, means of transportation, clothes, food) it cannot escape the law of entropy. This is the ultimate limit of economic growth. The only antidote to this inevitable trajectory towards entropic death is the process of *negentropic production* (from: negative entropy) of living matter, which translates into renewable natural resources.

The transition towards *this* bioeconomy would mean a decrease in the rate of economic growth as it is measured today, and a negative rate in time, while indicators for a sustainable, negentropic eco-technological production are developed. In this sense, the new economy is based on ecological potentials, technological innovation and cultural creativity. In this way a post-growth society and an economy in balance with the planet's conditions of sustainability could begin to appear. And yet, from environmental rationality emerges not only a new mode of production, but a new way of being in the world, new processes of signification of nature and new existential meanings in the construction of a sustainable future.

*Translated from Spanish
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The rights of nature, new forms of citizenship and the Good Life

– Echoes of the Constitución de Montecristi in Ecuador

Alberto Acosta

Every constitution synthesises a historical moment. Crystallised in every constitution is an accumulation of social processes. And in every constitution a certain way of understanding life takes shape. And yet, a constitution does not make a society. It is society that produces a constitution and adopts it like a roadmap. Besides, a constitution must be more than merely the result of an exercise in advanced jurisprudence, seen through the logic of constitutional interpretations, and it is certainly not the product of one or a few enlightened individuals. Beyond its indisputably legal function, a constitution must be a political project for a common life, to be elaborated and given effect through the active participation of all citizens.

From this point of view, the recent Ecuadorian constitution (produced in the city of Montecristi), which remained faithful to pent-up demands and responded to prevailing expectations, assigns the undertaking of structural transformation to itself as both a means and, indeed, an end. In it are expressed multiple proposals for radical changes constructed over the course of many decades of resistance and social struggles, changes that are often impossible for traditional constitutionalists to accept (or even to understand).

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The new state

A basic feature of the new constitution is the declaration of a liberal constitutional state based on notions of rights and justice: a state that is social, democratic, sovereign, independent, unified, intercultural, plurinational and secular. This definition opens up the possibility of a new, multiple-entry pact of broad coexistence. Without claiming to exhaust the definition of plurinationality, it is important to highlight the way in which this concept leads to a rethinking of the state in its overdue acknowledgment of indigenous peoples and nationalities, as well as its acknowledgment of the presence of other national communities – a genuine qualitative leap compared to the Eurocentric, monocultural perspective dominant until now. This is why it is necessary to reformulate the relations of power between state and citizenry, so that the latter become the true sovereigns. The crisis of political representation that has affected, and still affects, many parliamentary systems implies a crisis of constitutional law inasmuch as ‘popular sovereignty’ is subject to various private desires. This contradiction of the demands of the citizenry creates a crisis of legitimation: constitutional right has all too often existed on paper only.

The task is to overcome the range of norms that were explicitly or implicitly agreed by the big economic agents that acted independently of public powers in their relations with each other or the state. Ultimately, these norms, stemming from private interests, including transnational agents (IMF, WTO, Free Trade Agreements, to name just a few sources of this transnational law), have determined political relations with the state.

This has entailed devaluation of constitutional law and of constitutions themselves, with a loss of sovereignty by the people.

The Good Life

The Ecuadorian constitution calls on both individuals and collectivities to achieve the Good Life (*sumak kausay*). Society is invited to take part at every stage and in every arena of public management and planning for national and local development, and the execution and control of the plans for development (or rather, for the Good Life) on every level. The Good Life will never be a gift from powerful groups. The construction of an equal, egalitarian and free society will only be possible through the participation of all. And its attainment will require contesting the privileges of present dominant elites, without allowing new elites and new forms of domination to emerge.

The true constituent process begins immediately the constitution is adopted. This process demands a greater and more profound constitutional pedagogy, as well as a mobilised society that can propel the materialisation of constitutional achievements – in other words, a process of constituting citizenship.

The consolidation of new constitutional norms into laws and a renewal of politics consistent with the proposed changes is a task that calls on all in the city and the country to continue on the path of mobilisation. The emptying-out of the historical content of the constitution must be prevented, for example, by way of new laws and institutions.

Post-development?

The Montecristi constitution, and this is perhaps one of its greatest merits, opens up a struggle over the historical sense of development. In fact, the Good Life brings us directly to an as yet unexplored age, that of *post-development*. With the Good Life, what is rejected is the vision that purported to take us down the road of perpetual accumulation of material goods as an index of development and progress, a road that leads nowhere but to humanity's self-destruction.

We understand once and for all that we must look for alternative ways of dignified and sustainable living, ways that are not a mere caricature of the Western lifestyle and even less a continuation of structures marked by massive social and environmental inequality. We will have to solve existing imbalances and, particularly, to incorporate criteria of sufficiency rather than try to sustain, at the cost of the majority of the population and of nature, the logic of efficiency understood as ever-accelerating material accumulation for the benefit of a small fraction of society.

We are aware that these new currents of legal thought are not free of conflict. In abandoning the traditional concept of law as a source of right, the constitution has consolidated a juridical point of departure independent of traditional visions. It should come as no surprise, then, that this new charter has generated conflicts with traditional jurists, not to mention with those who are used to having their word (and especially their interests) become law.

The rights of nature

The rights of nature, which constitute 'a catastrophe for the Roman-French legal tradition', have been described as 'conceptual gibberish'. For those who wish to conserve the law (or defend the privileges of oligarchies?), who are essentially unable to understand the transformations taking place right now, it is difficult to understand that the world is constantly moving on. Throughout history, each creation and expansion of rights has always appeared as something previously unthinkable. The emancipation of slaves or the extension of civil rights to African-Americans, women and children were in each case dismissed as nonsensical. For slavery to be abolished it was both necessary to recognise 'the right to have rights' and to exert political pressure to change the laws that denied those rights. In order to free nature from the condition of being a rightless subject or a simple object of property, political pressure to have it recognised as being entitled to rights is also required.

To endow nature with rights, therefore, means to politically secure its passage from object to subject as part of a centuries-long process of expanding who or what becomes a subject with rights. This is a process that has been enriched by the struggles and contributions of many peoples, not only those from the Andes. It will not be easy to consolidate these transformations, especially to the extent that they affect the privileges of the circles of power, which will do everything to stop the process of change. But one day, maybe not too distant, we will see a Universal Declaration of the Rights of Nature as an inseparable complement to human rights.

The conflict and resistance that groups whose privileges are threatened can unleash, will – perhaps surprisingly to some – be positive for society as a whole, since they will evoke an organised response on the part of the majority. It is crucial to stress that the constitutional advances are not a gift of any one individual, but the result of struggle involving broad sectors of the population. Therefore, as part of the collective construction of a new contract of social and environmental coexistence, it is necessary to create new spaces of freedom and to remove all the obstacles that prevent them from becoming effective.

The source of these contradictions lies in the continuing power of a developmentalist theory and practice that are characteristic of an extractive (primary commodity-exporting) economy – and which have not only failed to achieve the desired development, but have also undermined our natural conditions. This stupidity continues, in fact, in all currently progressive governments in Latin America. Despite their considerable advances in some areas, social in particular, they still have enormous difficulty in creating new styles of development. They show no sign of kick-starting a new mode of sustainable natural-resource use to benefit the whole of society and secure the rights of nature.

Current governments – even in Ecuador – remain tied to neo-developmental perspectives and practices that necessarily contradict the spirit of the Good Life. This is why it is imperative not only to overcome neo-liberal practices, but also to strive towards a harmonious relationship between society and nature, that is, the Good Life.

Freeing the flows of people

In contrast with the course of capitalist globalisation, which blocks the flows of people, the Montecristi constitution proposes citizenship with universalised dimensions. The rights of those who have emigrated have been consolidated: not only can they vote in Ecuadorian elections, but they will have their own representatives in the National Assembly, with full power to initiate political measures, including proposing laws. The state will create incentives for the return of the savings and goods of expatriates, so that these resources can be deployed as productive investment in the country in ways decided by the expatriates themselves. Incentives will also be created so that they voluntarily participate in social security. The constitution also grants similar rights to migrants and citizens: those living in the country for more than five years will be allowed to vote, without the need for bilateral agreements with their countries of origin. It will be impossible to expel them to countries where their life, freedom, security or integrity, or that of their family members, will be at risk because of their political opinions, ethnicity, religion, nationality, ideology or membership of certain social groups. Likewise, the expulsion of groups of foreigners is banned: migratory processes must be regularised.

We do not wait for the world to change so that we can make advances in the field of migration: we act to change the world. These proposals concerning human mobility appear in the wider context of furthering the principle of universal citizenship, freedom of movement for all inhabitants of the planet and the progressive elimination of the

condition of being a ‘foreigner’ as elements in the transformation of unequal relations among countries, especially those between global North and South. To that end, the creation of a Latin American and Caribbean citizenship is promoted, as are the mobilisation of policies that guarantee the human rights of border populations and refugees and the common protection of Latin American- and Caribbean-born individuals in their countries of arrival and transit.

Conclusion

To sum up, if we want to change the world – and this is indeed the task –, it is insufficient and extremely dangerous to apply the paradigm of development as conceived in the Western world. Not only is this not synonymous with collective wellbeing, it also places the very life of humanity at risk. The Good Life transcends the mere satisfaction of needs and access to goods and services. From the point of view of the philosophy of the Good Life, which embraces the essence of indigenous cultures and the proposals for building a sustainable world being debated the world over, we need to question the traditional concept of development. This ‘development’ has led to generalised ‘misdevelopment’ (José María Tortosa) across the planet, including in those countries considered developed. Neo-developmentalism, or ‘senile developmentalism’ (Joan Martínez Allier), is not the path to development, let alone the Good Life. The growth and greater availability of revenue has not in and of itself secured the wellbeing of any country. Let us insist that the permanent accumulation of material goods has no future.

The Good Life has to do with a series of

social, economic and environmental rights and guarantees. It is also ingrained in the principles that guide the economic regime, which promote harmonious relations among human beings individually and collectively and with nature. It is, in essence, a matter of building an economy of solidarity, at the same time as various sovereignties are recovered as central to the political life of the country. We cannot depend primarily on the revenues generated from natural resources, but must rely on the efforts of human beings in coexistence with nature. To achieve this, it is necessary to expand social capacities, starting by recovering and strengthening multiculturalism as an essential element of change.

We are faced with the imperative of the democratic construction of a genuinely democratic society, steeped in the values of freedom, equality and responsibility, which is dutiful, inclusive, equal, fair and respectful of life; a society in which all can have equal possibilities and opportunities, where individual and collective coexist, where economic rationality is reconciled with ethics and common sense, where the rights of nature are a practical reality – in short, where a plurinational state and the Good Life are one and the same.

*Translated from Spanish
by Rodrigo Nunes.*

Carbon trading lies at the centre of global climate policy and is projected to become one of the world's largest commodities markets, yet it has a disastrous track record since its adoption as part of the Kyoto Protocol. *Carbon Trading: how it works and why it fails* outlines the limitations of an approach to tackling climate change which redefines the problem to fit the assumptions of neoliberal economics. It demonstrates that the EU Emissions Trading Scheme, the world's largest carbon market, has consistently failed to 'cap' emissions, while the UN's Clean Development Mechanism (CDM) routinely favours environmentally ineffective and socially unjust projects. This is illustrated with case studies of CDM projects in Brazil, Indonesia, India and Thailand.

UN climate talks in Copenhagen are discussing ways to expand the trading experiment, but the evidence suggests it should be abandoned. From subsidy shifting to regulation, there is a plethora of ways forward without carbon trading – but there are no short cuts around situated local knowledge and political organising if climate change is to be addressed in a just and fair manner.

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