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Sustainable Development through Policy Integration in Latin America

A Comparative Approach

Laura Rival



United Nations
Research Institute
for Social Development

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Occasional Paper Seven

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Social Dimensions of Green Economy
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Acronyms

AS	Araçuaí Sustentável
BF	Bolsa Floresta (<i>The Forest Conservation and Allowance Programme</i>)
BFF	Bolsa Floresta Família (<i>Family Forest Allowance</i>)
BNDES	Banco Nacional de Desenvolvimento Econômico e Social (<i>Brazilian Development Bank</i>)
CDM	Clean Development Mechanism
CECLIMA	Centro Estadual de Mudanças Climáticas (<i>State Centre for Climate Change</i>)
CO₂	Carbon dioxide
CPCD	Centro Popular de Cultura y Desenvolvimento (<i>Centre for Popular Culture and Development</i>)
EUA	European Union Allowance
FAS	Fundação Amazonas Sustentável (<i>Sustainable Amazonas Foundation</i>)
FUNAI	National Indian Foundation
GTA	Grupo de Trabalho Amazonico (<i>Amazon Working Group</i>)
IDESAM	Instituto de Conservação e Desenvolvimento Sustentável do Amazonas (<i>Institute for the Conservation and Sustainable Development of the State of Amazonas</i>)
INPA	Instituto Nacional de Pesquisas da Amazônia (<i>National Institute for Research on the Amazon</i>)
NGO	Non-governmental organization
PES	Payment for Ecosystem Services
REDD	Reducing Emissions from Deforestation and Forest Degradation
SD	Sustainable development
SDS	Secretaria de Estado do Meio Ambiente e Desenvolvimento Sustentável (<i>State Center for Climate Change</i>)
UEA	Universidade do Estado do Amazonas (<i>Amazonas State University</i>)
UFAM	Universidade Federal do Amazonas (<i>Federal University of Amazonas</i>)
UNDP	United Nations Development Programme
Y-ITT	Yasuni-Ishpingo Tambococha Tiputini
YNP	Yasuni National Park

Summary

Whereas sustainable development used to be conceptualized in relation to differentiated development stages and contrasts between “consumer” and “basic needs” societies (Redclift 1991), the emerging green economy has internalized the new geopolitical conditions created by “globalization”. Latin American countries, for instance, have characteristics of both “consumer” and “basic need” societies. Their challenge today is in large part similar to that of developed countries, in that they too need to translate socioeconomic development objectives into a model that maintains ecosystem services, biodiversity and low carbon emissions to support Earth Stewardship (Chapin et al. 2011). This paper examines how social and political actors in Brazil and in Ecuador propose to govern natural resource use sustainably, and how they work at building an alternative political economy based on ecosystem protection, biodiversity, renewable energy use and poverty reduction.

The first case study shows how sustainable development is being reinvented by Brazilian grassroots organizations working in partnership with government agencies at various levels (municipal, state and federal) and with large Brazilian companies such as Braspetro. Nominated for a Global Award last year, this project combines popular education with a whole range of environmental conservation programmes to address structural poverty and environmental degradation in a semi-arid region from which people have had to migrate in order to survive. Through its holistic approach to sustainability in a municipality of around 38,000 inhabitants, the project has created the conditions for the flourishing of a local economy based on family farming and local services. It has already inspired other municipalities, both in the Amazon region (in Brazil and in neighbouring Spanish-speaking countries) and in Mozambique and other locations in Africa. This project illustrates the fundamental role played by small and medium-sized towns in creating resilient socioecological systems in the tropics. It also demonstrates the ways in which engaged citizenship can deepen the quality and the meanings of “development”.

The clearest policy lessons relate to the sense of ownership and pride that local, grassroots participants have developed through this project. This directly links with the processes through which the project has been conceptualized and executed, as a form of self-help activism deeply rooted in regional traditions, a sense of belonging and a strong ethic of care. As Cornwall and Coelho remark:

For people to be able to exercise their political agency, they need first to recognize themselves as citizens rather than see themselves as beneficiaries or clients. Acquiring the means to participate equally demands processes of popular education and mobilization that can enhance the skills and confidence of marginalized and excluded groups, enabling them to enter and engage in participatory arenas (Cornwall and Coelho 2007:8).

The radical politics of development (Mohan and Hickey 2004) promoted here highlight the ways in which rights, entitlements and capabilities can be extended through the exercise of deeper control by marginalized citizens (mainly women and youth) over decisions that affect their lives. Without the popular education programmes that have transformed the whole town into a space for change, these children would not have succeeded in the state’s schooling system, nor would their parents have been able to uphold their citizenship rights and responsibilities. Having overcome their shame and sense of exclusion, these active and organized citizens have been able to move from being recipients of welfare programmes to taking a proactive role in public affairs, often coordinating directly with government officials and working in partnership with them, to improve the quality of imparted social services, expand redistributive social policies or challenge covert policy goals. By celebrating the values of simplicity, natural beauty, practicality and self-reliance, this project challenges the view that progress and modernity are best achieved through migration to megalopolises, or that consumerism offers the best material culture. As it spread into the rural areas surrounding the town, the project gave increasing importance to the environment, especially water and soil

conservation, species diversity and love for wild creatures; all considered to be directly related to human well-being.

The second project aims to promote sustainable development in the conservation units of the state of Amazonas through actions that decrease deforestation and reduce poverty. It shows how Brazil can use its political structures creatively, by creating legal structures that enable subnational levels of government to ally with private partners to share the cost of controlling and enforcing forest conservation policies. In this model, state ownership is devolved, not to the communities, but to subnational governments. The families living in conservation units have no legal ownership on the land they occupy; they are registered as being granted the right by the government to live there and are rewarded if they commit themselves to forest stewardship obligations. Conservation units seem to be the best legal instrument to protect environmental and ecosystem services in a country where land tenure is a thorny political issue, and the state of Amazonas has instituted its own laws to facilitate Payment for Ecosystem Services (PES). The funding mechanism and the organizational structure might also be replicated in other locations. For example, the contract (structured in four parts) allows the project to receive funding from a wide range of sources, both through the Clean Development Mechanism (CDM) and the Amazon Fund (which funds only capacity-building activities).

However, the participatory methodology used and the principle of paying communities for not deforesting do not stem from the same commitment to grassroots ownership. As a result, they have been vigorously contested by social actors who have felt excluded, and who have seen in the project an attempt to privatize both state land and social services. Actions aimed at decreasing deforestation and reducing poverty other than the monthly conditional cash transfer do not seem to be as successful, as they are costly and require the active cooperation of a large number of governmental and non-governmental partners. This project has also been criticized for being developed in a region where land use change pressures are minimal, population scarce and the risks of conflict or of loss of natural capital minimal, especially given that other parts of the Amazon biome are under threat, and that 70 per cent of the population live in urban settings, where the lack of drinkable water and waste management facilities is acute.

The third project, led by the Ecuadorian government, proposes to generate new funding by keeping oil in the ground to support a new national development plan which would ensure: the protection of 38 per cent of the national territory; the reforestation, afforestation or natural regeneration of one million hectares of forest owned by small landholders and indigenous communities; the increase of national energy efficiency and savings; the promotion of social development in Yasuní-Ishpingo Tambococha Tiputini's (Y-ITT's) buffer zone; and, finally, the financing of scientific research and technology. Ambitious and costly, this project raises many issues regarding decentralization, government planning, indigenous rights and local ownership, as well as potential conflicts between different policy frameworks, as Ecuador is also promoting a Reducing Emissions from Deforestation and Forest Degradation (REDD) national framework. The project also raises interesting questions regarding bilateral trade and multilateral aid policies.

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Introduction: The Green Economy Agenda

With hundreds of organizations preparing for Rio+20, “sustainable development” (SD)—a term familiar to us since the Earth Summit (the United Nations Conference on Environment and Development)—is in the limelight again. Often disparaged in academic circles as ambiguous, ideological, inoperable and ineffective (in short, a theoretical dead end), SD now looks as though it may finally make it as a full-blown development paradigm under the label “green economy”. Whereas the Brundtland Report (World Commission on Environment and Development 1987) emphasized intergenerational relations, the Earth Summit focused on the “three pillars”. The aim was to produce policies that would integrate environmental, social and economic objectives according to “win-win” scenarios, or, in other words, policies that would support continued economic growth while protecting the environment. The popularity of the three-pillar approach was such that it quickly led to official endorsement by governments all over the world, with many countries preparing national sustainable development strategies and creating multistakeholder sustainable development councils.

However, mainstreaming rarely translated into effective implementation and, during the first decade of the twenty-first century, SD became increasingly associated with social justice and human rights. Moreover, SD became increasingly conceptualized in terms of a better quality of life for all, “now and in the future...while living within the limits of supporting ecosystems” (Fernando 2003:7), perhaps under the growing influence of Amartya Sen’s (1999) vision of “development as freedom” and under the rise of a people-centred approach to development. Today, SD is being slowly reconfigured in terms of, on one hand, a new focus on human development as an end in itself (with economic growth being squarely identified as an incomplete and imperfect means to achieve this ultimate goal) and, on the other hand, a realization that natural capital needs to be restored (Aronson et al. 2010), including through investment policies that protect productivity in developing countries from destruction (Muradian and Rival, forthcoming).

An emerging consensus that the economy needs to remain within biophysical limits (Hall et al. 2001) has led authors such as Daly and Farley (2011) to argue that the three pillars need to be renamed and reordered. Environmental sustainability, which is an issue of scale, would come first, as an acknowledgement that the physical size of an economy should be relative to the supporting ecosystem. Social sustainability—an issue of income distribution and the recognition that the distribution of wealth must be just—would come second. Economic sustainability—that is, efficient resource allocation through property rights and markets—would come third. This reordering indicates that only a limited number of resources are efficiently allocated through market mechanisms. Regulating and supporting ecosystem services are best treated as public goods (see also Farley and Costanza 2010) while many provisioning and cultural services are best understood as common-pool resources (see also Ostrom and Cox 2010; Brondizio et al. 2009). Daly and Farley (2011) also stress that each type of sustainability requires a different kind of policy, and that, therefore, we need to renew our thinking about policy coherence and the integration of environmental and social policies. As Muradian and Rival (forthcoming) show, managing ecosystems for services constitutes the best way to prevent shortages of water, energy, food or natural resources. While some of these services are amenable to market institutions, others require public provision, including large upfront public investments. This further complicates and increases the cost of creating economic incentives for environmental improvement and poverty alleviation.

Authors such as Eckersley (2004) or Dryzeck et al. (2003) have argued that there is still a place in today’s world for the classical role of governments, whose exclusive responsibility regarding land use planning and law enforcement is crucial in the fight against biodiversity loss and environmental degradation. By advocating “greening the state”, these authors build on the insights of researchers who have described the local, regional and national institutional arrangements that govern natural resource systems (for example, Ostrom 2001). Not only do they recognize that common pool goods evolve with the expansion of spatial and temporal

scales, but they also recast the role of the state as a facilitator of transboundary democracy. As a result, they envision the state as a core political institution capable of facilitating socially progressive environmental change and true sustainability, while pointing to the need for a supportive legal structure at the macro level that would facilitate the self-organizing capacity of local groups and communities, who would be free to craft their own rules.

I contend that a new development paradigm is emerging, which goes much further than the green economy agenda currently being proposed for Rio+20. As argued by Norgaard (2011), this new paradigm requires a broad view of both economics and ecology, together with a political commitment to long-term thinking about development. As I see it, this emerging paradigm represents a reconfiguration of the political economy of development and involves new values (Chapin et al. 2011), new economics (Daly and Farley 2011) and new governance (Ostrom 2010; Rival and Muradian, forthcoming).

To illustrate what this new paradigm looks like in practice, I present here three case studies: a 10-year grassroots project, Araçuaí Sustentável, that combats social exclusion with the dissemination of agro-ecological practices in the state of Minas Gerais, Brazil; a forest conservation scheme, Bolsa Floresta, involving payments for ecosystem services (PES) in the state of Amazonas, Brazil; and Ecuador's government-led PES scheme, Yasuní-Ishpingo Tambococha Tiputini (Y-ITT), aimed at avoiding CO₂ emissions by keeping oil in the ground.

Research on the Y-ITT initiative was carried out by myself between 2005 and 2008 through ethnographic methods detailed in Rival (2010:359) and by two of my students (Barnard 2011; Ruprecht 2011), who mainly used interviews and the analysis of official and media documents. In addition, I refer here to Ecuador's 21 February 2011 *Submission to the Fourteenth Session of the Ad Hoc Working Group on Long-Term Cooperative Action under the United Nations Framework Convention on Climate Change*.

Research on Bolsa Floresta was conducted during 2009 through interviews and participant observation in various meetings and workshops both in Brazil and the United Kingdom, as well as a one-week visit to a community of the Rio Negro, which had recently been integrated in the programme. I also use here various publications by Virgílio Viana (2008, 2009, 2010), Director of Fundação Amazonas Sustentável (FAS, Sustainable Amazonas Foundation) and information publically available on the FAS website.¹ Research on Araçuaí Sustentável was carried out in May 2007 and May–June 2011 through participant observation and in-depth interviews with the Director of Centro Popular de Cultura y Desarrollo (CPCD, Centre for Popular Culture and Development), Tiaõ Rocha; CPCD's Project Manager, Flavia Mota; various local educators and "caring mothers"; and two youths. I also make use here of information and testimonies found on CPCD's website² and in its various publications.

Comparing these three very different initiatives and innovative paradigms of regulation (which all aim to tame the environmentally destructive potential of the state, while enhancing its emancipatory potential) allows me to identify some of the dilemmas and conflicts involved in making the values of nature an integral part of collective choice and decision making.

Three Latin American Case Studies

Araçuaí Sustentável

Araçuaí Sustentável (AS), a grassroots project in the state of Minas Gerais in Brazil, aims to combat social exclusion through self-help literacy and the dissemination of agroecological

¹ See www.fas-amazonas.org/en/.

² See www.cpcd.org.br/.

practices among poor small-scale farmers. Over the last 10 years, AS has grown organically along two main programmatic axes: *Meu lugar é aqui* (my place is here) and *Cuidando dos tataranetos* (caring for past and future generations). Each activity is carried out in a way that strengthens one or both of these two axes, in order to encourage social transformation on the basis of recovered human dignity. AS promotes social transformation along four mottos: collective “yes we can” (*empoderamento comunitário*); environmental commitment (*compromiso ambiental*); economic satisfaction (*satisfação econômica*); and human and cultural values (*valores humanos e culturais*).

Araçuaí is a municipality of around 38,000 inhabitants, of which 57.3 per cent live in the town and 42.7 per cent in the surrounding countryside. “Ninety per cent of the Brazilian cities have a population inferior to 50,000 inhabitants”, Tião, CPCD’s director, tells me. “Small cities are very important for the development of Brazil; their size is on a human scale.... How can we achieve quality of life for all in a giant megalopolis like São Paulo?” This is why CPCD, the organization that Tião founded in Belo Horizonte 27 years ago, came to Araçuaí in 2003.

Araçuaí is located in the valley of the Jequitinhonha River, in the northern part of Minas Gerais. Like Bahia further north, this is a poor, semi-arid region known in Brazil as a land of drought, hunger and poverty, from which people have had to migrate in order to survive. According to the town’s official website, Araçuaí’s economy depends on services (74 per cent) and mining (15 per cent), with agriculture representing no more than 5.7 per cent. Mass migration to São Paulo and other parts of the country has now stopped, but around 8,000 men still leave their homes for nine months every year. They travel hundreds of kilometres from their homes to work on large sugar cane estates, which sustain the production of ethanol, a biofuel central to Brazil’s green economy. Women stay behind to raise the children and farm small plots of land with minimal support. In recent years, with the continued reduction in forest cover, loss of biodiversity, soil erosion and the changing climate, droughts have become more severe and the lack of sustained rainfall more frequent. Dams and the expansion of eucalyptus plantations have caused the Jequitinhonha River to dry. Some of these plantations are registered for PES under the Clean Development Mechanism (CDM).

AS’s objective is to reverse environmental degradation and boost the role of agriculture in the local economy, so that the poorest section of the population may live comfortable and independent lives without having to migrate to find paid employment. This requires paying serious attention to the formation of human capital, something CPCD excels in. Between 2003 and 2006, the organization dedicated itself to addressing illiteracy and semi-illiteracy through local mobilization. Considering illiteracy a grave illness, CPCD initiated its work with an “intensive care unit” programme, which was then diversified into a range of programmes and activities aimed at transforming the lives of the participating families according to the principle of *empoderamento* (capability or enskillment).³ The programme is based on a philosophy of human life and ethical principles rooted in Paulo Freire’s “pedagogy of the oppressed”. The rationale for intervening is that illiteracy, hunger, violence against women and children, and environmental destruction should not occur in twenty-first century Brazil. I was told that to address these problems—taken to be symptoms of a grave social and political illness—requires special measures and intensive care. At the core of CPCD’s intervention, there is a concern for the child who has been failed by state schooling and whose most intimate, affective ties have been damaged by poverty. To learn how to read, write and count, and to acquire through this knowledge the intellectual and moral skills necessary to grow into a real citizen, the child needs to develop good relations with peers and caring adults. Learning has to be fun and apprenticeship lived as *joie de vivre*. “Bright dots” (*pontos luminosos*), that is, women and men who have the potential of becoming educators, are identified and trained. As one CPCD activist told me, “to provide good education, you need good educators”.

³ This Portuguese term is contrasted with *empoderamiento* (empowerment). CPCD work is inspired by a philosophy of power as “power to do” in order to achieve, without which the “power to claim” would be vacuous, or lead to populist, patron-client politics.

CPCD's first intervention consisted in mobilizing energies against illiteracy and semi-illiteracy. CPCD's starting point was a government study, according to which, of all Araçuaí children with eight years of schooling, only 3.3 per cent were really literate, that is, knew how to read, write and count. This meant that 96.7 per cent were declared illiterate (the term used in the report was "deficient"), including 50 per cent "in a critical state". As Tião says:

The failure of formal schooling has created mass illiteracy in this place. It has created half-citizens who cannot fully develop their potential or fully participate in the life of the nation. These children are the victims of the system that failed them, yet they are treated as defective individuals, as if they were responsible for not knowing how to read, write and count (Tiaõ Rocha, CPCD Director).

The literacy campaign took place outside school hours in the houses of mothers trained as community leaders. It was soon expanded into programmes rooted in local popular culture that transformed streets, squares and whole neighbourhoods into spaces of "permanent education". The whole community was mobilized and participated in the creation of libraries, mobile cinemas, improvised theatres, story telling and many more events. The programmes have beautiful, poetic names such as *Ser criança* (be a child), *Pedagogia do abraço* (hug pedagogy), *Cidade educative* (city of learning), or *Sementinha* (little seed). For CPCD, popular culture and folk knowledge are basic, essential resources for human development with all its holistic ramifications. In recognition of CPCD's efforts, the municipality funded the first two years of the programme and paid the educators' salaries. CPCD was so successful at getting children in difficulty to read and write that the municipality then asked the organization to run the city's educational services, which it did for free, as a civic engagement for the public good. For the next two years CPCD partnered with the town hall to run the town's primary schools.⁴

When a sufficient number of children reached the age of 14 (the age limit for the programme *Ser criança*), CPCD added three youth programmes to AS: *Fabriqueta de software* (small software factory); *Fabriqueta – unidade de produção solidária dedo de gente* (solidary production people's fingers);⁵ and *Meninos de Araçuaí – Cinema* (movie theatre children of Araçuaí). "The reason for this", I was told by one of the educators, "is that if children need to play to learn the basics, adolescents need the challenge of fending for themselves. They have to learn how to make money and look after their families." The three youth programmes expand the creativity of teenagers and channel it into social enterprises focused on culture and communication. For instance, when the royalties earned by the children's choir were substantial enough to be invested, the teenagers decided to create a cinema. Araçuaí had never had a cinema or a theatre before. Today, the cinema shows feature films on Saturdays and documentaries produced by the *Meninos de Araçuaí*. These short films (many are ethnographic and promote local and oral history) strengthen the literacy-for-citizenship campaign, as well as the ties between the city's inhabitants and CPCD youth activists.

In 2006, the literacy campaign was expanded to the rural areas of Araçuaí, where it was combined with a nature conservation programme. The first action consisted of reorganizing the government's food programme for the poor, *fome zero* (zero hunger), so that donations would be distributed fairly and in a well-coordinated manner. Through lack of proper planning and respect for the dignity of the recipients, the state aid programme had created chaos, dissension and competition among the population. A food bank, *empório solidário*, (solidarity market), was created with CPCD's help. The solidarity market operated as a cooperative store with proper shelving and a membership card system. Members collectively agreed on a set of rules and defined five levels of need. Those who no longer needed help agreed to return their cards to

⁴ The educator who acted as secretary of education told me: "We created a revolution in the schools". Although excellent relations had been forged with parents and teachers, the contract was not renewed when a new mayor was voted into office.

⁵ *Dedo de gente* (people's fingers) started in 1996 in other areas of Minas Gerais.

make room for others. After a few months, the store started to stock, besides the food sent by the government, goods donated by better-off citizens, such as second-hand clothes, blankets or books.

The second action consisted of establishing a demonstration farm on a disused five-hectare plot donated to the project by the Franciscan order. Volunteers from the neighbouring communities (most of them women) received training in agro-ecology and permaculture. The most enthusiastic remained to develop the project, which soon became *sítio maravilha* (the place of wonder), and which now produces 28 tons of food per month.

Sítio maravilha is supervised by Celsio, who was raised on a small family farm and worked as a sugarcane cutter in the state of São Paulo for over 26 years. Celsio and a group of trainees demonstrate techniques of water conservation, rainwater roof catchment, intensive horticulture, composting and more to visitors to the farm. They also demonstrate these techniques in rural households through training and social mobilization. Women who wish to be part of this project have to show first that they routinely use in their homes the waste recycling and composting techniques they have learned. When they become members of the project, they develop their own *quintal maravilhoso* (wonderful plot) based on the principles and techniques they have acquired. The women I visited and spoke with showed me with obvious pride their backyard gardens transformed into little pieces of “the place of wonder”. Celsio and the community organizers reinforce in their teaching the message that all these cultivated spaces form one large, collective land of abundance. The techniques used in the rural homes include: rain capture, compost toilets, gray water recycling, swales and tree planting for riverbank consolidation. Houses are painted with the same natural pigments and clays that are used in the handicraft factory *dedo de gente*. Like everything else promoted by CPCD, the messages conveyed celebrate the value of simplicity, natural beauty, practicality and self-reliance.⁶

Using similar principles of social and community mobilization, CPCD has also organized workshops and training sessions during which women exchange recipes to make preserved foods, herbal remedies, soap from old frying oil and more. Much local knowledge and know-how has been recovered in this fashion. As a direct result of such catalytic events, some women now have a wide range of products to bring to Araçuaí’s weekly market. There are already 56 women selling regularly in the market, and the figure goes up every month. The food, remedies and objects they sell are simple, practical, useful and healthy, and popular with the shoppers. Several women told me of their hope that their new income stream will be sufficient to cover their family needs, so that their husbands will no longer need to work away from home. Others are simply enjoying the benefits of saving by not buying. Consumer items are expensive in Araçuaí, as everything is imported by road from Belo Horizonte or São Paulo. Two women told me that they wish to live with *nada do fora* (nothing from the outside). Minas Gerais is historically known for its spirit of independence and resilience. These women hope that with the development of a thriving local economy they will be able to make a decent living in their own community.

Undoubtedly, the success of AS builds on what the Brazilian state has done for social development in the last 15 years. In Araçuaí, there is now a well-developed network of main paved roads; the whole region is comprehensively electrified; water is pumped from the river and piped into most houses; a new covered market was built in 2011; an affordable and regular coach service links Araçuaí to many national destinations; and Bolsa Família, the national conditional cash transfer, is paid to many of Araçuaí’s poor families. CPCD works at building

⁶ Here are a few testimonies: Valeria Borges (mother): “By participating in this course, I realized how much we need to change our lives and the way we think. I learned to value the earth and the plants.” Joice Aparecida (9 years old): “I learned many plant names I did not know. The garden is so pretty, it’s a place where people feel good.” Ellida Karoline (community leader): “I learned so many things I did not know about plants and compost. I gained a wider vision of what nature can offer us”. Kênia Teixeira (community leader): “I loved the gardening workshop, because it deals with all what matters in our lives”. Leila (4 years old): “I have just planted a small orange tree. It’s good to suck and to make juice. What I most enjoyed was to put the baby tree in the pot with all the other children”.

on these attainments to, as a CPCD member told me, “add quality where the state only sees numbers”.

The problem, then, is that too often state services “lack quality” and that this perceived lack of quality perpetrates the inequalities that prevent the expansion of capabilities, to use Sen’s (2008) terminology. For instance, while there is running water in the houses, it is unsafe to drink. With the programme, *Caminho das águas* (waterways), and in partnership with other organizations, CPCD helps households install rainwater storage tanks on rooftops. With the programme *Ser criança*, CPCD offers educational activities that complement state schooling by transforming children’s experience from failure to success. With the project *Cidade educativa*, CPCD started a library in a small town where none had existed before.

In response to the popular success of AS, the municipality took on board the expense of keeping it open. While Bolsa Familia is perceived to actively encourage people to buy food from supermarkets, CPCD encourages growing one’s own food and the raising one’s own animals so that Bolsa Familia payments can be put into savings accounts. A final example illustrates CPCD’s willingness to collaborate with state agencies. In the last few years, the federal government has created 250 new technical universities. The one that recently opened in Araçuaí has two new specialized programmes, one in environmental studies and the other in agroecology; both are run in partnership with CPCD.

CPCD ethics are universal, yet they are rooted in the very particular localities in which CPCD works, in a dialogue with the communities that embrace these ethics and develop their own sense of initiative. CPCD educators are in no rush; their practices unfold according to the rhythms of self-discovery and rising consciousness. Symbolic actions play an important role in this process, and their meanings are easily perceived and embraced. For instance, the idea came up one day to offer a tree seedling to each newborn in the maternity hospital. People had been planting trees along the riverbanks as part of the new gardening and conservation techniques, and a community nursery had been developed. Seedlings are now sent to the hospital with their scientific name, the botanical name under which they are known in the region, and the baby’s name. They are presented in a small basket made of banana leaves, which, being biodegradable, can be planted along with the seedling. The local hospital has now institutionalized the practice of giving a tree seedling to each newborn. Tião, who was trained as an anthropologist, calls such symbolic actions “a small nothing that means a great deal”. CPCD has a whole repertoire of similar symbolic actions, which express the ethics of care, seamlessly weaving care for the earth, care for people, care for the old, care for the young and care for the ties that unite people and generations with each other and the place where they live.

Bolsa Floresta: Paying for avoided deforestation

If AS started as a grassroots campaign among poor peasants who have not lost their land but who can no longer sustain their families through what the Brazilians call *agricultura familiar*, Bolsa Floresta (BF, literally “The Forest Conservation Allowance Programme”) involves poor families that migrated to the Amazon with the opening of colonization fronts (Bunker 1987) and who now live as illegal settlers within the boundaries of state protected areas.

BF started in 2006 as a state project under the name Juma Sustainable Development Reserve Project for Reducing Greenhouse Gas Emissions from Deforestation. The Juma reserve, home to 370 families, is a state “conservation unit” comprising 589,612 hectares of forest. It was the first project to be nominally recognized as a Reducing Emissions from Deforestation and Forest Degradation (REDD) project in Brazil and one of the first projects to obtain “gold-standard validation” by the Climate, Community and Biodiversity Alliance, which certifies schemes that simultaneously address climate change, community development and biodiversity conservation. BF’s mission is to replicate the Juma Reserve experience in 13 additional protected areas with a population of at least 6,500 families spread over ten million hectares.⁷ As explained

⁷ Virgílio Viana talks about the project as involving 6,000 families over an area twice the size of Costa Rica.

in greater detail below, initial funding for the project (2006–2016) came from the government of the state of Amazonas, Bradesco Bank and the Marriott International hotel chain.

Incentives to avoid deforestation include a combination of conditional direct payments to families (family forest allowance); grants to community associations (forest allowance for associations); social development programmes (social forest allowance); and the promotion of income-generating activities (income forest allowance). There is also funding for support, monitoring, auditing and administration. A monthly Family Forest Allowance (Bolsa Floresta Família or BFF) of R\$50⁸ (US\$29) is paid monthly to registered married women with children who live in one of the 14 conservation units covered by the programme. This payment is modelled on the highly popular conditional cash transfer Bolsa Família, mentioned in the previous section. Payments are made directly onto a Bradesco bank debit card held by the mother, who can use her card in post offices or cash machines in Manaus and other urban centres. The women who receive this payment pledge at a public workshop that they will look after their children's education and will do their best to prevent forest fires. Official documents available on the internet stress that the payment is a *recompensa* (reward), not a source of income for the beneficiary families, who commit to zero deforestation.

The Forest Allowance for Associations is calculated to represent 10 per cent of the total value of the family allowances. It amounts on average to R\$12,000 per reserve per year. Reception is conditional to participating in the activities of the association. The money is transferred to the community association's bank account or used as a form of credit towards community expenses agreed upon in general assemblies. This allowance funds office support (internet, solar panels and computers), transportation (speed boats) and logistics (fuel and food supplies) as a means to strengthen community organization and social control mechanisms. The goal is to ensure that the conservation units become managed as community-regulated commons. The Income Forest Allowance, with an average value of R\$140,000 per community (calculated to be equivalent to 11.4 families) per year, is designed to promote sustainable development and support income-generating productive activities such as bee keeping, vegetal oil, ecotourism and many other appropriate activities that were pioneered throughout the Brazilian Amazon during the 1990s (Hall 1997), before being systematized by the federal programme ProAmbiente.⁹ As an informant told me, "the income from the forest allowance covers anything that generates income, is legal, and does not produce smoke". The Social Forest Allowance, with the same average value of R\$140,000 per community per year, is aimed at improving health, education, communication and transport for all in collaboration with government agencies and participating non-governmental organizations (NGOs). The villagers I spoke with make a clear distinction between what they see to be two separate BF: the family allowance and the various types of community payments. FAS employees, by contrast, distinguish investments in income-generating activities, which they call BF Income, from investments aimed at improving the quality of life in the communities, which, for them, come under Bolsa Floresta Social.

The project is planned to run until 2050, by which time it is expected to have generated around 171 million tonnes of CO₂ credits. The methodology to quantify the carbon emission reduction through avoided deforestation was developed by Instituto de Conservação e Desenvolvimento Sustentável do Amazonas (IDESAM), a research NGO founded in 2004.¹⁰ IDESAM also collaborated with various government agencies, university research units and NGOs to prepare deforestation scenarios for the state's protected areas. For Virgílio Viana, the brain behind BF, these protected areas form part of the "Deep Amazon", a region not yet reached by roads or commercial agriculture. With its low rate of deforestation (less than 2 per cent), the Deep

⁸ 1 US\$= 1.7 Brazilian Real (approximately), March 2012.

⁹ ProAmbiente is the first formal PES scheme established in Brazil. It was launched by civil society organizations in 2000, before being transferred to the federal government in 2004. It is based on the principle that small farmers are paid to minimize deforestation and the use of fire, and embrace environmentally friendly systems such as agroforestry. The biggest problem faced by ProAmbiente was a lack of sustained funding (May and Millikan 2010).

¹⁰ The Juma Project Design Document may be found at www.idesam.org.br/projetos/rdsjuma_pdd.php.

Amazon is a haven for “pro-active investment in natural capital” (Trivedi et al. 2009), a form of conservation finance aimed at maintaining such forests in their pristine state. As a REDD+ scheme, BF aims to “ensure that standing trees are worth more than logs”, a remark I heard many times in the field, which encapsulates the new rationality behind the CO₂ calculations of the green economy.

BF was made possible thanks to two initial donations, each of R\$20 million, one from Bradesco Bank, the other from the state of Amazonas.¹¹ Additional donations were obtained from a range of national and international partners,¹² including a large grant from the Amazon Fund, which is funded by Norway and managed by Brazil’s development bank, BNDES. The endowment fund, now amounting to approximately US\$40 million, is invested with Bradesco Bank, free of fees and administrative charges, with a view to attracting REDD financial flows. While the Family Forest Allowance, Forest Allowance for Associations and administrative costs are covered by the private donations, the Income Forest Allowance and the Social Forest Allowance are covered directly from the endowment fund. In 2009, a total of US\$8,690,600 was spent (amounting to a direct cost of US\$150 per family and a direct cost of US\$0.10 per hectare of protected forest). In 2010, a total of US\$11,066,666 was disbursed to benefit 8,000 families (with a direct cost of US\$115 per family and US\$0.08 per hectare of protected forest, see Viana 2010:38).

BF became operational in 2008 after the state of Amazonas passed a law on sharing avoided deforestation benefits. Another law was passed to create 30 state-level conservation units.¹³ BF is implemented by FAS, which is described in the official brochure as “a private, independent and non-profitable, non-governmental institution of public interest and without political party connections”. FAS was legally founded in December 2007 by the two main grant donors, Bradesco Bank and the state of Amazonas. It is officially registered and recognized in both federal and state law. Virgílio Viana, who acted as State Secretary for Environment and Sustainable Development from 2003 to 2008, left the ministry to become Director of FAS. He has written extensively on BF and the state initiatives that preceded it. He refers to the scheme as “the largest REDD and PES programme in the tropical forests of the world”. He is currently involved in replicating the programme in various places in Latin America and Africa, and is advising the federal government on how to expand BF to other states in Brazil.¹⁴

The creation of a private foundation to achieve these goals is presented as a necessary institutional innovation to allow sustainable development to take place in the long term “independently from political party interests”, as indicated in the foundation’s statutes, and outside the constraints of short-term electoral cycles. It also allows private companies to exert their corporate responsibilities voluntarily. The public/private status of FAS is presented as the best way to facilitate the convergence of interests between Brazil as a nation (“it is in our national interest to reduce deforestation and conserve our forests”, I was told by the director of FAS) and the Annex 1 countries¹⁵ who, in the post-2012 Kyoto context, are committed to reduce their CO₂ emissions. FAS implements many of the actions that were envisaged under the Programa Zona Franca Verde (Green Free Trade Zone Programme, see Viana 2010) in the Conservation Units where it works.

¹¹ The donation from the government of the state of Amazonas was authorized by Law 3.135/2007, see footnote 13.

¹² Such as Coca-Cola, the Spanish Foundation Sevilla Nodo, the Italian clothing store chain Yamamay, and Samsung.

¹³ While the federal government has yet to introduce national PES legislation, the state of Amazonas has already passed a number of laws to this effect. The Law on Climatic Change, Environmental Conservation and Sustainable Development was published in June 2007 (Amazonas State Law 3.135/2007, available at www.ciflorestas.com.br/arquivos/lei_lei_3.1352007_31561.pdf). It was followed by the promulgation of the complementary Law 53, which established the state’s system of conservation units. The state’s climate change policy was formalized by the Law 3.244 of 4 April 2008, which created CECLIMA, a new government unit within SDS which coordinates and executes the state’s climate change policy. The State of Amazonas was the first Brazilian state to legalise state-level extractive reserves; Acre’s, for instance, are federal.

¹⁴ FAS is also helping the federal government and the National Indian Foundation (FUNAI) to apply BF methodology to indigenous reserves.

¹⁵ Annex 1 countries comprise the industrialized countries that were members of the OECD in 1992, plus the Russian Federation and other transition economies in Central and Eastern Europe.

According to Virgílio Viana and other FAS workers I have interviewed, the status of private foundation allows FAS to partner with a wide range of organizations that offer their technical expertise and support to Bolsa Familia at a minimal cost, as “donations in kind”. For instance, while DDL, one of the largest law firms operating in the Amazon region, provides FAS with legal assistance, PricewaterhouseCoopers Brazil, “one of the most respected auditing companies in the world”, is responsible for FAS’s external audits. The federal university (UFAM) sends its forestry and pisciculture students to research and monitor the income forest allowance programmes, whereas researchers at UEA (Amazonas State University), INPA (National Institute for Research on the Amazon), the AgroTechnical School and the Permaculture Institute contribute to the development of a whole range of initiatives.

FAS also has contractual partnerships with a range of agencies from the state of Amazonas, such as the secretary for education and the agency for sustainable development.¹⁶ These partnerships allow FAS to associate a number of additional and complementary programmes to the core “forest allowance system” in order to foster long-term and lasting changes in human development, especially in the areas of health and education; in sustainable forest economies; and in the management of the conservation units through monitoring, control and scientific development. As a FAS worker told me, “We need to work on all fronts”. He added that coordinating many institutions and articulating a multiplicity of activities into a coherent whole was a real challenge. For its director, BF would not be possible without FAS and its catalysing role in getting actors to work together to fulfil the Millennium Development Goals, especially on health issues, which he sees as absolutely central to the promotion of a better quality of life linked to forest conservation in the Amazon region (see also Viana 2008:150).

The Yasuní-ITT Initiative: Paying for avoided pollution from oil

If Bolsa Floresta has become the icon of a successful REDD scheme, the Yasuní-Ishpingo Tambococha Tiputini Initiative (Y-ITT) is designed as an alternative to REDD. Y-ITT was officially endorsed by the Ecuadorian government in 2007, when President Correa pledged to leave indefinitely 846 million barrels of heavy crude underground in the oil fields lying beneath the Yasuní National Park (YNP). The park is one of the most biodiverse in the world and home to indigenous groups living in voluntary isolation. In exchange, Ecuador asked for a compensation of US\$3.6 billion—half the oil’s market value—to be raised over 13 years and deposited into a trust fund administered by the United Nations Development Programme (UNDP). The trust fund and the interests it would generate would then be used to finance renewable energy facilities, energy efficiency in consumption programmes, reforestation, the protection of the country’s national parks, social development projects in and around YNP, and environmental research. If a future government ever decided to exploit the oil, the money invested plus interest would be returned to the contributors, with no more risk than repayment of the external debt (Rival 2010). As substantial international funding has not materialized, Y-ITT is no more than a project awaiting implementation. Yet, it has already fostered a number of institutional changes within Ecuador. Many insights can be gained from the disagreements surrounding the policy process, the attempts to solve a number of technicalities, or the discussions that have accompanied the promises of international funding (Rival 2010, 2011).

Y-ITT is a long-term strategy signalling a political commitment to change the country’s model of development in the face of climate change. Officially promoted as a non-market-based mechanism, it is far more ambitious and encompassing than any REDD+ pilot project. Instead of “buying time” (Kanowksi et al. 2010), Y-ITT proposes to mitigate climate change by keeping fossil fuels in the ground. The fundamental idea behind Y-ITT (that the best way to mitigate climate change and develop sustainably is to keep fossil fuels underground, to embrace renewable energies and to promote forest conservation) has been circulating in NGOs such as Acción Ecológica and OilWatch since the early 1990s. “A key outcome of the ITT initiative, if successful, would be to show that petroleum can be worth more under the ground than above

¹⁶ The full list of partners can be found at www.fas-amazonas.org/pt/secas/parceiros/parceiros-operacionais.

it", I was told by an interviewee. This idea arose from the conclusion that Ecuador's heavy dependence on oil revenues creates a skewed regime of development, with high indebtedness, unemployment, poverty, inequality and deforestation rates.

Y-ITT is being officially promoted as a non-market-based mechanism. The rationale stands that by committing to refrain indefinitely from extracting the 846 million barrels of ITT petroleum, Ecuador proposes an innovative way of combating global warming, which involves: (i) refraining from extracting fossil fuels from areas that are highly sensitive both biologically and culturally; and (ii) consolidating a strategy based on promoting social development, nature conservation and the use of renewable energy sources with the ultimate goal of achieving a new model of sustainable human development. As a developing oil-dependent country, Ecuador cannot afford to promote the transition from the current development model based on petroleum extraction without external financial contributions. Y-ITT is presented as a highly cost-effective solution that is "several times better than other conventional mitigation tools, based only on avoided deforestation", given that more than a billion tons of CO₂ emissions can be avoided during a 30-year period through a combination of measures such as keeping the ITT oil in the ground, avoiding deforestation on a national scale, reforestation and switching to renewable energy.

The proposal is based on the unique characteristics of the Yasuni's biological and cultural diversity and the fact that the exceptional and unique richness of the park is currently threatened by the oil industry (Bass et al. 2010). Arguments also cover the accelerated deforestation of the Ecuadorian Amazon region and the threats posed by the development of a vast road infrastructure. Although not mentioned with the same frequency, the low-grade quality of the ITT crude oil (which makes it particularly expensive to exploit, less productive in terms of recovery and extremely polluting) is also playing a part. It is also important to stress that without international carbon markets, a proposal such as Y-ITT would not be conceivable. Their existence facilitates the translation of the market value of crude oil into direct and indirect avoided CO₂ emissions. According to Ecuador-UNDP's international agreement, the total amount to be raised and administered by the Trust Fund is equivalent to 407 million tons of avoided CO₂ emissions, valued according to the price of European Union Allowances (EUAs) at the signing date (US\$19.81 per ton of CO₂).¹⁷ "A key outcome of the Y-ITT initiative, if successful, would be to show that petroleum can be worth more under the ground than above it" I was told.

The Trust Fund will work as Norway's oil fund. While the fund's capital will be invested in renewable energy projects, interest will be used to execute five different activities in line with the National Development Plan: protect 38 per cent of the national territory by preventing deforestation in 43 protected areas (representing a total of 4.8 million hectares) and administering five million hectares of remaining original ecosystems; reforest, afforest and promote the natural regeneration of one million hectares of forest owned by small landholders and indigenous communities; increase national energy efficiency and savings; promote social development in Y-ITT's buffer zone; and, finally, finance scientific research and technology.

The official document prepared for the United Nations Framework Convention on Climate Change meetings of April and June 2011 clearly stipulates that Ecuador's proposal is consequential with the *Human Development Report 2007/2008 on Fighting Climate Change: Human Solidarity in a Divided World*. It fully embraces the report's central ideas such as, for instance, that "climate change is the defining human development challenge of the twenty-first century".

The document further explains that Y-ITT is grounded in the government's decision to give priority to social and environmental values by exploring alternative economic and development models. With Y-ITT, Ecuador shows its willingness to take a lead internationally on the shared

¹⁷ Official negotiators stress that the amount of direct CO₂ emissions that would be prevented with Y-ITT surpasses the annual emissions of France (373 million tons) or Brazil (332 million tons), with a total economic value of US\$8.067 billion.

and differentiated responsibilities that underpin international climate change policy. This is why Y-ITT is proposed to the world in a spirit of international cooperation and solidarity, with Ecuador assuming up to half of the opportunity cost of keeping the ITT oil in the ground, and the international community contributing at least half of the revenues that the state would have otherwise received from extracting this oil (see also Larrea and Warnars 2009). As a negotiator told me, Y-ITT “creates a public good for the world”.

To understand fully how Y-ITT became official government policy in 2007, one needs to examine the international context. Like BF, Y-ITT directly engages in debates about the post-2012 (post-Kyoto) international convention on climate change. The fact that Norway decided to earmark US\$500 million a year of its Oil Fund to fight deforestation, for instance, has undoubtedly – albeit indirectly – influenced both policies. As Humphreys (2008) argues, “the Bali decision on Avoided Deforestation represents the latest iteration in a long series of negotiations on global economic inequalities, and in particular the demands of many developing country governments for a redistribution of economic resources in order to address global inequalities”. For Humphreys, the Bali decision should be analysed in relation to demands since the 1970s for a new international economic order, as well as to the G77’s twin concepts of “compensation for opportunity cost foregone” and “common but differentiated responsibilities”. Humphreys’ historical analysis is important to understand Ecuador’s demand that the international community share in the economic sacrifice that Y-ITT represents, and compensate Ecuador with at least half of what the country would receive “in recognition of the environmental benefits that would be generated by keeping this oil underground”, as Raphael Correa put it (Rival 2010). Humphreys’ analysis is useful to understand how older North-South political positions have been reworked in the light of new possible development pathways. Ecuador has repeatedly stressed that Y-ITT represents a long-term strategy signalling a political commitment to change the country’s model of development in the face of global climate risks. However, intra-governmental conflicts around Y-ITT and the setting up of the Trust Fund signal other processes at work, in particular the repositioning of the state within the emerging polycentric architecture (Rival 2011).

To summarize, the proposal was specifically designed to address international climate change policy at meetings of the Conference of the Parties in Bali and Copenhagen. In international relations terms, Ecuador asks developed countries to contribute financially to the prevention of future CO₂ emissions in a way that ensures the economic feasibility of Ecuador’s centrally planned government strategy to change the course of national development through “greening the state”. Germany, which had initially agreed to pay €58 million a year for 13 years into the Trust Fund, withdrew its pledge in September 2010.¹⁸ With only a small fraction of the US\$3.6 billion necessary for the proposal to be viable actually in the coffers, the future of Y-ITT is far from certain. This situation reflects both the power of international actors’ preference for market mechanisms such as REDD and the mistrust in which the Ecuadorian government, which has been more than ambivalent in its promotion of Y-ITT, is held internationally (Rival 2011). Some evidence suggests that Ecuador is now trying to fit Y-ITT within a REDD national framework (Ruprecht 2011).

To conclude, although Y-ITT is little more than a “big idea”, many insights can be gained from the discussions that have accompanied this evolving proposal. Y-ITT has created a rich debate, as well as government reforms. Despite all the uncertainties, Y-ITT has generated much popular support, including in the Amazon region (Barnard 2011). It has also created tensions between various ministries, as well as between national and local levels of government, along with issues surrounding the governance of the trust fund (Rival 2011). I argue that the tensions created by Y-ITT between different levels and functions of government, as well as the issues raised regarding decentralization and local ownership¹⁹ show that innovative sustainable development policies

¹⁸ For a discussion of Germany’s position in relation to other donors, see Ruprecht (2011).

¹⁹ A thorough discussion of the articulation between central and local levels of government must include a consideration of the indigenous question. For instance, indigenous organizations are opposing Ecuador’s new Environmental Code, particularly articles

could potentially lead to greening the state (Rival 2011), thus demonstrating that governments in the developing world need not always be on the side of extraction and degradation. Finally, Y-ITT raises a number of issues regarding environmental law, constitutional law and resource exploitation, as well as fascinating issues regarding the links between identity, nationalism and environmentalism (Barnard 2011). All these aspects are important to consider when discussing policy integration within a new green economy regime.

Reworking “Sustainable Development” into a New Development Paradigm

The three case studies presented here shed new light on the institutionalization of mechanisms for collective action and collective decision making with respect to the green economy. Their comparative analysis highlights the formal and informal ways in which the economy is rethought in relation to nature; wealth generation and wealth distribution are reconceptualized; and notions of efficient resource allocation are deployed and contested. Y-ITT, BF and AS are all rural sustainable development programmes, which not only propose to integrate nature conservation with poverty reduction, but also work at transforming the articulation of nature, society and market from “business as usual” to “sustainable environment management”. BF does this through forest conservation so that “trees are worth more live than dead”, “thousands of people are saved from poverty” and “forest households are rewarded with monthly payments into credit card accounts for practising farming without fire”. Y-ITT proposes to avoid CO₂ emissions by making petroleum worth more under the ground than above it, while taking the whole nation on a new development path based on biodiversity conservation and respect for cultural diversity. AS aspires to break the vicious circle of land degradation, out-migration and rural poverty through programmes that reconnect inhabitants of small towns with surrounding rural communities. It promotes an ethic of restoration that conjugates the repair of the social fabric with “earth repair”.

BF and Y-ITT seem to differ from AS in terms of the way nature and its worth are conceptualized. What actors aspire to conserve and value through BF and Y-ITT is an evolved form of wild nature, whose embodied continuity with the past is irreplaceable. In contrast with the tropical rainforests of the Yasuní and the state of Amazonas, the land around Araçuaí has been destroyed, damaged or altered by humans ever since the colonization of Brazil by the Portuguese, and the value created by AS essentially relates to regenerative practices applied both to human and natural capital. In Araçuaí, there is no unspoiled nature, and people are not asked to protect what is considered wild. Rather, they are looking for ways of repairing and restoring what has been heavily degraded through bad management and worsening weather conditions. BF, by contrast, is designed to transform poorly protected public land into state-owned conservation preserves managed by a semi-private organization with the responsibility of delivering economic and social incentives to poor settlers. The latter are conditionally allowed to live within the state conservation units; they must ensure that no logging activities or fires degrade the forest.²⁰ In other words, the integrity of nature depends on their *not working it*. Similarly, the integrity of YNP through Ecuador’s Y-ITT requires not only the banning of oil extraction and logging, but also the seamless merging of biological and cultural diversity, and, inevitably, the naturalization of traditional livelihoods.

Both BF’s conservation of natural capital and Y-ITT’s protection of ecological wealth have been strongly contested by activists speaking on behalf of forest dwellers keen to put forth

261 and 74 of the new constitution, which assert that the state will maintain exclusive authority over forest resources and that environmental services could not be subject to appropriation and would therefore be regulated only by the state.

²⁰ Conservation units are presented as the best legal instrument to protect environmental and ecosystem services in a country where land tenure is a thorny political issue, and the state of Amazonas has instituted its own laws to facilitate PES. State ownership is thus devolved, not to the communities, but to subnational governments. The families living in conservation units have no legal ownership on the land they occupy; they are registered as being granted the right by the government to live there, and are rewarded if they accept to commit themselves to forest stewardship obligations. “Conservation units”, Virgílio Viana told me in an interview, “transform maps into behavioural change on the ground. They get the technical information out of the closet.”

alternative visions of human/environment relationships. At a meeting organized by Grupo de Trabalho Amazonico (GTA), a network representing 600 non-governmental organizations, a rubber tapper said: "We want the freedom of defining our own development path, on our own terms. As implemented, Bolsa Floresta devalues our labour." Another GTA member added: "We're not poor, we're not hungry, we're not *favela* dwellers. What we need are good services. We live far away, we die of simple illnesses. We need markets for our products, so we can live a decent life." Several speakers talked about "social biodiversity" to illustrate the rich political thinking that has accompanied the development of innovative policies such as BF. GTA is wary of the dominant market ideology, especially the possible commoditization of carbon and water, which they hope to counter by insisting on the "bundling" of ecosystem services and by emphasizing the role of human labour in the green economy. Although GTA leaders and grassroots thinkers are talking the talk of PES and avoiding deforestation, they make it clear that ecosystem services must be conceptualized as a means to add value to their labour as rubber tappers, fishermen, or agroecological farmers. They see themselves as forest producers who work in a way that protects the forest. In their view, the value of their work should be recognized economically through better market prices and politically through better public services.

GTA's vision of PES is thus miles apart from the one articulated by FAS, which basically sees two inputs, the behaviour of ecosystem stewards and the money of the global community feeding in to PES schemes, as delivering three types of output: livelihood improvement, well-managed ecosystems and economic benefits. The term "social biodiversity" used by the rubber tapper quoted above encapsulates this vision of rights, entitlement and citizenship. GTA's vision is of a PES mechanism that redistributes wealth from the rich to the poor in the form of good public services delivered by the state. Whereas FAS employees speak in terms of a "virtuous circle" and "governments' supporting roles", GTA leaders envision a market controlled and disciplined by the government, whose fundamental responsibility is to redistribute wealth to citizens equitably. If local people were getting a fair price for their products, and if the government provided adequate and free services, there would be no need for handouts in the form of PES, as one of the GTA delegates told me.

Although the ethnographic evidence emerging from the research on Y-ITT is not as clear yet, a similar concept of forest citizenship is emerging, as well as demands for social and economic services tailored to the needs of forest dwellers. The idea of a post-petroleum future for Ecuador, which combines an attachment to place and nature with an awareness of the resilience of indigenous people and their diverse cultures, is defended by a wide range of social actors, albeit, for many of them, more as a symbol of what we should aspire to than as a realistic policy. More radical Ecuadorian ecologists are opposed to the drilling for oil in the Amazon region on the basis that the country's heavy dependence on oil revenues contributes to global climate change and causes many social and ecological conflicts. For indigenous leaders, the issue is more one of respecting indigenous visions, whether oil is extracted or alternative modes of development envisaged.

Although further fieldwork is needed to grasp the diverse thinking existing within the communities studied, the views reported above indicate that, from the perspective of indigenous or traditional producers, there is more to green economy than the internalization of the economic worth of the services nature is now understood to perform for humans. To them, nature becomes natural capital or ecological wealth only by choosing to ignore the role of human labour and values. Waste recycling, water management and conservation, terracing, organic gardening and other environmental components of AS are not designed to save natural capital from human greed or need. If the measures implemented favour climate and hydrological regulation, they do so for the local population who depend on restored and protected ecosystem services for their basic water and food needs. In other words, ecosystem services are conceptualized in terms of securing and protecting local livelihoods, rather than in terms of providing strategic ecosystems vital for the comparative advantage and the economic advancement of a particular region in the long run. In the Amazon or in Mina Gerais, nature too

tends to be valued as sustaining “the base” (Gudeman 2008). This vision of nature as a source of goods for the community, rather than services to be traded, seems to correspond to what Martinez-Alier (2002) has labelled “the environmentalism of the poor”.

The vernacular social ecologies briefly presented here illustrate the complex links between ecosystems, biological diversity, economic development, human needs, aspirations and political struggles that are being woven in Latin America underneath the label “green economy”. They illustrate that sustainable development continues to represent a set of competing visions about the future of society, social justice and ecological restoration, and that envisioning sustainability and its possible material realizations raises unanswered questions with regards to the values of nature and human labour.

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