

## Governance of global climate change in the Brazilian Amazon: the case of Amazonian municipalities of Brazil

*Governança da mudança climática global na Amazônia brasileira: o caso dos municípios amazonenses no Brasil*

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Global climate change disregarded one of the most pressing scientific and political contemporary challenges (Bulkeley and Newell 2010). Stern contends that “climate change is global in its causes and consequences, and international collective action will be critical in driving an effective, efficient and equitable response on the scale required,” which means deeper international cooperation in many areas – creating price signals and markets for carbon, spurring technology research, development and deployment, and promoting adaptation, particularly for developing countries (Stern 2009, n.p.). Governance of climate change is part of a multilayered process, that encompasses modern forms of steering that are often decentralized, open to self-organization and less hierarchical than traditional governmental policymaking (Biermann et al. 2009). As such it involves multiple actors, scales and dynamics from global to local levels, whose actions combine to respond to climate change.

Amazonian municipalities of Brazil are involved in global climate governance. This article identifies two different dynamics, which are complementary, and have some areas of intertwinement. The first dynamic is linked to the national policy to control deforestation. The federal government started to publish lists of the municipalities with highest deforestation rates, a “name and shame” strategy that has forced many of them to react. As a result many multilevel arrangements evolved with municipalities, the federal government, international cooperation agencies, and NGOs to help the municipal governments to meet the conditions to be out of the list. The second dynamic can be characterized by the initiatives taken by municipalities to get involved in the international negotiation processes focusing on the United Nations Framework Convention on Climate Change (UNFCCC) and the Reducing Emissions from Deforestation and Forest Degradation

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(REDD+) mechanisms<sup>1</sup>, they have strengthened subnational, national, regional and transnational networks, as well as have made commitments to mitigate and to find ways to adapt to global climate change. Local governments of the Amazon have taken part in global climate change politics.

In the debate about the governance of climate change, the Amazon region should be considered because of its role in driving the change and also because the area is very vulnerable to global climate change. Deforestation<sup>2</sup> has played a significant role in this context. For Stern, halting deforestation falls into the three broad categories of actions that must be taken to cut emissions<sup>3</sup>. The Brazilian government has recognized the relations between forest and climate change. In December 2009, the National Policy on Climate Change was sanctioned as a national law. Among its main instruments is the Action Plan to Prevent and Control Deforestation in the Amazon. According to Nobre (1991, apud Nobre et al. 2007), the ecosystems of Amazonia are subjected to a combination of environmental drivers like land use change, fires, global climate change and climate extremes. Those drivers interact and can result in the “savannization” of parts of the Amazonian region, severe species depletion, and potential loss of environmental services, as, for instance, carbon stocking, in a scenario without governance (Nobre et al. 2007). The local population<sup>4</sup> will mostly feel these impacts.

The challenges of governance of climate change are related to the fact that even though the region will be impacted, drivers of deforestation are linked to economic activities like logging, cattle ranching, soy harvesting, and mining, as well as to public investments in infrastructure like roads and hydropower plants (Margulis 2003, Smeraldi 2008), all of which have played a significant role in the economic growth of the region and of Brazil.

The aim of this article is to discuss how some Amazonian municipalities of Brazil have been taking part of processes of climate governance. Two concepts will be used to frame the discussion: one is the concept of “governors” (Avant et al. 2010): authorities who exercise power across the border for purposes of affecting policy. The other is “agent” (Schroeder 2010, Dellas et al. 2011): actors who have the ability to prescribe behavior. Based on these concepts, the article will analyze

1 The concept was extended and known as REDD+, which refers to the development of a mechanism or a policy that should cover ways of providing positive incentives for developing countries to reduce emissions from deforestation and forest degradation, to increase forest carbon stocks; to adopt sustainable forest management and forest conservation strategies. Available at <<http://www.ipam.org.br/saiba-mais/O-que-e-e-como-surgiu-o-REDD-/3#>>, accessed July 19, 2012.

2 In 2005, Brazilian emissions were around 2,192 billion tons/year of Greenhouse Gases (CO<sub>2</sub> equivalent). Most of its GHG emissions were from land use change and forest conversion representing 61% of the emissions; agriculture comes next with 19% and energy with 15%.

3 The actions needed to cut emissions fall broadly into three categories: energy efficiency, low-carbon technologies, and a halt to deforestation. Stern, Nicholas – Created 3/24/2009 – 10:12 Published on Development in a Changing Climate (available at <<http://climatechangeblog.worldbank.org>>).

4 Around 20 million people. Available at <<http://portalamazonia.globo.com/pscript/amazoniadeaaz/artigoAZ.php?idAz=266>>, accessed March 19, 2012.

to what extent it is possible to view these actors as agents in the process of climate governance and how they interact to create issues, set agendas, and establish and implement rules.

The article is divided in three parts. In the first, it discusses the concepts of climate governance, agency and scale, which provide a framework for understanding how local governments can exert agency in climate governance and possible limitations for that because of scale politics. In the second section, it describes examples of how Amazonian municipalities of Brazil have been acting on climate governance. In the final concluding part, it discusses these examples and draws some preliminary conclusions about the role of Amazonian municipalities in climate governance. It argues that these municipalities still have to face many challenges to be agents in climate change governance. However, some seem to be trying to scale up and to participate in climate governance. More research must be carried out in order to fully access the possibilities and limitations for the Amazonian municipalities of Brazil to be agents in this process.

## Climate governance, agency and scale

For Avant et al. (2010, 14), global governance describes the different, policymaking activities that produce coordinated action in the absence of world government. Climate change has been seen as a global problem. However, according to Bulkeley and Newell (2010, 2–3), it is important to discuss the “global” character of the problem. They argue that how “global” is interpreted can lead to different understandings of where, and with whom, the challenge of addressing climate change lies. Most of the time, global refers to the physical nature of climate change, which leads to an understanding of being an international problem. While this is true, Bulkeley and Newell (2010, 2–3) consider alternative means through which the global nature of climate change could be understood. For instance, they consider the global processes through which emissions of GHG are generated, or the other scales of decision-making, which shape the trajectories of GHG emissions and the potential to adapt to climate change. Thus, they remind that many scholars suggest that climate change needs to be considered a multilevel problem that encompasses different levels of decision-making – local, regional, national, and international – and new spheres and arenas of governance that cut across such boundaries. All of these are involved in creating and addressing climate change.

Bulkeley and Newell (2010, 2) state that governing climate change is a complex process because of the multiple scales of political decision-making involved, the fragmented and blurred roles of the state and non-state actors, and the deeply embedded nature of many processes that lead to emissions of GHG. As a multilayered process, climate governance goes beyond the international regime built around the UNFCCC (Okereke et al. 2009). Okereke et al. (2009) argue

that the concept of climate governance focuses on how governing as a process takes place, acknowledges the multiple and relational nature of power and considers that state and society are intertwined. As such, the concept recognizes a wide range of actors that have participated in the process of governing climate change and points to the emergence of novel governance arrangements.

Avant et al. (2010) raise the question about the agents or governors in the processes of global governance. The authors define global governors as authorities that exercise power across borders for purposes of affecting policy. They also examine the various sources of authority that agents draw upon and identify five broad bases of authority for global governors – institutional, delegated, expert, principled, and capacity-based authority (Avant et al. 2010, 10). Dellas et al. (2011), however, question who are the ones that actually perform the tasks involved in governing, and indicate that consent is not the only source of authority and legitimacy. For them, agency is defined by the capacity of individual and collective actors to change the course of events or the outcome of processes once this capacity is based on authority and not force (Pattberg and Stripple 2008, 273–274 apud Dellas et al. 2011, 87).

In a study about indigenous peoples and avoided deforestation, Schroeder (2010) analyzes to what extent indigenous peoples can be seen as agents in designing REDD mechanisms under the UNFCCC. The author makes the distinction between actors and agents. The former can be individuals, organizations and networks that just participate in decision-making related to the earth system; the latter is an actor who is able to prescribe behavior and to obtain the consent of the governed, thus he/she is an authoritative actor – as such, an agent can directly shape outcomes (Schroeder 2010, 319–320).

Schroeder proposes a typology of agency that is also useful to analyze local governments' role in climate change governance. She highlights that agency may arise from the purposeful steering by constituents either directly by making steering decisions, or indirectly by influencing the decisions of other actors (Schroeder 2010, 322). Below, there is a table for Schroeder's typology of agency just to make it easier to relate the type of involvement and to the degree of agency she attributes.

**Table 1.** Types of involvement.

Type of involvement in policymaking	Degree of agency
(1) Being informed of facts and outcomes	None
(2) Being consulted and invited to provide input or feedback	Weak and indirect
(3) Being involved as a junior partner and ensured that views and concerns are reflected in the outcomes	Strong but indirect
(4) Being invited to collaborate on equal footing	Weak but direct
(5) Being empowered and conferred decision-making authority	Strong and direct

Source: Schroeder<sup>5</sup> (2010, 322) and International Association for Public Participation (IAP2).

5 Schroeder referred to <[http://www.iap2.org/associations/4748/files/IAP2%20Spectrum\\_vertical.pdf](http://www.iap2.org/associations/4748/files/IAP2%20Spectrum_vertical.pdf)>.

In this sense, actors can exercise different degrees of agency depending on the type of involvement in policymaking. Moreover, governance comprehends different tasks or policymaking activities (Avant et al. 2010, 14–16). There are four tasks or activities implicit in the governance process: setting agendas and creating issues, making rules, implementation and enforcement, and evaluating, monitoring, and adjudicating outcomes. Thus, global governors perform the combination of this set of policymaking activities that produce coordinated action in the absence of world government. While the view of Schroeder (2010) is useful to indicate different degrees of agency. The perspective of Avant et al. (2010) gives us a broader range of activities which actors can carry out to “govern,” or to exert agency.

Climate change is a global phenomenon. For Bierman (2006), spatial and social interdependencies are functions of the global system that can transform local environmental degradation into transregional, or global social, economic and political crises (Biermann 2006). That is why the governance process of climate change is multilevel. Schroeder (2010, 321) states that a global problem manifests nationally, regionally and locally. The responses to this kind of problems happen in the same way. The author points to a plethora of examples of engagement at the local level, like parallel initiatives, transnational networks and private-public partnerships that have emerged, many of which are governing earth system transformation in their own right.

As a process, governance can be built from top-down, from bottom-up, or as a mix of both. Gupta (2007) underlines that by framing problems along specific levels on different scales, the contours of the problem change and, hence, the solutions that are relevant. Accordingly, Bulkeley (2005) calls the attention to processes of scaling and rescaling and the ways in which they are intertwined with struggle for dominance and control. Thus, the socially and politically constructed nature of scale should also be considered (Bulkeley 2005, Lebel et al. 2005, Cash et al. 2006, Gupta 2007).

## Amazonian municipalities and the governance of climate change

Amazonian municipalities are part of the politics of global environmental change and climate governance. We should be aware of how interactions from global to local occur, and how they can drive the way governance arrangements are built enabling, fostering, constraining or hindering actor’s ability of prescribing behavior and participating in decision-making. Amazonian municipalities of Brazil can exert different degrees of agency, depending on their type of involvement in global climate policymaking (Schroeder 2010). Moreover, these municipalities can perform several tasks in climate governance besides rule making, like setting agendas and creating issues, implementation and enforcement, and evaluating, monitoring, and adjudicating outcomes (Avant et al. 2010). As mentioned, we consider two dynamics of climate governance. Below we discuss both of them.

## The national policy to combat deforestation and global multilevel arrangements involving municipalities

The Brazilian government sees control of deforestation as a goal that is broader than climate change mitigation, but it recognized the relationship in the national climate change law (Law no. 12,187, dated December 29, 2009). It was sanctioned right after the UNFCCC Conference of the Parts (COP) 15, when Brazil accepted to have voluntary emission reduction targets. Thus, deforestation control is a pillar of the national policy on climate change, and it is essential for Brazil to honor its emission reduction target (from 36.1% to 38.9% of emissions projected until 2020).

The Ministry of the Environment (MMA) stated that from 2004 to 2007, deforestation had decreased around 59% consecutively. However, in the second semester of 2007, the data indicated that there was a shift in the tendency, and deforestation had started to increase<sup>6</sup>. This fact was the main reason to change the focus and to target specific Amazonian municipalities in order to be more effective (MMA 2008)<sup>7</sup>. Decree no. 6,321/2007 was published in December, 2007<sup>8</sup>.

The policy innovated by determining that the MMA would annually publish a list of municipalities located in the Amazon Biome with the highest deforestation rates. Such municipalities should be identified by their records of deforestation rates measured by the National Institute of Spatial Research (INPE) in a time range of at least five years. The measures should be: total deforested area; total deforested area in the last three years; and an increase in the deforestation rates in at least three out of the last five years (Decree no. 6,321, December 21, 2007).

The main instruments of such policy were: the geo-referencing and registration – Rural Environmental Register (CAR) – on the state environmental organs (OEMA), the establishment of limits for deforestation in areas above 5 ha, and the restrictions of access to official credits (Resolution CMN/BACEN no. 3,545/2008). The decree was based on the idea of shared responsibility among the governments of the three levels of jurisdiction (federal, state and municipal), and also the agricultural business sector, considering the whole production chain (MMA 2008).

To be excluded from the list the municipalities would have to demonstrate that they control and monitor deforestation in 80% of their territories, without considering protected areas. For that purpose, most of the rural properties would have to obtain a CAR. Moreover, the municipalities would have to show deforestation rates to be below the limit for annual rate, and for the average rate of the last two years established by the MMA.

6 See <[http://www.inpe.br/noticias/noticia.php?Cod\\_Noticia=2175](http://www.inpe.br/noticias/noticia.php?Cod_Noticia=2175)>.

7 Telephone interview with an environmental analyst of the Ministry of the Environment (MMA), April 22, 2009.

8 It should be noticed that the set of instruments that were foreseen by the Decree had been planned for three years (Interview with an MMA officer, Brasília, March 5, 2012).

In 2008, the Ministry of Environment published the Ministerial Ordinance no. 28/2008 (MMA Ordinance no. 28/2008) with the first list of the municipalities with highest deforestation rates, which, altogether, were responsible for more than 50% of deforestation. Thirty-six municipalities were included in that list. In 2009, the Ministry published another Ministerial Ordinance adding seven other municipalities to the list of 36 (MMA Ordinance no. 103/2009)<sup>9</sup>, totaling 43 municipalities in the list.

In 2010, the MMA kept all the municipalities in the list but Paragominas, in Pará state, which was considered a municipality with deforestation monitored and under control, and was excluded from the List (Ordinances no. 66 no. 67, dated March 24, 2010). In 2011, only Querência (Mato Grosso) was excluded from the list for being considered a municipality with deforestation monitored and under control (Ordinance no. 139, dated April 20, 2011).

After the publication of the decree, many of these municipalities have been mobilized and taken actions to fulfill the requirements in order to have their names excluded from the lists. This strategy of naming and shaming can be seen as the main drive for the involvement of municipalities in the control of deforestation<sup>10</sup> and the governance of climate change.

Initiatives from the federal government as well as from NGOs have focused mainly on the listed municipalities. Several of them have been receiving international assistance to combat illegal deforestation. Some municipalities and NGOs have also submitted project proposals to the Amazon Fund, which have received financial contributions from the Norwegian and German governments.

The cooperative arrangements involve resources from the federal government and international cooperation funds related to the World Bank, European Union, and the Norwegian and German governments. The Brazilian government considers these schemes as international technical cooperation projects – Overseas Development Assistance (ODA). Thus, their institutional designs have followed the guidelines for ODA received by Brazil, which emphasize the role of the federal government in designing, planning, and managing these arrangements.

All these cooperative arrangements can be considered as multilevel climate change governance. They involve state and non-state actors from global to local, global actors that have framed the issue of controlling deforestation as a way to mitigate climate change.

9 Ministério do Meio Ambiente Portarias 28/2008 e 102/2009: Amazonian municipalities with highest deforestation rates.

10 This policy seems to have been effective, as it has been demonstrated by the declining deforestation rates in the Amazon. Lima et al. (2009) analyzed the effects of the decree and found evidences of its effectiveness. There have been relevant reductions on deforestation in 36 municipalities of the list since 2005, but the lowest rate was registered in 2008 after the decree. The numbers indicated that their participation in the total deforestation rate for the region was reduced from 49.1% in 2007 to 41.7% in 2008. Another evidence is that while there was a deforestation increase of almost 4% in the whole region in the first semester of 2008, there was a reduction in the 36 municipalities of the MMA list (Lima et al. 2009).

## Examples of multilevel cooperation arrangements

### Brazil-Norway-United Nations Development Project

The Brazil-Norway-UNDP project has been implemented since 2010. The main objective was to provide support for the elaboration of the State Plans to avoid and control deforestation in Brazilian Amazonia. Thus, state governments have also taken part. The other goal was to help several municipalities and rural landowners to have the Rural Environmental Register (CAR). Acrelândia, Senador Guiomar and Plácido Castro in Acre state, Marcelândia in Mato Grosso state, and Dom Eliseu and Ulianópolis in Pará state have received support to obtain the CAR for the properties in their territories. Thus, the institutional arrangement comprehended the federal, state and municipal governments, the UNDP, and the cooperation agency government of Norway.

The municipalities have not participated in the conception of the project, and they were selected according to the need to control deforestation and the pressure on their forest remains. Almost all of them had to be convinced to participate. They expressed their will to participate through a technical cooperation agreement. Their counterpart has been the provision of their human resources and local transportation. They have participated in planning the actions locally, but it does not seem that they have taken part in the decision-making in other levels. Their main role has been the mobilization of local actors like landowners and rural unions. Local political conflicts and resistance promoted by some rural unions have been pointed as the main hindrances to the project<sup>11</sup>.

### Brazil-Rain Forest Trust Fund/World Bank-The Nature Conservancy Project

This project was called “Rural Environmental Register: a contribution to the public policies to control deforestation” (“*Cadastro Ambiental Rural: um subsídio às políticas públicas para o controle do desmatamento*”). It was initiated in 2009 and concluded in December 2011. The project received financial support from the Rain Forest Trust Fund (RFT)<sup>12</sup>, which has been managed by the World Bank, to help municipalities to have the CAR implemented in rural lands in at least 80% of their territories. The Nature Conservancy (TNC) was in charge of the execution of the project. The MMA and state agencies also took part in the initiative. The target municipalities were Feliz Natal, Brasnorte and Juína in Mato Grosso state, and Santana do Araguaia and Marabá in Pará state. The project was considered successful and there is the possibility that three of these

11 Interview with Nazaré Lima Soares, MMA. Brasília, March 5, 2012.

12 This Fund was created for the Pilot Program to Protect the Brazilian Rainforest initially supported by the G7 countries (PPG7).



municipalities will be excluded from the list. The Mato Grosso State Federation of Rural Landowners campaigned against the CAR and deforestation control, which influenced the landowners in the municipalities that did not succeed to have the CAR implemented<sup>13</sup>.

São Félix do Xingu: Brazil-European Union-Food and Agriculture Organization Project and other initiatives

Brazil, the European Union and FAO are partners in the “Municipal Pact to Reduce Deforestation” project, which has been carried out in São Félix do Xingu, in Pará state. Besides, the municipal government and the state of Pará government also take part in this project. According to the MMA, São Félix do Xingu could be a good demonstrative project as most of its area is productive. It is the second largest in Pará state and the largest considering only productive land<sup>14</sup>. Its economy is based in cattle ranching and it holds the biggest cattle herd in Brazil. Thus, there was much resistance in the municipality to confront deforestation.

The project objectives have been helping the municipality to establish a municipal pact to reduce deforestation. The municipal pact was signed in 2011. Deforestation has started to decrease there (379 km<sup>2</sup> in 2010 and 145 km<sup>2</sup> in 2011). There are other initiatives in São Félix do Xingu, which have been carried out by TNC and Instituto Internacional de Educação do Brasil (IIEB).

Transnational-local arrangements: NGOs and municipalities

The first two municipalities that were excluded from the list were Paragominas (Pará state) and Querência (Mato Grosso state). After being excluded, these municipalities were labeled “municipalities with deforestation monitored and under control,” and are entitled to receive positive incentives and investments from the federal government. None of these municipalities received resources from the above ODA projects

Paragominas started to mobilize when the MMA list was published. The local government and several civil society representatives, such as entrepreneurs and educators, gathered to sign a “pact” for the environment. The project “Paragominas Município Verde” (Paragominas Green Municipality) was initiated with the support from the Amazon Institute of People and the Environment – *Instituto do Homem e Meio Ambiente da Amazônia* (Imazon) – and TNC. The project comprehended satellite monitoring of the municipal territory, creating a deforestation alert system – *Sistema de Alerta de Desmatamento* (SAD). It helped

13 Interview with Nazaré Lima Soares, MMA, Brasília, March 5, 2012.

14 It is the sixth largest municipality in Brazil (84,212 km<sup>2</sup>), which represents around 6.75% of Pará, and 0.99% of the Brazilian territory.

the municipality to promote the Rural Environmental Register (CAR) of its rural private estates, and also social mobilization and capacity-building (Brito et al. 2010, 30–31). Thus, the local government had a leadership role even though the work and influence of two big NGOs were also important.

Querência<sup>15</sup> was excluded from the list in 2011<sup>16</sup>. The municipality has reduced deforestation for the last ten years. In 2000, the total deforested area was 477.1 km<sup>2</sup> and it was 21 km<sup>2</sup> in 2010. The implementation of the CAR and of other actions to monitor, to surveil, and to promote liability has contributed to reduce the deforestation rates. Even though they did not have ODA, the farmers have organized themselves<sup>17</sup> with the support from national NGOs, like the Instituto Socioambiental (ISA), a big Brazilian NGO that has worked there. Since 2004, ISA has carried out the project Y Ikatu Xingu to preserve water sources. The NGO strategy was to work with the farmers helping them to recover the water sources in their lands. This strategy was important to keep the farmers mobilized<sup>18</sup>.

Alta Floresta (Mato Grosso state) should be the next municipality to be excluded from the MMA list. It has not been receiving assistance through the above multilevel arrangements either. Alta Floresta, however, was targeted in other multilevel cooperation schemes, such as the Pilot Program to Protect Tropical Forests supported by the G7 countries (PPG7). Thus, it has been seen as an “internationalized” municipality.

### Transnational networks and the case of Manaus

It is important to highlight that globally more than 200 local governments have signed the Global Cities Covenant on Climate (Mexico City Pact) during the World Mayors Summit on Climate Change, convoked by the Mexico City government, the World Mayors Council on Climate Change, ICLEI-Local Governments for Sustainability<sup>19</sup>, and United Cities and Local Governments (UCLG). Manaus is the only Amazonian municipality that has signed the Pact so far.

The first report about the Mexico City Pact called the attention to the “cities’ strategic and fundamental role to national governments when it comes

15 Querência hosts part of the Xingu Indigenous Territory and a large untouched land covered by cerrado (Brazilian savanna), Amazon forest and a transition area. The economy of this municipality is centered on agribusiness. Available at <<http://www.ondehospedar.com.br/informe/mt-querencia.php>>.

16 Available at <[http://www.sema.mt.gov.br/index.php?option=com\\_content&view=article&id=717:querencia-sai-da-lista-dos-municipios-com-maior-desmatamento-e-alta-floresta-pode-ser-o-proximo&catid=162:desmatamento&Itemid=180](http://www.sema.mt.gov.br/index.php?option=com_content&view=article&id=717:querencia-sai-da-lista-dos-municipios-com-maior-desmatamento-e-alta-floresta-pode-ser-o-proximo&catid=162:desmatamento&Itemid=180)>, accessed March 23, 2012.

17 Interview with Nazaré Lima Soares, MMA, Brasília, March 5, 2012, and oral presentation by Marcelo Herocowits (ISA), Seminar about CAR, Brasília, October 7, 2011.

18 Marcelo Herocowits (ISA), Seminar about CAR, Brasília, October 7, 2011.

19 Formerly known as the International Council for Local Environmental Initiatives, from where stems its acronym ICLEI.

to the struggle to carry out global-impact actions and decisions.” The objective of the report was to describe the outcomes of the local governments and show their commitments for combating climate change. According to the Report, “one important achievement that emerged from the World Mayors Climate Summit and the signing of the Mexico City Pact was recognition at COP 16 in Cancún that cities should be considered strategic governmental entities when it comes to fighting climate change at subsequent COP summits.”

In Brazilian Amazonia, few municipalities are members of transnational networks. But if we take into consideration all the municipalities of Brazil, they are over-represented in relation to other regions. Local Governments for Sustainability membership in Brazil is made out of 26 municipalities. Five of them are located in the Amazon region: Alta Floresta, Apuí, Lucas do Rio Verde, Manaus, and Tailândia. According to an ICLEI staff member<sup>20</sup>, they have become members due to the *Local Governments Amazonian Summit: the Insertion of the Amazon in the Climate Change Negotiations*, 2009, in Manaus.

### Manaus taking the lead regionally and networking transnationally

Manaus has been active in transnational networking. Manaus is the capital city of Amazonas state, the largest city<sup>21</sup> in western Brazilian Amazon<sup>22</sup>, and the seventh most populated in Brazil<sup>23</sup>. Is considered the gate for the Amazon forest. Manaus is among the top ten Brazilian municipalities in terms of gross domestic product. Its GDP per capita is US\$ 11,079. The increase of its GDP is the result of the concentration of many industries in its industrial area, due to tax exemption policies in its free zone, but also of royalties received for natural gas coming from Urucu. The distance from Manaus to other big cities in Brazil is considerable, which makes it quite isolated from the rest of the country. But given its size, the geographical location in the Amazon, and socioeconomic indicators, it is not surprising that the municipal government has tried to strengthen its international profile.

Manaus is an interesting example to look at because of the kind of international profile the municipal government has been building, which has focused on global environmental issues like climate change, biodiversity, and water. Also, it has emphasized the participation in and strengthening of transnational networks. Manaus is an active member of two big networks: the United Cities and Local Governments (UCLG), and the Local Governments for Sustainability (ICLEI).

20 Telephone interview with Bruna Cerqueira, ICLEI-Brazil, March 5, 2012.

21 In 2010, the population was around 1,802,014 inhabitants. Available at <<http://www.ibge.gov.br/cidadesat/painel/painel.php?codmun=130260>>, accessed in March 7, 2012.

22 It is located on the left bank of the Negro River. The area of the municipality is 11,401 km<sup>2</sup>. Available at <<http://www.manaus.am.gov.br/conhecemanauis/>>, accessed in March 7, 2012.

23 Available at <[http://www.ibge.gov.br/home/presidencia/noticias/noticia\\_visualiza.php?id\\_noticia=1766](http://www.ibge.gov.br/home/presidencia/noticias/noticia_visualiza.php?id_noticia=1766)>, accessed in March 7, 2012.

Climate change is high on the municipal's international agenda. Manaus has tried to take a leadership role among the local governments in the Amazon at the same time that the municipality has been part of networks like ICLEI and UCLG. Manaus is a member of the UCLG Climate Negotiation Group. This group was created in November 2009, during the UCLG World Council that took place in Guangzhou. The objective was to provide a representative political voice that compliments the work undertaken by thousands of cities across the world, and a group of cities and regions has been mandated to join the UCLG Climate Negotiation Group. Led by the City of Nantes, these local governments have been following the international negotiations and advocating the interests of local governments in different fields. Manaus appears as the capital of the Amazon region, particularly representing the concern with the inclusion of a special chapter on the Amazon area in the international negotiations. Thus, Manaus was mandated to follow the negotiations on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries, Land Use Change and Forestry<sup>24</sup>. The parties of UNFCCC recognized the UCLG group as the Local Governments and Municipal Authorities Constituency Group.

In the UNFCCC arena, the group aims at guaranteeing that the local government's role is recognized, and that the mechanisms of financial and technical support for mitigation of and adaptation to climate change reflect the specific needs of cities and municipalities.

In October 2009, Manaus hosted the Local Governments Amazonian Summit: the Insertion of the Amazon in the Climate Change Negotiations in partnership with the National Confederation of Municipalities (CNM), the Latin American Federation of Cities, Municipalities and Local Governments Associations (FLACMA), and the ICLEI. One of the issues that moved the local governments was the preliminary document presented by the federal government for the COP 15. That initial position paper restated the 1997 position that did not include conserved forests in the mechanisms to compensate for GHG emissions. The local governments of the Amazon mobilized themselves and decided to gather to discuss the issue (CNM 2009). The Summit's main objective was to promote a more effective participation of the Amazonian local authorities in the UNFCCC negotiations and to express their support to the REDD mechanism. More than one thousand people participated in the Summit, among them mayors, other local authorities, and representatives of associations of municipalities. It was the first meeting of local governments from all the countries in the Amazon Biome.

The *Carta de Manaus* (Manaus Charter) was signed by the local authorities and was one of official documents that were submitted by the local government networks to the federal government, in order to serve as subsidy for the Brazilian

24 Available at <<http://www.cities-localgovernments.org/sections.asp>>, accessed in March 7, 2012.

government proposal to the UNFCCC's COP 15. The Charter highlighted the importance of the local governments in the management of the territory and committed to adopt voluntary targets of reduction of deforestation and forest degradation and to present their initiatives to the national governments of Amazon countries and to the international community (Carta de Manaus 2009).

The Summit and the Charter can be taken as evidence that the local governments of the Amazon have initiated a process of raising awareness about their own role in the governance of climate change. The local governments of the Amazon seemed to have increasingly become more conscious of role in the process of climate governance, so wanted to demonstrate their commitment to reduce deforestation, as well as their unique position that allows a direct relationship with the local communities but also a relationship with the "international community." Moreover, the local governments, on one hand, had the clear intention to show their position concerning REDD and forests through the Summit and the Charter, a position that differed from the initial proposal of the Brazilian federal government for the COP 15. On the other hand, they recognized that they were represented by the federal government in the international arena when they recommended them to support the inclusion of REDD and REDD+ in the climate negotiations.

Another result of the Summit was the creation of the Local Governments of the Amazon Permanent Forum for Climate Change and Sustainable Development (*Fórum Permanente de Governos Locais da Amazônia para Mudanças Climáticas e Desenvolvimento Sustentável*). The intention was to have a focal point for the exchange of experiences and to promote solidarity among the local governments. In September 2011, Manaus hosted the I Latin American Forum of Local Governments for the Environment and Sustainability, which was considered a follow-up of the 2009 Summit. It gathered representatives of local governments from several Latin American and Caribbean countries. The objective was to resume the discussions about the role of municipalities and local governments in the negotiations of climate change and about the biodiversity potential that exists in the cities (urban biodiversity). UCLG considered it as an official event to prepare for Rio +20. Themes like climate change, forests, river basins and biodiversity are related to the reality of hundreds of municipalities located in the Amazon region. Moreover, the importance of urban areas was highlighted for nations to reach their targets of emissions reduction.

The recognition of the forests' role, and of the importance of positive incentives to reduce emissions from deforestation and degraded forests and to conserve the forest is considered a gain for the Amazonian municipalities in COP 15. At Cancún, COP-16's major achievement was the recognition that cities and municipalities should be considered strategic governmental entities to fight climate change. This gain was attributed to the work of the UCLG group and to the Mexico

City Pact/World Mayors Summit. There are issues that the local governments consider important to still fight for as the Clean Development Mechanism, and the Adaptation Fund<sup>25</sup>.

## Amazonian municipalities of Brazil: agents of climate governance?

It must be noticed that deforestation in the Brazilian Amazon has decreased significantly since 2005. In December 2011, the lowest mark of deforestation was announced: 6,238 km<sup>2</sup>/year<sup>26</sup>. As deforestation rates declined from 2005 to 2009, Brazilian emissions decreased considerably as well (Viola 2010). Carvalho (2010) states that such reduction represents an important contribution for the mitigation of climate change, around 1.2 billion to 1.4 billion tons of avoided GHG emissions. This amount is equivalent to 20% of the Brazilian commitment of emission reduction. Part of this reduction can be related to the involvement of the municipalities in the national policy to control deforestation, or more specifically to Decree no. 6,321/2007 (Assunção et al. 2012).

The municipalities have come to the process later than other actors. The national policy to combat deforestation involved the municipalities in the end of 2007, and the list of the ones with highest deforestation rates was published in 2008. It was a naming and shaming strategy that seemed to have forced the municipalities to get involved. The Summit that gathered local governments of the Amazon region only took place in 2009. All these events were relatively recent to enable comprehensive analyses, comparisons and definite conclusions.

Municipalities of the Amazon have institutional-based authority (Avant et al. 2010), which has been exerted locally. However, climate change is a global phenomenon and its governance is as a multilevel process. Climate change mitigation and adaptation depend on actions that must be taken at the local level. According to the Brazilian federal constitution, municipalities enjoy degrees of autonomy. As entities of the federation, they have jurisdiction at the local level, a kind of “local sovereignty.” They can, to a certain extent, conduct its own foreign affairs (*paradiplomacy*), and govern some issues that are related to climate change. We will indicate some tasks that have been carried out by Amazonian municipalities (Avant et al. 2012).

25 Secretary Marcelo Dutra presentation to the I Latin American Forum of Local Governments on Environment and Sustainability, September 2012, available at <[26 Available at <<http://www.brasil.gov.br/noticias/arquivos/2011/12/6/desmatamento-na-amazonia-brasileira-em-2011-apresenta-menor-taxa-ja-registrada>>, accessed July 24, 2012.](http://www.google.com.br/url?sa=t&rct=j&q=&esrc=s&source=web&cd=7&sqi=2&ved=0CGYQFjAG&url=http%3A%2F%2Fdc183.4shared.com%2Fdownload%2F21Tensmx%2FApresentacao_para_Forum_Secret.pdf&ei=kO9vT62xDcXXgQf-6chr&usg=AFQjCNEwIIAtY5i1Hp1_RHskSv44YUQQSw></a>.</p>
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## Setting agendas, creating issues and making rules

The initiatives taken by transnational networks are mainly focused on setting agenda and creating issues. Amazonian municipalities like Manaus, and the other ICLEI members, have been trying to set agendas. Manaus government has an international agenda, and has specific positions related to forests, biodiversity, water, and climate change. Concerning the latter, Manaus demonstrated that its position on forests differed from the initial one adopted by the federal government. The municipality has stated its position on the clean development mechanism, REDD+ and the adaptation fund. However, other municipalities of the Amazon have not been so active in stating their views and positions, or participating in transnational networks. They have only reacted when they were called into action. The main difficulty has been lack of material and human resources. Political culture is also a factor, as many municipalities do not seem to perceive themselves as autonomous entities of the federation. The majority of the Amazonian municipalities still act as if the central government were the only actor in global issues.

In the UNFCCC arena, most of Amazonian municipalities of Brazil have only been informed of facts and outcomes in international negotiations; thus, they have not been able to prescribe behavior. Such fact indicates that most municipalities have had no agency (Schroeder 2010). Manaus, and other municipalities that are members of transnational networks, have been consulted and invited to provide input or feedback, which is considered a weak type of agency (Schroeder 2010). However, municipalities go beyond the international climate negotiations among nation states, when they set their own agendas, and sign they own pacts and charters. The Mexico Pact seems to be an attempt to make rules or to establish commitments among municipalities. Manaus is the only Amazonian municipality that has signed the Pact so far. Other municipalities were invited to join the Pact during the I Latin American Forum of Local Governments on the Environment and Sustainability.

## Implementing and enforcing rules

The 43 municipalities that were listed by the Ministry of the Environment were forced to act. When Decree no. 6,321/2007 was sanctioned the objectives were to tackle the sources of deforestation more precisely, identifying where it was occurring, and also “share responsibilities.” The decree had also the side effect of bringing not only the local government, but also “the society in the debate about causes and consequences of deforestation” (Lima et al. 2009). As a consequence, greater social mobilization and the presence of international actors have been observed in these municipalities.

The multilevel cooperative arrangements that were described above can be seen as a response to the naming and shaming strategy. All the cooperative arrangements that were established can be considered instances of the larger process of global climate governance.

As seen, some projects that have been implemented on the ground were framed as ODA received by Brazil, and should be placed in the framework of international cooperation received for development. The Ministry of External Relations (MRE) is in charge of it. Thus, there has not been much room for municipalities to participate in project design, planning, and coordination. However, the national and international actors (federal government, international organizations, and NGOs) seem to be conscious that it would not be possible to carry out the projects without involvement from local governments. As a policymaker has stated, municipalities are the local facilitators in the process of climate governance<sup>27</sup>. Local governments know the municipal territory, landowners, leaders, and other actors; they have contributed to raise awareness and mobilize them. Without local knowledge and society mobilization, these projects would not be implemented.

According to Avant et al. (2010, 15), implementation should be seen as a contested process, because “many rules that high level government actors make are vague, even platitudinous, requiring other actors to exercise a great deal of discretion and autonomy to translate them into action on the ground.” So far, the data cannot tell much about how much discretion and autonomy was required to translate the national deforestation policy into action on the ground. This translation becomes even harder if we frame deforestation control as a dimension of the governance of climate change. More actors and issues come into scene, as REDD schemes, international NGOs, and so on. Thus, implementation on the ground is a complex phenomenon that should be taken into consideration to analyze the governance of climate change.

Avant et al. (2010, 15) also highlight that no case fits the rules perfectly. Thus, it would be important to identify “the exceptions, modifications, and improvisations by implementing agents.” Considering that on the ground implementation of policies for deforestation reduction and climate change mitigation has been through multilevel governance arrangements, as the ones described in Brazilian Amazonia, we need to understand that “even if all actors agree on what the rules require, acting on those requirements demands resources, information, and coordination, all of which are notoriously complicated and even contentious in many transnational settings” (Avant et al. 2010, 15). In this sense, field research would be necessary to fully understand this process. So far, it seems that even though Amazonian municipalities are crucial for combating deforestation

27 André Lima, former MMA director, responsible for Action Plan for Prevention and Control of the Legal Amazon Deforestation – Plano de Prevenção e Controle do Desmatamento na Amazônia (PPCDAm) –, interviewed in Brasília, December 8, 2010.



and climate change, they have not been heard when policies and projects are designed and planned, neither in broader coordination with other actors. However, as Avant et al. (2010) argue, implementation is a contested process, and exceptions, modifications, and improvisations do happen on the ground.

## Comparisons and preliminary conclusions

Comparing the two kinds of dynamics of Amazonian municipalities in climate governance, preliminary conclusions can be drawn. The first dynamic is vertical and top-down, although it has generated many cooperative multilevel arrangements, which comprise several municipalities, the federal government, NGOs, donor countries and inter-governmental organizations. Amazonian municipalities apparently have not been able to shape outcomes. However, as they are crucial actors for implementation on the ground, more research must be done in order to fully access to what extent they are able to govern the process. The second dynamic is horizontal, bottom-up, and linked to transitional networks. It has allowed some actors like Manaus to scale up and contribute to shape outcomes like the inclusion of forests and REDD or the recognition that municipalities and cities are governmental strategic partners in climate negotiations.

The multilevel cooperative arrangements that have emerged, and in which several actors from global to local take part, can be considered examples of how international, national and local actors interact to control deforestation and reduce GHG emissions on the ground. Even if the municipalities have not taken the initial moves, they have been gradually taking more active roles, as it was evidenced, for instance, by their initiatives to bid for financial resources from the Amazonian Fund. Paragominas and Querência are also examples of a more proactive role within multilevel arrangements. All these arrangements have been set through a formal agreement between municipal and federal governments, and as such the former must not only agree, but also take several responsibilities and commitments – which reinforces the municipalities' participation and possibilities to shape governance outcomes.

It is not possible to claim that Amazonian municipalities have fully exerted agency in any of the described dynamics. Climate change is a multilevel process, but the global scale can still limit participation in decision making. Acting globally demands resources that sometimes are not available to local governments. The rules of participation in international negotiations also limit their participation in most arenas. As Schroeder (2010, 321–322) argues, scaling a problem up or down the governance scale is a critical instrument for framing environmental problems because it places them in a specific institutional and socioeconomic context. So several actors and multiple scales should be taken into consideration so as to understand the process of climate governance. We conclude that the municipalities of the Amazon are part of this process and more research is needed

in order to fully assess how and to what extent take place the power relations and implications for mitigation of and adaptation to climate change.

## Bibliographic references

ASSUNÇÃO, Juliano, Gandour, Clarissa C. E Rocha, Rudi. *Deforestation Slown in Legal Amazon: Prices or Policies? Climate Policy Initiative Working Paper*, PUC-Rio, 6 February 2012. Available at <<http://climatepolicyinitiative.org/riodejaneiro/files/2012/03/Deforestation-Prices-or-Policies-Working-Paper.pdf>>.

Avant, Deborah D.; Finnemore, Martha, and Sell, Susan S. 2010. Who governs the globe? In Avant, Deborah et al. (ed). *Who governs the globe?. Cambridge Studies in International Relations 114*. Cambridge University Press.

Biermann, F., Betsill, Michelle et al. 2009. Earth System Governance: People, Places and the Planet. *Science and Implementation Plan of the Earth System Governance Project. ESG Report 1*. Bonn, IHDP: The Earth System Governance Project.

Biermann, F. 2006. 'Earth system governance' as a crosscutting theme of global change research. *Global Environmental Change*, doi 10.1016/j.gloenvcha.2006.11.010

Brito, Brenda, Souza Jr, Carlos, Amaral, Paulo. 2010. Reducing emissions from deforestation at municipal level: a case study of Paragominas, Eastern Brazilian Amazon. In *Everything is Connected. Climate and Biodiversity in a Fragile World*. British Embassy Brasília and Defra

Bulkeley, Harriet and Newell, Peter. 2010. *Governing Climate Change*. Global Institutions Series. London and New York: Routledge

Bulkeley, Harriet. 2005. Reconfiguring environmental governance: Towards a politics of scales and networks. *Political Geography* 24, pp. 875–902.

Carvalho, Fernanda Viana. 2010. Brasil: de Estado-veto a negociador estratégico. A posição brasileira nas negociações internacionais sobre florestas e clima (1997-2010). *Tese de Doutorado*. Programa de Doutorado em Política Internacional e Comparada. Universidade de Brasília.

Cash, David W.; Adger, Neil; Berkes, Fikret; Garden, Po; Lebel, Louis; Olsson, Per; Pritchard, Lowell; and Young, Oran. 2006. Scale and Cross-Scale Dynamics: Governance and Information in a Multilevel World. *Ecology and Society* 11(2): 8. Available at <<http://www.ecologyandsociety.org/vol11/iss2art8>>.

Cash, David W.; Moser, Susanne C. 2000. Linking global and local scales: designing dynamic assessment and management processes. *Global Environmental Change* 10, pp. 109–120.

Dellas, Eleni; Pattberg, Philipp and Betsill, Michele. 2011. Agency in earth system governance: refining a research agenda. *International Environmental Agreements* 11:85–98 (DOI 10.1007/s10784-011-9147-9).

Gupta, Joyeeta. 2007. The Problem of Scale in Environmental Governance. *IHDP Update. Newsletter of the International Human Dimensions Programme on Global Environmental Change*, 1.2007.

Higuchi, Niro et al. 2009. *Governos locais amazônicos e as questões climáticas globais*. Manaus: Edição dos autores.

Lebel, L., P. Garden, and M. Imamura. 2005. The politics of scale, position, and place in the governance of water resources in the Mekong region. *Ecology and Society* 10(2): 18. Available

at <<http://www.ecologyandsociety.org/vol10/iss2/art18/>>, Research, part of a Special Feature on Scale and Cross-scale Dynamics.

Lima, André; Capobianco, João Paulo Ribeiro; e Moutinho, Paulo. 2009. *Desmatamento na Amazônia: Medidas e efeitos do Decreto Federal 6.321/07*. Brasília: Instituto de Pesquisa Ambiental da Amazônia.

Margulis, S. 2003. *Causas do Desmatamento da Amazônia Brasileira – 1ª edição –* Brasília, Banco Mundial.

Nobre, Carlos; Oyama, Marcos; Cardoso, Manoel; Sampaio, Gilvan; Salazar, Luis, Lapola, David; Obregon, Guillermo, and Hirota, Marina. 2007. Mudanças Climáticas Globais Impactos nos Biomas da Amazônia. *Simpósio “Conservação de Biodiversidade em Paisagens Florestais Antropizadas”*. Belém, 21 de Novembro de 2007.

Okereke, Chukwumerije; Bulkeley, Harriet; and Schroeder, Heike. 2009. Conceptualizing Climate Governance Beyond the International Regime. *Global Environmental Politics* 9 (1): 58–78.

Schroeder, Heike. 2010. Agency in international climate negotiations: the case of indigenous peoples and avoided deforestation. *International Environmental Agreements* 10: 317–332.

Smeraldi, Roberto; May, Peter. 2008. *O Reino do Gado: Uma nova fase de pecuarização da Amazônia*. São Paulo: Amigos da Terra – Amazônia Brasileira.

Viola, Eduardo. 2009. *O Brasil na arena Internacional da Mitigação da Mudança Climática, 1996-2008*, Rio de Janeiro, CINDES.

Viola, Eduardo. 2010. *Impasses e Perspectivas da Negociação Climática Global e Mudanças na Posição Brasileira*. Rio de Janeiro: CINDES.

## Documents

Carta de Manaus, 2009. Elaborada e assinada por ocasião da Cúpula Amazônica de Governos Locais. A inclusão da Amazônia nas Negociações de Mudanças Climáticas.

CNM – Confederação Nacional de Municípios, 2009. *Relatório Final da Cúpula Amazônica de Governos Locais*, Manaus.

MCT – Ministério de Ciência e Tecnologia, 1994. Primeiro Inventário Brasileiro de Emissões Antrópicas de Gases de Efeito Estufa – Relatórios de Referência. Disponível em <<http://www.mct.gov.br/index.php/content/view/full/25441.html>>, acesso em 15 de junho de 2009.

MMA – Ministério do Meio Ambiente, 2008. *Políticas de Prevenção e Controle do Desmatamento da Amazônia Legal*. Audiência Pública. SenadoFederal. 28.10.2008.

MMA – Ministério do Meio Ambiente, 2010. *Análise do desmatamento em 2009, em especial em municípios e áreas prioritárias de atuação*. Apresentação de Mauro Pires (MMA), Marcos Rosa. Brasília, 20/05/2010.

UNEP – United Nations Environment Program and ACTO – Amazon Cooperation Treaty Organization. 2009. *Environment Outlook in Amazonia – GEO AMAZONIA*. Panama: UNEP; Brasília: ACTO

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## Abstract

With regards to the debate about governance of climate change, it should be assumed that the Amazon region plays an important role, as this large area is highly vulnerable to its effects. In this sense, this article aims to discuss how some Amazonian municipalities of Brazil have been taking part in the complexes and multilayered processes of climate governance.

**Keywords:** Brazilian Amazon; climate change; governance of global climate.

## Resumo

Com relação ao debate sobre a governança climática global, assume-se que a região amazônica deve desempenhar um importante papel, já que essa grande área é altamente vulnerável aos seus efeitos. Nesse sentido, o presente artigo tem por objetivo discutir como que alguns municípios brasileiros têm participado dos complexos e multivariados processos de governança climática.

**Palavras-chave:** Amazônia brasileira; mudança climática; governança do clima global.