

2016

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2016 Berlin Conference on Global Environmental Change
Freie Universität Berlin

5. Democratizing Climate Governance

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Berlin 23-24 May 2016

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5. Democratizing Climate Governance

Time: Monday, 23/May/2016: 11:00am - 12:30pm

Session Chair: Steffen Bauer; steffen.bauer@die-gdi.de

Location: Oxford

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Fairness and Equity Implications for New Governance Mechanisms

Abstract

Research in the field of Global Environmental Governance (GEG) pays considerable attention to the emergence of New Governance Mechanisms (NGM). This doesn't only mean the involvement of a growing number of state and non-state actors but also corresponding to new ways of participation. In this regard, NGM poses profound challenges to governments and institutions in the Developed and Developing world alike. This article seeks to advance the debates on GEG by analyzing fairness and equity implications in participatory processes that led to the development of innovative governance mechanisms in Brazil, which may have influenced the elaboration of its intended Nationally Determined Contribution (iNDC). Given the fact that the social dimension is at the heart of Brazil's climate adaptation and mitigation strategies and bearing in mind the need to institutionalize the protection of vulnerable from the negative effects of climate change and strength their resilience, a relevant aspect is evident. Brazil, as a transitional economy, could provide insights into environmental governance schemes as well as influence the policy-making process in others developing nations. We believe that existing local, regional and global governance mechanisms in Brazil, explore key factors associated with public perception, awareness, ethics, justice, innovation and climate risks, which are ultimately important to address normative implications related to the climate negotiations and international relations as Brazil's iNDC commits to strength the country's adaptation capacity and proactively assess climate-related risks. But how fairness and equity are really addressed in the country?

Keywords

Climate Change, Climate Governance, Innovative Governance Mechanisms, Green Municipalities Program, Global Environmental Governance,

Introduction

Climate change is the most significant moral and environmental issue of our time. It means that only with the global cooperation we will be able to face its challenges and build-up viable and long-term solutions, and for that we need trust

building; in fact, taking into account ethics, fairness, equity and justice, as a real and integral part of climate policy and governance (with genuine efforts to make words turn into actions even in our unfair world). A global solution to climate change will require all – Developed and Developing nations and the rich and the poor peoples, to limit their GHG emissions to what might be considered a “fair share” of safe global emissions. In turn, it will require the highest attention to the moral imperatives of climate change based on the fact that all nations have agreed to adopt policies and measures to prevent “dangerous anthropocentric interference with the climate system” under the UNFCCC (1992: Art 2).

There is a vast literature on ways to think about fairness and equity in efforts to address the problem of climate change. On this subject, we aim to further encompass some contribution, addressing fairness and equity implications in an innovative governance mechanism that Brazil currently uses for developing climate change mitigation and adaptation policies. We analyze its justifications against some basic criteria agreed in the country and in the development of participatory processes that may have contributed in the elaboration of the Brazilian intended Nationally Determined Contribution (iNDC). As said by Ferreira Costa (2016, p.135), the current Brazilian political discourse on climate change arises from a fundamental review that emerged from the need to adapt to changing global circumstances and incorporated climate change, not as a deterministic phenomenon, but as something to give form and expression to the construction of a new world order. According to Barros-Platiau (2010) the dynamics of the environmental regimes are different from the economic and political ones and to impose itself in the international negotiations Brazil had to show credibility, legitimacy, and voice. As a result, Brazil has been binding its international performance in the adoption of ethical issues, fairness, equity, and justice in its discourse as well as promoting concepts of shared responsibility by the voluntary adoption of climate policies to forge a leadership role.

As initially presented in the National Climate Change Policy (NCCP), which was established in 2009, under the Law 12.187/2009 and by Decree 7.390/2010, Brazil has been pointing to a voluntary commitment to reducing GHG emissions by 36.1–38.9% compared to projected emissions by 2020, according to the baseline of 3.236 GtCO_{2e}. This means absolute emissions reductions between 1.168 GtCO_{2e} and 1.259 GtCO_{2e}. Notwithstanding, following International Negotiations developments, this commitment has evolved and, on September 27, 2015, the Brazilian Government

submitted to the United Nations Climate Change Secretariat its intended Nationally Determined Contribution (iNDC) to the new agreement under the Convention at the 21st Conference of the Parties (COP-21) in Paris.

By adopting an economy-wide, absolute mitigation target, Brazil voluntarily agreed to follow a more stringent modality of contribution, compared to its voluntary actions pre-2020. The Brazilian contribution is now consistent with emission levels of 1.3 GtCO_{2e} (GWP-100; IPCC/AR5, 2014) in 2025, and 1.2 GtCO_{2e}, in 2030 (GWP-100; IPCC/AR5, 2014), corresponding, respectively, to a reduction of 37% and 43%, based on estimated emission levels of 2.1 GtCO_{2e}, in 2005 (GWP-100; IPCC/AR5, 2014). In relation to Brazil's existing national voluntary commitment, which aims to achieve gross emissionsⁱ of approximately 2 GtCO_{2e}ⁱⁱ, in 2020. This iNDC represents an additional gross reduction of approximately 19%, in 2025 (ITAMARATY, 2015).

In this regard, this article aims to provide an overview of potential key innovative climate change and environmental governance policies against some basic criteria, concerning fairness and equity, agreed in the country that led to the development of participatory processes with possible reflection on its iNDC. We intend to discuss a municipal-level environmental governance initiative called Green Municipalities Program, initially adopted by the State of Pará . It has been put into practice associated with other public policies like Bolsa Verde (Green Grant) and others initiatives such as, CAR – Cadastro Ambiental Rural (Environmental Rural Registryⁱⁱⁱ) as well as several subsidiary policies and programs. The development of such mechanisms may have influenced the elaboration of the Brazilian intended Nationally Determined Contribution (iNDC) once the Brazilian government believes that both its actions and its national commitment to reduce GHG emissions (iNDCs) are quantitatively linked to the atmospheric warming threshold of 2°C degrees, which somehow represents what Brazil considers its “fair share” of global emissions (FERREIRA COSTA, 2015).

Although it is not the aim of this study to analyze the entire spectrum of environmental policies and initiatives in Brazil, we believe that addressing fairness and equity implications for new governance mechanisms, here, represented by the discussion of some relevant aspects of the Green Municipalities Program compared to the adoption of these issues in international negotiations, it will help us to better understand innovative power structures among actors and across levels in the development of the environmental policy framework in Brazil.

To achieve this aim, we draw from a wide range of sources in the literature, official documents and the analysis of the institutional framework of rules, institutions, processes as well as the recent context of the environmental policy formulation and use and control of natural resources in Brazil to organize this document into four parts, including this introduction, which characterizes the effectiveness and constraints of key themes in order to draw out lessons for scaling up policy pathways. The second part presents the role of the “functions of government” as the main “actor” since environmental governance demands continuing policy-making at national and subnational levels. In the third part, we discuss fairness and equity implications in some recent climate and environmental policy developments in Brazil. To finally address participatory processes that promoted potential Innovative Environmental Governance Mechanisms represented by the Green Municipalities Program as an example of Innovation in Governance to draw together the main conclusions.

Global Governance of the Environment

Young (2014) affirms that none of the main streams of thinking about International relations – Neo-Realists, Neo-Liberals, Constructivists – suggests that considerations of fairness and equity constitute a major force to be reckoned with in creating and administering international environmental governance systems that prove effective in solving problems. It may not be completely correct as political concepts and ways of organizing intern and foreign policy evolve over time. The effects of globalization - which are not completely understood - may force this change in ways that the adoption of concepts of fairness and equity could prove effective in the promotion of sustainability.

It may demand a review of long-established concepts, especially considering scale and issues that may happen inside a country but go beyond national borders as we usually consider global governance as the purposeful order that emerges from institutions, processes, norms, formal agreements, and informal mechanisms that regulate action for the common good, composed of elements and methods from both the public and private sectors encompassing activities that transcend national boundaries at the international, transnational, and regional levels being based on rights and rules that

are enforced through a combination of economic and moral incentives (BENEDICT, 2015).

According to James N. Rosenau and Ernst-Otto Czempiel (1992), and Thomas J. Biersteker (2009), governance is based on shared expectations, as well as on intentionally designed institutions and mechanisms, while it is at the same time a permissive concept, like globalization, in the sense that it gives one license to speak or write about many different things, from any pattern of order or deviation from anarchy (which also has multiple meanings) to normative preferences about how the world should be organized. It also entails how environmental goals are established, how rules are defined for reaching the established goals and, finally, how policy outcomes are produced following the use of the defined rules.

We believe this research is consistent with observations of Arid Vatn and Paul Vedeld (2011) when they say that two main elements are fundamental to governance: the type of actors involved, characterized by their capacities and competencies; and the (formal and informal) institutions that facilitate interaction and coordination between actors. Notwithstanding, we focus on “functions of government”, when we claim that partnerships aligned with different levels of government - acting as the main “actors” -, play a fundamental role in this process as environmental governance demands continuing policy-making at national and subnational levels.

Thus, the institutionalist perspective on providing solutions to the complex problems of environmental deterioration and human well-being in natural resource management is grounded on the belief that a system of rules and norms that extend from the global to the local level can provide a basis for governance by defining, constraining and shaping actors’ expectations in different domains (OSTROM, 2005; BIERSTEKER, 2009: 180).

Granted that, “global governance of the environment” is not limited to “governance that is global” – that is, the coordination of activities that span the globe, at least in its aspiration (OVERBEEK *et al.*, 2010; LATHAM, 2009) -, it is rather concerned with political power, as a concept, at all levels of the political system. At the same time, the rise of new economic powers presents us with an opportunity to consider whether and how the place of non-state actors might evolve (McGUIRE, 2013).

Curiously, as said by Matthew Cashmore *et al.*, (2015), political power has received limited attention within the vast literature on environmental governance, despite the fact that the increasing institutionalisation of global environmental

governance does not occur without continuing policy-making at national and subnational levels, since global standards need to be implemented and put into practice locally, and global norm-setting requires local decision-making and implementation, once new institutions are not simply the result of functional gaps being filled in the governance structure but they are, partially, the result of political motives (PATTBERG and WIDERBERG, 2014: 688; 696). For all that, the political power is exercised through a profusion of shifting alliances between diverse authorities and actors in projects to govern a multitude of facets of economic activity, social life, and individual conduct.

For this reason, we believe power should not be seen so much as a matter of imposing constraints as a kind of regulated freedom (MILLER and ROSE, 2008) but sometimes as the functions of government (BIERSTEKER, 2009:4). Although we recognize that governance should not be always equated with the government, as it demands performance of functions necessary for systemic persistence and therefore is as dependent on inter-subjective meanings as on formally sanctioned constitutions and charters (ROSENAU and CZEMPIEL, 1992).

According to Biermann *et al.*, (2010) and Schroeder, (2010: 320), in governance studies, it requires an analysis of how state and non-state actors actively shape policy actions and outcomes as actors may contribute to the purposeful steering of constituents either indirectly, by influencing the decisions of other actors, or directly, by taking decisions, or as we could point, by simple political inaction. What leads us to the concept of the term “agency” - the capacity of actors to exert influence. Notwithstanding, different actors can affect agency in policy-making through various ways: (i) including consultations in which they provide input or feedback; (ii) involvement as a partner seeking to ensure that their views and concerns are reflected in outcomes; (iii) collaborating on an equal footing with policy makers; and, (iv) empowerment through being conferred decision-making authority (SCHOROEDER, 2010). Besides, when considering political inaction, the void created by this choice may allow “new competitors” to address critical political issues. A situation that can offer to these competitors the opportunity to dictate the rules of the game or making these new actors an integral part of the cumulative steering effort toward responding to global and local environmental change.

Fairness, Equity and Climate Policies in Brazil

Brazil is a country of continental dimensions, presenting a complex and dynamic economy – despite the current political and economic crisis - as well as being a resource-rich country and a large agricultural producer with a huge population, notwithstanding still recognized as a developing country due to its socio-economic and cultural constraints (FERREIRA COSTA, 2015: 1).

For the Government of Brazil (GoB, 2015) a relevant aspect of its foreign policy is evident. The social dimension is at the heart of Brazil's climate adaptation and mitigation strategies as well as the need to institutionalize the protection of vulnerable from the negative effects of climate change and strength their resilience. It has been framed around the idea of Brazil as a value-creating actor, claiming significant value characteristics at the core of its approach to regional and global affairs placing itself as a “bridge” between the South and the North. They believe it could allow its diplomats to establish the country as a critical coalition organizer and ideational leader for southern actors looking for major changes in global governance systems, and a central interlocutor for northern actors trying to cope with pressure from the South (BURGES, 2013: 577).

However, it was only in the 1990s that concepts of justice became part of the climate debate in social movements in Brazil, and the creation of the Environmental Justice Network (Rede Brasileira de Justiça Ambiental), in 2001, helped to give an interpretation of the environmental justice developed in the country. In spite of being a network with almost 100 NGOs characterized by the study of inter- transdisciplinary organizational processes (de FREITAS *et al.*, 2009) and participatory processes (PORTO and MILANEZ, 2009) it is only associated with urban social movements in the South and Southeast of the country addressing different aspects of the climate debate.

In this research, we consider that it is impossible to separate the environmental and agrarian questions when it comes to discussing environmental governance in Brazil, a shared point of view by Oliveira (2010). However, taking into account the main focus of this research - how fairness and equity are really addressed at different levels in the country -, we opted to base it on actors and mechanisms in the northern region, where the profile of the main actors is quite different, marked by a strong presence of research institutions and research-oriented NGOs, such as IPAM, INPA, INPE, AMAZON, TCN,

as well as Universities and independent scientists that usually link climate justice to social justice (SEGEBART and KONIG, 2011).

As stated by Milanez and Fonseca (2011: p.1), internally, Brazil's environmental justice movement has emerged quite recently despite the fact that Brazil's environmental discourse and actions related to the climate regime are seen as very strategically important internationally as strongly influenced by the government. Its strategic positioning is strongly marked by the creation of the Forum Clima^{iv}, aimed at inducing debates and political mobilization whereas others environmental issues are generally relegated to a second plan and organized by social movements, workers' unions, environmental organizations and ethnic groups.

Despite this recognised value, according to Miccolis *et al.*, (2014: 26) major infrastructure and energy projects may damage Brazil's international image and are also seen as being underpinned by mainstream development policies benefitting corporate farming, mining and industrial interests, often at the expense of conservation and livelihoods of smallholder farmers and traditional communities as many projects under development in the country, mostly in the Amazon basin, have been pushing forth without adopting recommended social and environmental safeguards, often bypassing judicial rulings, such as in the case of the Belo Monte hydroelectric power plant (IPAM/IMAZON/ISA, 2013).

It is also important to be accountable for the current political crisis in Brazil. The three branches of government are currently in conflict, and today the elected ruling party (Worker's Party – PT) has no representation and lack of support in the Brazilian Congress. This political instability is reflected by the adoption of conservative laws and amendments that deconstruct many socioenvironmental advances of recent decades. The most recent example is given by the approval of the constitutional amendment (PEC 65), proposed in 2012 by Senator Acir Gurgacz (PDT-RO) and currently reported by Senator Maggi (PR-MT). It provides that, from the simple presentation of a study of Environmental Impact Assessment (EIA) by a contractor, no project may be further suspended or canceled. In practice, it means that the environmental licensing process, which examines whether a project is feasible or not from the social and environmental impacts that can be generated, ceases to exist^v. The approval of this constitutional amendment may be seen as a clear contradiction between the Brazilian international discourse and national and sub-national policy development and political action.

In addition, an overall analysis of Brazil's policy framework shows additional contradictions and constraints that still need to be addressed in the long run such as trends and disparities in rural credit and finance policies. Issues that may be deleterious in the long run when considering the adoption of fairness and equity in climate and conservation policies. Available data suggests that the scales are heavily tipped in favor of large-scale farming as opposed to family farming (HEREDIA *et al.*, 2010; FERNANDES *et al.*, 2012). Moreover, while substantial funding is being invested in programs such as the ABC to promote low-carbon agricultural practices (USD 1.58 billion in 2013), much larger sums of funding have been allocated to support large-scale farming activities (USD 56.7 billion in 2013). A situation that seems contradictory considering Brazil's international positioning and local development policies.

A lingering question emerges from this research. How to address such contradictions, concerning the adoption of fairness and equity in international, national and sub-national climate and conservation policies and in its local political actions, while at the same time foresee the overall extent and effectiveness of environmental measures that could be maintained to promote sustainable development as well as be accountable to the public opinion and respond to market pressures?

Despite internal challenges, Brown and Taylor (2015) described Brazil as a committed country acting to increase resilience and adaptation responses while encouraging local and regional climate change plans and strategies. Cohen (2012: 50) states that abroad and at home, the Brazilian government continues to paint itself as a great green mediator between Global North and South, using regulation and market-based mechanisms to slow deforestation and to innovate in biofuel as well as lead several initiatives conducted by the private sector to induce a more sustainable land use and bioenergy production such as the soybean moratorium and "soja" plus (soybean in Brazilian Portuguese), which aims to promote a sustainable supply chain in the soybean sector through social-environmental assessments and compliance with basic sustainability guidelines, where major companies have also joined hands in the wider Working Group on Sustainability in Agribusiness, while in the ranching sector, major companies set up the Working Group on Sustainable Ranching, opening their books to external audits examining their supply chains for suppliers causing deforestation and compliance with the so-called "Cattle Agreements" (GTS, 2013; GTPS, 2014; MICCOLIS *et al.*, 2014).

Internationally, it seems the Government of Brazil (GoB) has been trying to put into focus ethical obligations to those who are most vulnerable (NPCC, 2007:7-8, 13; 19-21; 84) as well as trying to include perspectives of fairness, justice, and equity in its international positioning. It is remarkable reported in international communications and in training and cooperation initiatives in relation to national, regional and international capacity building with others developing nations (South/South cooperation) and triangular cooperations (North-South/South) (MCT, 2010: 464; 473-474; 478-479).

Brazil's orientation on international climate negotiations seems to have a broad scope including mitigation, adaptation and means of implementation, consistent with the contributions' purpose to achieve the ultimate objective of the Convention, pursuant to the decision 1/CP.20, paragraph 9 (Lima Call for Climate Action^{vi}), at the same time that its policies, measures, and actions related to climate negotiations are carried out under a "comprehensive" legislation^{vii} and related instruments, programs and planning processes. In addition, the Government of Brazil has been trying to put the most vulnerable first, at least in its discourse, by the inclusion of actions to increase resilience and reduce risks associated with the negative effects of climate change, especially for the poorest parts of the population, with attention to gender issues, the rights of workers and of indigenous and traditional communities with full respect to human rights, in particular rights of vulnerable communities, while promoting gender-responsive measures, addressing fairness and equity issues in the context of the design of new public policies, through its National Adaptation Plan (NAP^{viii}), which is in its final elaboration phase.

In addition, Brazil addresses fairness and equity placing itself as a developing country as it still has 14.145.859 people living below the poverty line, of which 5.162.737 live in extreme poverty (MDS/PNAD, 2014), basing its commitments on flexible pathways to achieve its National 2025 and 2030 objectives in the context of the several challenges concerning poverty eradication.

When addressing fairness, Brazil seems to be willing to further enhance its contribution towards achieving the objective of the Convention, in the context of sustainable development although recognizing that emissions will grow to meet social and development needs compared to current levels. Notwithstanding, it has been delinking economic growth from emission increase over the period 2004-2012 as Brazil lifted more than 23 million people out of poverty, at the same time that its GDP increased by 32% and emissions dropped 52% (GWP-100; IPCC/AR5, 2014). A

possible explanation for this success lies in the fact that most of Brazil's emissions reduction were caused by a dropped in the deforestation and land-use change in all biomes, mainly in the Amazon basin, combined with successful income-transfer policies aligned with the market, such as the "Bolsa Família".

Brazil's intentions to reduce greenhouse gas emissions in the context of expected continued population and GDP growth as well as income per capita increase makes this contribution unequivocally very ambitious, at the same time hard to succeed under the unfold political situation and considering the fact that Brazil's population is projected to continue to grow until the 2040's, to approximately 230 million inhabitants (IBGE, 2013), creating a scenario of increasing pressure over natural resources.

Moreover, taking into account questions of equity in its plans, Brazil calls for historical responsibility not only from developed countries. It apparently recognizes its relative responsibility as well as of others emerging economies when states that "most" of the current concentration of greenhouse gases in the atmosphere is a result of emissions since the industrial revolution up till now (the post-1750 period). It also claims that in order to build a fair and equitable global response to climate change it is, therefore, of central importance to link cause (net anthropogenic greenhouse gas emissions) and effect (temperature increase and global climate change), in relation to the global mean surface temperature increase. It can be linked to the relative responsibility of each country with a high level of confidence by establishing series, in all sectors, of anthropogenic greenhouse gas emissions by sources and removals by sinks, allowing the estimation of the relative share of total temperature increase attributable to an individual country. Nevertheless, this technical discussion is beyond the scope of this article to investigate fully this debate.

Brazil's mitigation efforts seems to be of a type, scope and scale at least equivalent to the iNDCs of those developed countries, which according to Brazilians diplomats are most responsible for climate change, independently of the many different ways to compare national responsibility – current emissions (in absolute figures or on a per capita basis), historical emissions or based on the carbon footprint of consumption. Notwithstanding, Brazil calls its own responsibility when it includes deforestation and current and future extraction of fossil fuels in the "pré-sal".

In view of the above, and based on available tools, Brazil, in its INDC, truly believe that address equity and fairness, in a far more ambitious way than what would correspond to its marginal relative responsibility considering potential climate-related

risks. Although there is a visible lack of articulation and alignment between international and national/sub-national policies.

Perspectives and Challenges of Innovation in Governance

According to Alberti and Bertucci (2006), documenting and sharing innovations in public policies is a very important tool in fostering innovation in government and promoting development. Despite the wealth of good examples around the world, the challenge is to distinguish between cases that are indeed best practices in governance and cases that do not fall under this category. In other words, what has been presented as an innovative practice may not always be a successful long-term experience that can be disseminated to other countries. In general terms, innovation in governance is a creative idea which is successfully implemented to solve a pressing public problem. It is the act of conceiving and implementing a new way of achieving a result and/or performing work. An innovation may involve the incorporation of new elements, a new combination of existing elements or a significant change or departure from the traditional way of doing things. It refers to new products, new policies and programs, new approaches, and new processes.

Key Innovative Climate Change and Environmental Governance Policy

Governments of various countries have been seeking to adapt, as far as possible and with different intensities, to the global trend of reducing the state's role, due to economic pressures and the emergence of new actors. At the same time, it has increased the participation of civil society in the formulation and implementation of public policies, which causes significant changes in the composition of stakeholders and decision-makers (CÂMARA, 2013). In this regard, since the 1980s Brazil has experienced the emergence of social movements as well as to the processes by which modern, democratic social actors have emerged and acquired a new democratic identity. They started to pressure the state and the political system to adapt to a new conception of modern democratic institutions, with greater performance and accountability in the formulation and implementation of inherent public policy actions (JACOBI, 2006).

With the advent of the 1988 Constitution, increasing social participation in policy-making processes as well as growing pressures from civil society and

environmental groups, both nationally and internationally, led to the emergence of a series of new governance initiatives aimed at combat environmental degradation, mainly with the goal of curtailing deforestation and reducing GHG emissions in Brazil (NEPSTAD *et al.*, 2014).

In addition, the institutionalization of the National Environmental Policy in Brazil has sought to incorporate principles of democratization of public policies, social participation in the decision-making process and state decentralized action by the institutionalization of the CONAMA^{ix} with the creation of several state and municipal councils providing the participation of various social actors in the environmental governance building process. A process strongly marked by national induction processes aimed at establishing governance mechanisms, focusing on public sector reforms and strengthening participation and empowerment of civil society in public policy (CÂMARA, 2013: 137).

The analysis of this process leads us to the concept of decentralization, which seems to be halfway to its complete implementation in Brazil as it requires bodies and local authorities with enough power to establish rules and standards on their own and independently. Nonetheless, it does not absolve the state control to ensure the balanced care of local and national interests of society as a whole and not only of stronger and more organized groups (SANTOS, 1997).

Some authors have claimed that in democratic countries special interest groups may enjoy disproportionate influence on policymaking (MANCUR, 1965; 1982; MIDLARSKY, 1998) as decentralization can have negative environmental impacts if local governments lack the capacity for good governance, and traditional local powers have too much influence on what are often politically weak environmental departments, influencing enforcement of environmental legislation (RIBOT, 2004). A fact that, obviously, may negatively affect the discussion and implementation of fairness, equity and justice issues in the political dialogue and action.

Innovative Governance Mechanisms - Green Municipalities Program

The three branches of government in Brazil have historically issued a series of decrees and norms aimed at combating deforestation in the Amazon, usually by restricting credit to activities associated with illegal deforestation, but the effect of these policies was expressionless or short due to the fact that, commonly, it was the market

itself that most influenced deforestation rates (BARRETO and ARAÚJO, 2012). A situation that started to change when, according to Maia *et al.*, (2011) and Viana *et al.*, (2012), an increased awareness among farmers about the market forces and its consequences as well as command and control policies^x proved successful in reducing environmental degradation compared to isolated punitive measures intended to promote sustainable land use. As a result, new hybrid and multi-level governance arrangements started to emerge as part of ongoing efforts to promote compliance with environmental and social laws, as well as to the need of alignment to a new international positioning and modern national and subnational policies in Brazil.

A visible shift from merely regulatory or repressive initiatives is currently taking place towards more participatory processes as the traditional *modus operandi* that proved unable to alter the dynamics of productive activities linked to deforestation and at the same time promote a new sustainable economic base in the country. In addition, the raising awareness created by this process, concerning conservation and environmental issues, has been developing a new mentality among the stakeholders and in a higher and continuing commitment in ordering environmental conservation processes in local communities albeit small farmers and traditional communities still face challenges to actualize its inclusion as a group with decision-making power.

The strengthening of policies against deforestation has been influenced by recent discussions on climate change as it has mobilized different actors, mainly the Federal Government, NGOs and large national entrepreneurs against deforestation resulting in the creation of economic and political incentives to reduce deforestation and greenhouse gas emissions represented in the first Brazilian reduction target, established in 2009 (ANGELO, 2009).

Granted that, in the period 2004^{xi}-2009^{xii}, a set of government policies and actions of civil society helped Brazil to finally reduce deforestation more consistently, holding entire value chains accountable for illegal deforestation, especially logging and cattle, issuing hefty fines and shutting down illegal operations while also setting up a blacklist of perpetrators of deforestation and environmentally unsustainable municipalities.

In addition, in 2008, the Brazilian government published a Critical Deforestation List^{xiii}, initially listing 36 municipalities with the highest rates of deforestation in the Amazon as a policy measure to prioritize efforts to combat deforestation (VIANA *et al.*, 2012). This list was later updated to 43 municipalities^{xiv}, with critical levels of

deforestation and has been used as a key input for resource allocation through several environmental policies and programs (since then this list has been updated continuously).

The creation of this list prompted the municipality of Paragominas, in Pará State, to develop a program called “Green Municipality”, aiming to get the municipality off the blacklist and recover its dishonoured reputation but ended up going much further (GUIMARÃES *et al.*, 2011; GOVERNMENT OF THE STATE OF PARÁ, 2015).

Launched in March 2011^{xv}, this program was a local response to actions from the Federal Government and the Federal Public Ministry to combat deforestation in the Amazon during the first decade of the 21st Century. These measures resulted in the inclusion of 17 municipalities^{xvi} of the State of Pará in the Critical Deforestation List of the Ministry of Environment (MMA), later leading to the signing of Terms of Adjustment of Conduct by the meatpacking industry and livestock producers (GOVERNMENT OF THE STATE OF PARÁ, 2015). As a result, thousands of rural properties were embargoed creating negative social impacts caused by the cessation of irregular economic activities.

The program was enabled through partnerships and agreements between NGOs^{xvii} (The Nature Conservancy - TNC, and AMAZON^{xviii}), municipal governments, large-farmers, ranchers and other stakeholders at the local level. In a nutshell, this program has been described by GUIMARÃES *et al.*, (2011); VIANA *et al.*, (2012), and; MICCOLIS *et al.*, (2014), as an innovative governance mechanism aimed at reducing deforestation and promoting more sustainable value chains at the municipal level by bringing stakeholders together to establish natural resource and land use management pacts and by providing technical assistance for the adoption of more sustainable production techniques, coupled with land tenure and environmental regularization.

Such a co-management of natural resources under this governance mechanism is enabled by pooling public and private resources to implement existing provisions for environmental protection under the Brazilian Forest Code, such as legal reserves and permanent preservation areas and leveraging licensing mechanisms such as the Rural Environmental Registry (CAR), but also by increasing adoption of sustainable forest management, agricultural and grazing practices (GUIMARÃES *et al.*, 2011). In addition, in 2010, the Ministry of Agriculture established the sectoral plan for climate change mitigation and adaptation for solidifying a low-carbon emission economy in

agriculture known as the ABC program through Decree 7390/2010 with the aim of organizing and planning measures to increase the adoption of low carbon production techniques (MAPA, 2013: 35). The ABC program established governance mechanisms that innovated by providing loans for production systems per se as opposed to just targeting credits for products or value chains (ASSAD, 2013).

The Green Municipalities Program has been useful to raise awareness and commitment among local stakeholders through municipal agreements to combat deforestation. The municipalities under this program are classified according to their characteristics of vegetation cover, deforestation and environmental and agricultural system, which allows the evaluation of performance taking into account environmental and economic particularities of each municipality. Strategies are developed in line with the needed intervention accentuated by the PAS - actions of the Sustainable Amazon Plan (another state program covering the entire state of Pará). The Green Municipalities Program actions have the same basis, with the difference that the state program contains a specific axis for a shared environmental management since it prioritizes the decentralization of management in these municipalities.

Different authors point, precisely, the effective political coordination between stakeholders as well as a clear role definition among partners as the main key features supporting the Green Municipalities Program. Unlike what occurs in most programs in developing countries. However, some features of the Green Municipalities Program are a reflexion of local actors alignment with federal and state public policies to combat deforestation and promote sustainable development in the Amazon, especially under the actions of the Sustainable Amazon Plan (PAS), the Action Plan for Prevention and Control of Deforestation in the Legal Amazon (PPCDAM) and the Plan for Prevention, Control and Alternatives to Deforestation in the State of Pará (PPCAD). We believe that this set of policies and programs as well as intrinsic characteristics in some municipalities combined with the political momentum are the main elements responsible for the successful implementation of this process when addressing the reduction of deforestation alone.

As stated by Viana *et al.*, (2012: 3) the decentralization of environmental policies can be positive if it delivers more power to the hands of municipal actors, allowing for more flexibility and innovation in terms of partnerships in different social arenas as well as promoting the constitution of social arrangements compatible with local needs. A significant number of case studies in different parts of the world

demonstrate the effectiveness of participatory forest management (SANDBROOK *et al.*, 2010). Although shared responsibility may create gaps and overlaps of power, it can also make room for collaboration (TONI, 2006).

Unfortunately, not everything is like *la vie en rose*. According to Heredia *et al.*, (2010); Fernandes *et al.*, (2012), Viana *et al.*, (2012) and Ferreira Costa (2014), smallholders all over the country still lack access to credit from banks, and/or may be burdened by high debts as well as face negative experiences by failed alternative production activities, result of lack of technical assistance, low-quality inputs, and/or bad transport infrastructure. A situation that contrasts with public policies and social reforms aligned with the market systematically developed by recent governments that have contributed in the fight against rural poverty and environmental degradation (FERREIRA COSTA, 2014).

Therefore, many of the small farmers saw little benefits from committing to this programme (zero deforestation) as the market-driven components of many programs may have contributed towards the lack of participation of this kind of actor as the perceived benefits of their collaboration did not exceed the costs from complying with the rules, which in this case would have meant sacrificing traditional agricultural practices resulting in negative implications for the practical adoption of issues related to justice and equity.

In this regard, Brazil's overriding challenge in the policy arena seems to be harmonizing and effectively coordinating its different policy agendas in different government levels to address fairness and equity. It demands a strong coordination at their various levels of implementation - international, national and sub-national - so as to effectively manage trade-offs between their disparate goals and actors. Nepstad *et al.*, (2014) addresses this question, at least in the context of the Amazon basin, when he states that punitive measures need to be complemented by positive incentives and finance at scale for landholders, smallholders farmers, indigenous communities, counties, and States to allow a sustainable transition to achieve lower deforestation rates, greenhouse gas emissions reductions, productive inclusion and sustainable rural development.

Final Considerations

In recent years, the use of natural resources in Brazil has been generally regulated by institutions formed by the search for consensus to improve access to all, reducing imbalances and injustices among stakeholders and decision-makers, aimed at developing a participatory process to reduce historical privileges to some and restrictions to others. In this regard, the country has made significant progress in building a reputation for sound environmental policy since it passed the 1988 Constitution and a series of environmental Laws at the end of the 20th and in the beginning of the 21st Century. However, the implementation of conservation and environmental policies has become more difficult as the necessity to meet national development pressures increased, which may have corresponded to its new global repositioning as an emerging leader in the climate regime in the last decades.

Owing to its high socioeconomic inequality levels and the environmental pressure caused by some structural factors, the social-environmental outlook is likely to become still more challenging in the longer run as Brazil is set to demand more natural resources to implement its development's plans and projects as well as to fit into recently established environmental regimes accorded in international forums.

Notwithstanding, stakeholders, and Brazil's authorities have recognized these challenges and, so far, have been showing a relative commitment to adjusting public policies by improving participatory processes introducing fairness and equity issues, at least in international negotiations. It seems they have been trying to implement structural measures to enhance the efficiency and shared responsibility to achieve medium/long-term policy objectives even in the face of some recent setbacks such as the adoption of a New Forest Code, in 2012, and the possible approval of the PEC 65 that favors large agricultural producers and large landowners.

The recent reduction of Amazon deforestation and the relative decline in emissions is still celebrated with the advent of policies and programs that included a myriad of actors addressing market-based policies that guarantee some encouragement in the reduction of environmental degradation rates. Notwithstanding, to actualize issues of justice and equity, the government still must create conditions to include smallholders farmers and traditional communities in this equation, in order to guarantee a real promotion of governance to put its discourse into practice.

Nevertheless, the concept of "innovation" in the environmental governance schemes in Brazil still seems to be quite conflicting. The reduction of environmental degradation, as well as the lift of people out of poverty (by the adoption of public

policies based on the market and income transfer, which has proved promising), may not be sustainable in the long run. Apparently, traditional power structures in the country have not changed, as it is usually represented by large landowners and livestock farmers who have the power to legislate in their favor, and only adapt their behavior in response to international market pressures. Time is still needed to make sure that currently, participatory processes under development will prove sustainable and replicable as a fact. The promotion of social inclusion and the reduction of the rampant exploitation of Brazilian biomes is still necessary, as well as studies to better understand how governance mechanisms will develop to large landowners and cattle breeders response when some of their interests will be affected in this process.

At the same time, another important question concerning innovative governance mechanisms arises. It seems that such mechanisms follow an old recipe: they only seek to meet external pressures to maintain the exportation of raw materials as Brazil have done since the beginning of its history. For this reason, this novelty seems to be associated with traditional patterns.

It is also very important to bear in mind that innovation in governance is not an end in itself. Indeed, it is a way to improve public administration in order to enhance the quality of life for all citizens as well as to promote sustainable development. In addition, innovation in governance should be understood as a complementary mechanism to reinforcing democratic governance but not as a substitute for the responsibility of existing institutions, including the three branches of government, public administration, and market forces as well as the people. Traditional communities and smallholders farmers still lack a voice in the decision-making as well as the lack of financial viability to environmental and socially sustainable projects, despite the evolution of participatory processes and the creation of advanced regulatory mechanisms. Innovation in Climate Policy and Governance requires the participation and mobilization of the many different groups of society and of world public opinion in order to neutralize the aggressive lobbying of firms and sectors committed to maintaining the *status quo*. It should be very representative in Brazil, as fairness, justice, and equity implications in Innovative Governance Mechanisms may have not yet reached a positive correlation between the improvement of life and the reduction of inequalities as well as between the reduction of inequalities and the promotion of environmental sustainability. This situation states a clear contradiction between the Brazilian discourse in the international arena and its political action in national and sub-national policies.

As in the case of the Green Municipalities Program, although many aspects indicate a truly voluntary innovation. It seems it was more aspirational to improve the image of the municipalities and to respond to market demands than effectively address environmental problems. Thus, we believe that fairness and equity implications in environmental governance can not be treated as marginal issues if there is a real political will to face environmental challenges. The approach to this theme can not be merely related to the reduction of image damage, much less supported by transitional political motivations.

Granted that and considering the ongoing environmental policy development in Brazil it is possible to draw initial conclusions concerning the adoption of fairness and equity in International, National and Sub-National policies and programs in Brazil. It has been marked by strong contradictions and constraints that still need to be addressed in the short, medium and long run. Considering the Green Municipalities Program, it still needs to prove itself sustainable on the medium and long-term. An important indicator could be the maintenance of forest cover. Since this was one of the main factors that contributed to the emergence of this new governance arrangement. A previously opulent and generous forest cover, natural resources and biodiversity have already been severely overexploited and depleted to maintain the agricultural's remaining productivity.

Funding

Erasmus Mundus SMART2 support (Project Reference: 552042-EM-1-2014-1-FR-ERA MUNDUS-MA2) coordinated by CENTRALESUPELEC

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Notes

ⁱ Not considering removals.

ⁱⁱ Value between 1.977 GtCO₂e and 2.068 GtCO₂e, which represents a reduction between 36.1% and 38.9% below the projected business as usual emissions in 2020, as established by the Decree 7,390/2010 – assuming GWP-100 (IPCC SAR).

ⁱⁱⁱ Environmental Rural Registry (CAR), comprised of an electronic registration system drawing together information on protected areas on private lands as required by law, namely PPAs and LRs, data on forests and native vegetation, as well as human occupation and activities. Rural properties has, initially, until 2015 to be registered in this geo-referenced system, which will be required for issuing any environmental licenses, while also allowing state and federal environmental agencies to compare stated vs. actual land use through satellite images.

^{iv} The Brazilian Forum on Climate Change, established by Decree 3515 of June 20, 2000, aims to raise awareness and mobilize society for discussion and position on the problems arising from climate change by greenhouse gases emissions as well as on the Clean Development Mechanism (CDM) defined in Article 12 of the Kyoto Protocol to the United Nations Framework Convention on Climate Change ratified by the National Congress through Legislative Decree 1 of February 3, 1994.

^v The environmental licensing, whether made by IBAMA or State agencies, states that any project has to go through three technical evaluation stages. To check the feasibility of a project, it first demand environmental impact studies to receive an environmental license. To obtain prior license, the entrepreneur still needs a site license, which allows the effective start of the project, a process that is also monitored and that can result in new constraints measures. In the third stage, it is given an operating license authorizing the use of the enterprise, be it a road, a dam or an oil rig. What the PEC 65 does is ignore these three steps. As said by the Federal Public Ministry, Sandra Cureau, this ends up with the Brazilian Environmental Legislation. The PEC 65/2012 still must pass a vote in the full Senate. If approved, the proposal will go to procedure in the Lower House and then return to the Senate. To finally, follow the presidential sanction (another problem is that no one knows who will be the president in the next months).

^{vi} Decision 1/CP.20. Lima call for climate action. Paragraph 9 reiterates its invitation to each Party to communicate to the secretariat its intended nationally determined contribution towards achieving the objective of the Convention as set out in its Article 2. Available at: <<https://unfccc.int>>.

^{vii} The National Policy on Climate Change (Law 12187/2009), the Law on the Protection of Native Forests (Law 12651/2012, the Forest Code), the Law on the National System of Conservation Units (Law 9985/2000).

^{viii} The National Adaptation Plan to Climate Change (NAP) is a tool under development by the Federal Government in collaboration with civil society, private sector and state governments that aims to promote the reduction of national vulnerability to climate change and risk management associated with this phenomenon. The NAP development involves the participation of various ministries and the Brazilian Forum on Climate Change. It is a participative process embedded on governance . Volume I : Estratégia Geral . Versão Consulta Pública . Available at: <<http://hotsite.mma.gov.br>>.

^{ix} National Environment Council (Brazil) CONAMA was created through Law 6938 issued on August 31, 1981, which instituted the National Environment Policy. The competence of the Council is set by the above Law, regulated by Decree 99274 issued on June 6, 1990 and its posterior alterations. CONAMA is in fact one of the world's rare environment parliaments. Its composition is decided by the powers of the Brazilian Federation and includes representatives from all States of the Brazilian Federation as well as the Federal District of Brasilia and, apart from the elected members and those appointed by the most representative entities of the economic, includes the industrial and agricultural sectors, members that represent civil society through environmental entities of the Republic, and the Federal Government through its main Ministries. Resolutions are reached through voting by the 109 members. Ministry of the Environment of Brazil. Available at: <<http://www.mma.gov.br/port/conama/>>.

^x (i) Restriction of Rural Credit - Resolution 3545, of February 29, 2008, of the National Monetary Council that requires environmental and agrarian regularity to finance agricultural and livestock projects in the Amazon Biome; (ii) List of Municipalities that Deforested in the Amazon and imposition of various administrative restrictions to those municipalities. Procedure under the Federal Decree 6321/2008, the first list published by the MMA goattending 28 municipalities in January 24, 2008; (iii) List of Embargoed Areas – Publication by the IBAMA of the list of rural properties and owners who received environmental embargoes as a result of deforestation, based in the Article 18, § the 1st, in the Federal Decree 6514/2008. The list may be conferred at: <http://siscom.ibama.gov.br/>; (iv) Ownership of the meat production chain as a result of the regulations of the Law on Environmental Crimes, who blamed all actors, in the production chain, that would acquire products from embargoed areas, according to Article 54 of the Federal Decree 6514/2008, and the action of the Federal Public Ministry (MPF) which resulted in the signing of a TAC (Terms of Adjustment of Conduct - Termos de Ajustamento de Conduta) forcing sector companies, in the meatpacking industry, to buy cattle from legalized ranches, according to TerraClass Data (a project developed by Embrapa and INPE. Available at: http://www.inpe.br/cra/projetos_pesquisas/terraclass2010.php); (v) Strengthening control operations that were more effective and consistent, as the apprehension of machines, products (wood, coal, grains) and animals in rural properties with illegal deforestation (eg, operation Arc of Fire and Pirate Ox). In addition, Brazil assumed an international commitment at COP-15 (Copenhagen) to reduce deforestation by 80% until 2020, calculated on the average of the years 1996-2005, which corresponds to 19.600 km².

^{xi} In 2004, the Federal Government launched the Action Plan for Prevention and Control of Deforestation in the Brazilian Legal Amazon (PPCDAm). It consisted of a set of policies structured around three objectives: (i) regulating land tenure and zoning land use, (ii) monitoring land conversion, and (iii) incentives for sustainable activities.

^{xii} The Presidency of the Republic launched the Decree 6321/2008 and Portaria MMA 28/2008, focused on the fight against deforestation on selected municipalities in the Brazilian Amazon. Portaria MMA 103/2009, modified the criteria for exiting the Critical Deforestation List, which became the following: (a) have at least 80% of the territory on private lands monitored through rural environmental registration (Cadastro Ambiental Rural – CAR), by georeferencing of properties' boundaries, areas under permanent protection and legal reserves; (b) 2008 deforestation be ≤40km², and (c) annual deforestation mean of the years 2007 and 2008 ≤60% of the mean observed in the 2004-2006 period. In addition, the Federal Government gave priority to municipalities that exit the Critical Deforestation List for access to credit and federal programs and projects that aim to incentivize sustainable activities such as forest plantations, agroforestry,

and sustainable agriculture and cattle ranching - Portaria MMA 67/2010 -, as well as other norms such as, Portaria MMA 102/2009, Portaria MMA 138/2011, Resolução Bacen 3, 545/2008.

^{xiii}The Critical Deforestation List is based on three criteria that evaluate the historic dynamic of deforestation at the municipal level: (a) total area deforested, (b) total area deforested in the previous 3 years, and (c) an increase in deforestation rates in at least 3 of the previous 5 years (Viana *et al.*, 2012).

^{xiv}Links between deforestation and land tenure status are undeniable as about three-quarters of rural properties in the Brazilian Amazon region do not meet the requirements of the Rural Environmental Registry (CAR) because of non-titled land. Under Law 11952 of 2009, the Ministry of Agrarian Development set up an initiative aimed at legalizing land tenure known as Arco Verde Terra Legal (Green Arc Legal Land), which drew together several ministries and federal agencies focusing initially on the 36, later on the 43 municipalities with highest deforestation rates in the States of Amazonas, Maranhão, Mato Grosso, Pará, Rondônia and Roraima (Barreto and Araújo, 2012).

^{xv} Through the State Decree 54/2011. Available at: <http://municipiosverdes.com.br/>.

^{xvi} Altamira, Brasil Novo, Cumaru do Norte, Dom Eliseu, Novo Progresso, Novo Repartimento, Paragominas, Rondon do Pará, Santa Maria das Barreiras, Santana do Araguaia, São Félix do Xingu, Ulianópolis (MMA Decree 28/2008); Itupiranga, Marabá, Pacaya, Tailândia (MMA Decree 102/2009); y Moju (MMA Decree 175/2011). The municipalities of Paragominas, Santana do Araguaia, Dom Eliseu and Ulianópolis left the Critical Deforestation List a few years later. Paragominas was the first, in 2010 - reducing by more than 90% local rates of deforestation and forest degradation, followed by three others in 2012 (Government of the State of Pará, 2015).

^{xvii}The Nature Conservancy and IMAZON in partnership with the municipal government in Paragominas initiated a series of meetings with rural landowners, resulting in a pact for zero deforestation and definition of an action plan that triggered initiatives for promoting more sustainable land-use practices and exiting the Critical Deforestation List.

^{xviii}Imazon supports the consolidation of a socioenvironmental management model and the Rural Environmental Cadastre in eleven municipalities in the Amazon through monitoring of forest cover and GHG emissions, socioeconomic and forest diagnostics and training of agents aiming at reducing deforestation, forest degradation and associated carbon emissions.