

# **Environmental governance and the challenge of harmonization of state policies on climate change**

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## **1. Introduction**

The concern over the issue of global climate change and its socioeconomic effects has stimulated the debate and the search for solutions for mitigation and adaptation in various arenas (public sector, private sector, civil society organizations and social movements) and at various scales of action (local, regional, national and global).

In Brazil, one of the results of this search for solutions has been the development of state policies on climate change, in many cases with the introduction of specific legislation regulating the purposes, goals for reducing the emission levels of greenhouse gases (GEE), methods and emission inventories, instruments and mechanisms to reduce emissions, among other aspects.

A feature of the recent process of drafting state policies on climate change is that they generally have been developed independently by each state, without coordination or standardization. Thus, although there is the National Policy and National Plan on Climate Change, it is unclear how and if they are being considered in the formulation of state policies.

The lack of coordination and especially the construction of a common dialogue between state policies on climate change can lead to problems of regulation and effectiveness for Brazilian public policies for mitigation and adaptation, with impacts on the business and productive sector.

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Knowing the degree of fragility of this lack of coordination and standardization of state policies on climate change is the first step to improve the quality of these policies and also the governance of climate risk in the country.

In this sense, this work aims to contribute to the improvement of public policies, thus becoming an essay on the “State of the Arts” of state laws on climate change, focusing on their possible conflicts and problems of harmonization of state policies with each other and in relation to national guidelines.

The essay was developed within the activities of Climate Forum – Entrepreneurial Action on Climate Change of Ethos Institute in partnership with the Center of Economics Socioenvironmental of the University of São Paulo (NESA/USP), under the coordination of Tasso Azevedo and Ricardo Abramovay.

The Climate Forum is a working group comprised of 17 companies who signed the Open Letter to Brazil on Climate Change in August 2009, where they establish a set of commitments aimed at combating climate change. Many companies have operations in more than one Brazilian state and experienced a situation that needed to understand the different state laws in order to guide their actions.

The essay covers the situation of state policies on climate change until September 2011. Elements after that date are not incorporated into this analysis, which it shall be subject to new updated versions through the creation of an observatory on the climate change Brazilian policies.

From a methodological perspective, this essay faced the challenge of transforming highly qualitative information, which is the contents of laws, to tabs, maps and graphs that inform clearly and objectively the situation of all the state laws for public debate.

## **2. Mapping of state policies on climate change**

This section provides a brief overview of the current landscape of state policies on climate change in Brazil as a whole. It has as reference information contained in the legislation of the states that have enacted a law to regulate its policy, as well as documents of states that do not have a law sanctioned, but do have a bill draft in progress and a debate with the civil society and the local Legislature.

### **2.1. Legislation**

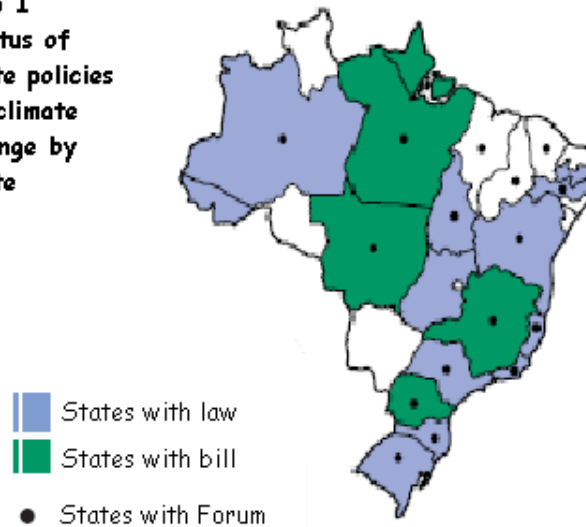
Of the 27 states, 17 already have sanctioned law or bill to regulate their state's policy on climate change.

In terms of a regional perspective, the South and Southeast are the most advanced regions regarding the construction of a legal instrument. All states of these two regions have enacted laws or bills.

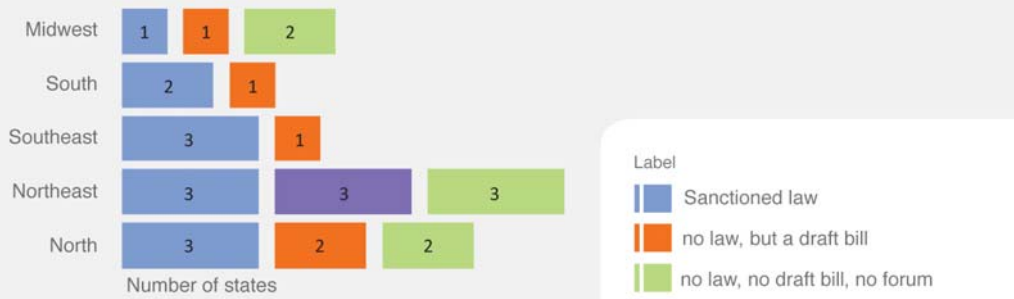
Unlike the Northeast region, where three states have neither the law nor the bill and still haven't constituted the State Climate Change Forum – the advisory board that allows the stakeholders participation. The forum is usually chaired or directly connected to the chief of Executive.

In the Middle-West, it is noteworthy the fact that the Brazilian capital (Federal District) has legislation yet under discussion nor a state forum created (see Map 1 and Graphic 1 and Table 1).

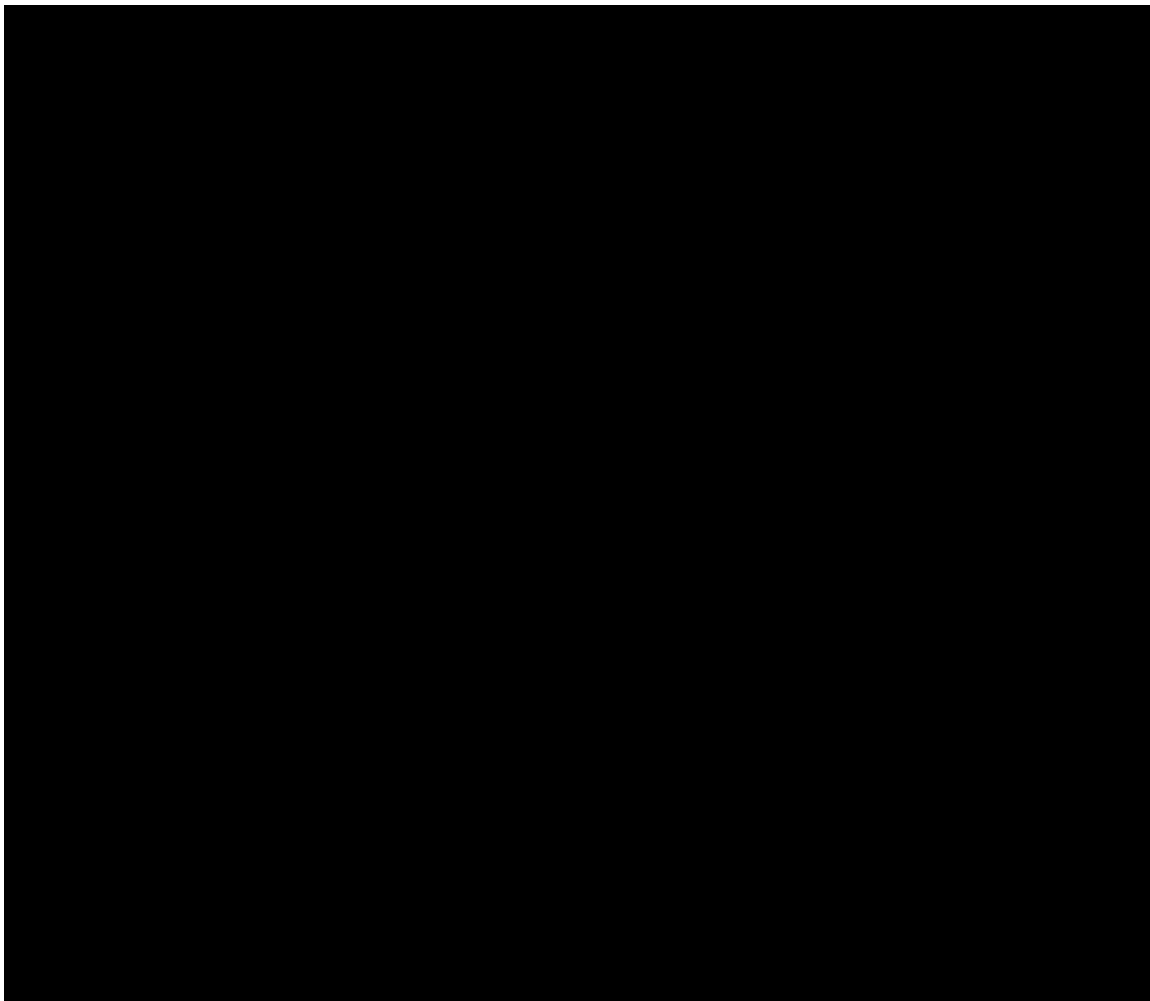
**Map 1**  
**Status of state policies on climate change by state**



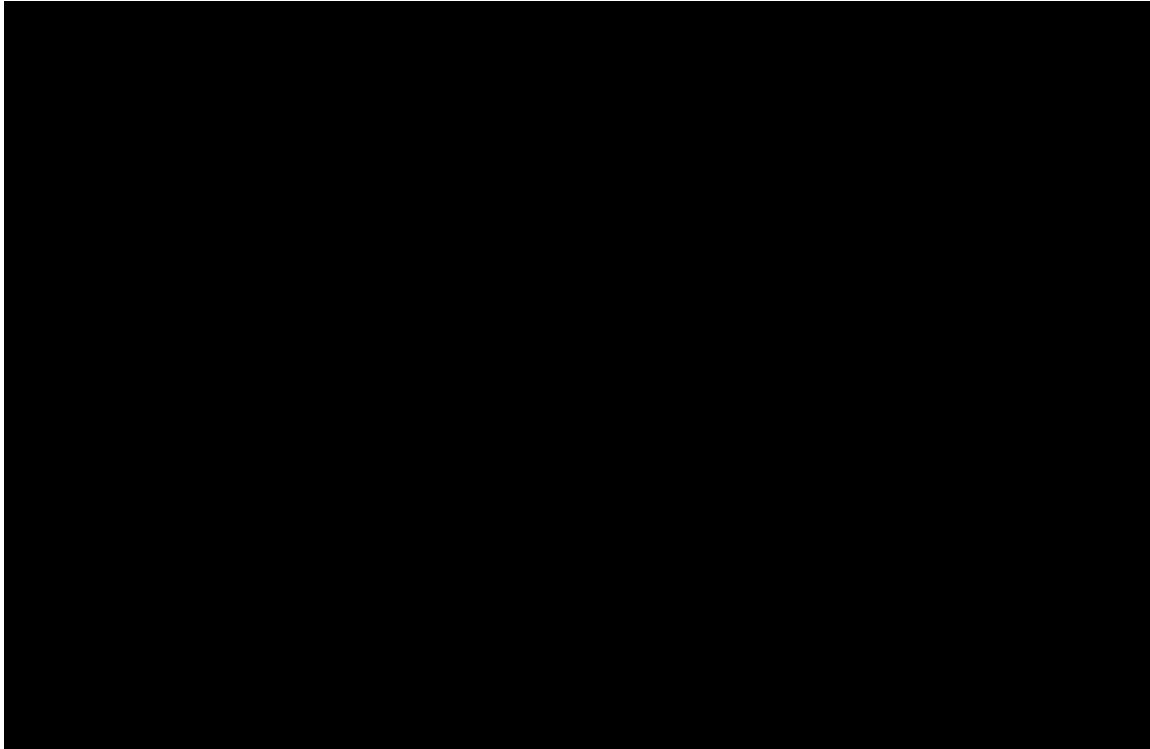
**Graph 1**  
**Status of state policies on climate change by region**



A temporal analysis reveals that the first states to create their laws to regulate their policies of climate change were: Amazonas, Tocantis, Goiás, Santa Catarina and São Paulo. These states created their laws even before the National Law of Climate Change, which was created in December 2009.



By June 2009, few states had specific laws for their climate change policies. It is from this period on that the movement to constitute this legislation is intensified (see Figure 1).



## **2.2. Social Participation**

There are at least three reasons for promoting social participation and debate on the regulatory development of the policy of climate change: (1) it promotes civic engagement and the sharing of responsibility by GEE emissions; (2) it gives transparency to the efforts made on the stabilization of greenhouse gases and their regulatory framework; (3) it promotes an awareness on the subject of global warming and the global need to change cultures, practices, habits and the technological paradigm toward a one with lower CO<sub>2</sub> emissions.

In general, this participation is achieved through recognized institutional spaces and processes of consultation and engagement of different stakeholders for each specific purpose.

At this preliminary stage of our research, it was not possible to assess how the consultation process for the development of each State Law on Climate Change took place. Thus, to assess the presence of participatory process on law construction, we chose to use as an indicator the State Forum on Climate Change.

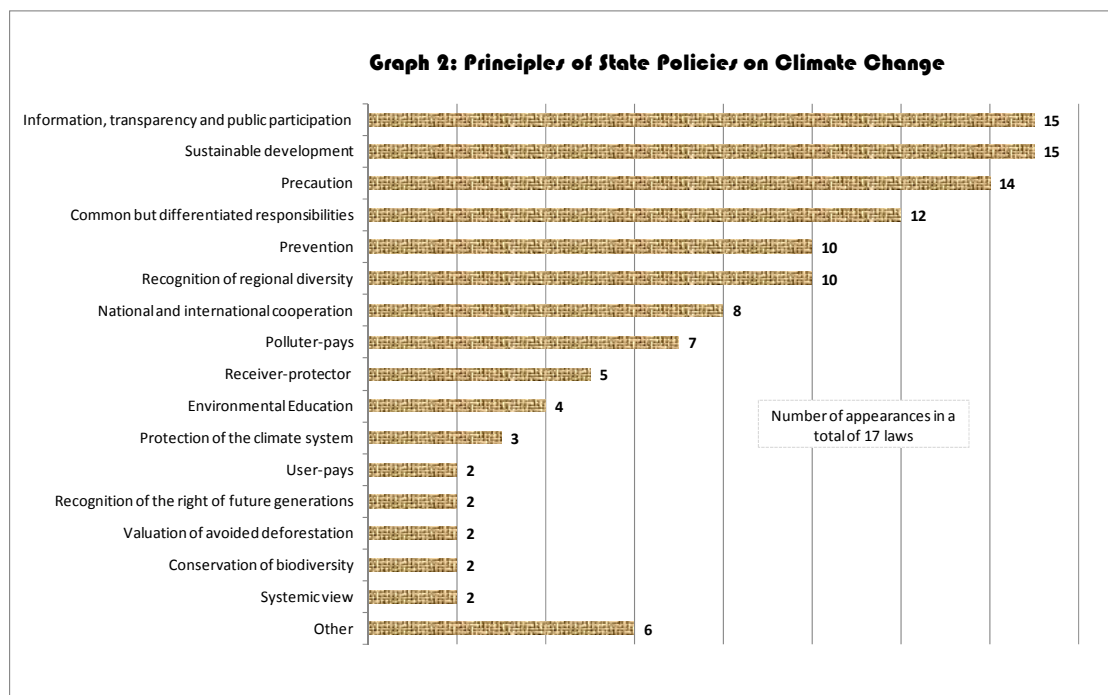
As presented in Map 1 and Table 1, among the set of 27 states, 16 have created their State Forum on Climate Change, all between 2005 and 2009. Of these, only the state of Amazonas created your forum after the creation of state law that regulates his politics on climate change.

Noteworthy is the case in the states of Amapá, Paraíba and Goiás, which has already started discussion on the creation of specific legislation, but still have no forum. Note that in Paraíba and Goiás even the law has been enacted.

### **2.3. Principles and Guidelines**

Taking as reference the principles reported in the legislation, states present a set of guidelines in common (See Graph 2).

These principles are in tune with and relate to those that guide the National Policy on Climate Change, which are: prevention; precautionary principle; common but differentiated responsibility; sustainable development and civil society participation.



## 2.4. Commitment to mitigation GEE emissions

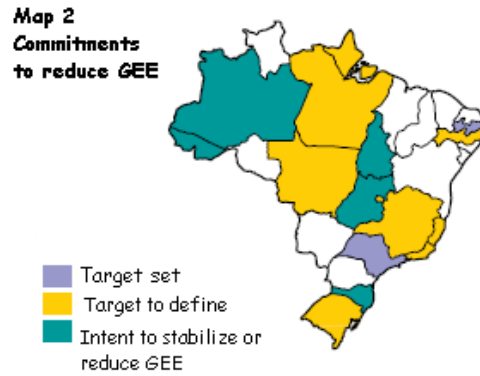
One of the contributions of State Laws on Climate Change Policy is the establishment of a commitment to mitigate emissions of greenhouse gases (GEE), usually expressed as objectives, goals and guidelines related to its reduction or stabilization.

To date the majority of laws, except the laws of São Paulo, Rio de Janeiro and Paraíba, have no GEE emissions reduction target defined.

The goal of São Paulo is 20% reduction in GEE emissions by 2020 compared to emissions inventoried in 2005. The goal of Paraíba reproduces the national target of reducing by 36.1% and 38.9% emissions project for 2020, in the trend scenario.

The following Map 2 summarizes the current stage commitments to the mitigation of GEE emissions assumed through existing state laws.





In practice three situations were observed: (1) states with goal set in their legislation; (2) states whose law mentions that a target will be set in the future, usually a global goal and also sectoral targets; (3) state laws in which some intention to stabilize or reduce GEE emissions were interpreted.

Among the laws of all states, only the law of Bahia shows no reference on its commitment to reducing or stabilizing GEE emissions.

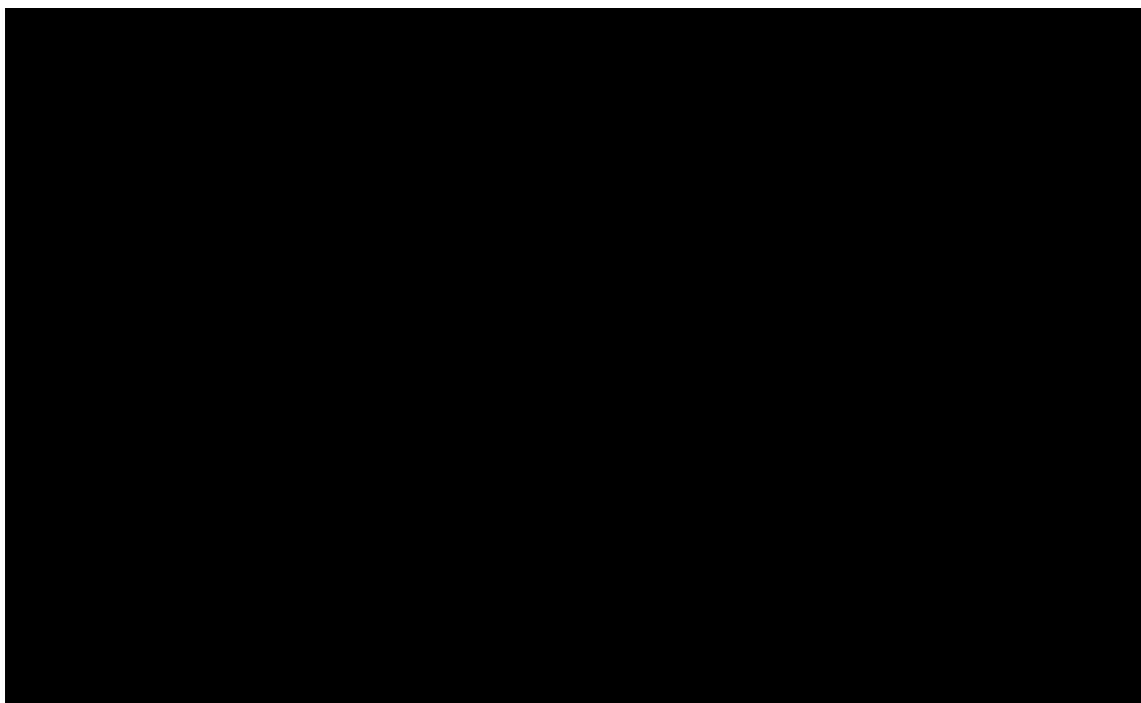
## **2.5. Instruments implementation of state policy on climate change**

Based on information provided by the state laws, the kinds of instruments that climate change policies include for the implementation of mitigation and adaptation to global warming were classified.

As Table 2 shows, in general the state policies are contemplating a variety of common instruments, whose type is repeated in different states. However, there is a large difference on the degree of detail or specificity of the instruments, according to different laws.

There are cases of laws that only mention generically fiscal, economic and tax instruments, while others are quite specific, such as the state of Tocantins, which provides, for example, the possibility of reduction or dismissal of Tax on Goods and Services Circulation (ICMS)

and the Property Tax of Motor Vehicles (IPVA) for biofuels production operations or use of vehicles with lower GEE missions.



*Box: Criteria for classification of instruments and mechanisms to implement mitigation and adaptation to global warming*

**Market:** including the Clean Development Mechanism (CDM), Carbon Market, Reducing Emissions from Deforestation and Forest Degradation (REDD), Nationally Appropriate Mitigation Action (NAMA) and Payment for Environmental Services, among others.

**Economic:** finance, funds and credit.

**Fiscal:** tax changes and positive tax (exemption / incentives) or negative (recovery rate / punitive).

**Research and science:** technical-scientific research on various topics (economic climate, based scientific on global warming, methodologies for inventory of GEE emissions, etc.).

**Environmental monitoring:** climate monitoring, biodiversity monitoring, socioeconomic and climatic risk monitoring, monitoring of flora in protected areas, among others.

**Environmental education and training:** environmental education, often promoted on the networks of public and private education, and training courses on climate change offered especially for public employees.

**Management:** strategic plans, Ecological-Economic Zoning (ZEE), instruments of spatial planning, sustainability indicators, impact assessment systems, creation of centers for adaptation to climate change, risk management and management of protected areas with the creation of new units, among others.

**Regulation:** environmental licensing and other regulatory instruments.

## **2.6. Governance**

The issue of global climate change and coping through strategies on mitigation and adaptation to global warming at the subnational level is a matter relatively new to public administrations. The issue is multi-theme, multi-sectoral and demand diverse partnerships and joints, both to the mitigation or adaptation policies.

For the climate change policies to be formulated, implemented, monitored and adjusted efficiently and effectively it is essential to have good governance. In the context of climate change, given its characteristics, it is essential that there are spaces for multi-sectoral coordination and coordination between the Federation, states and municipalities.

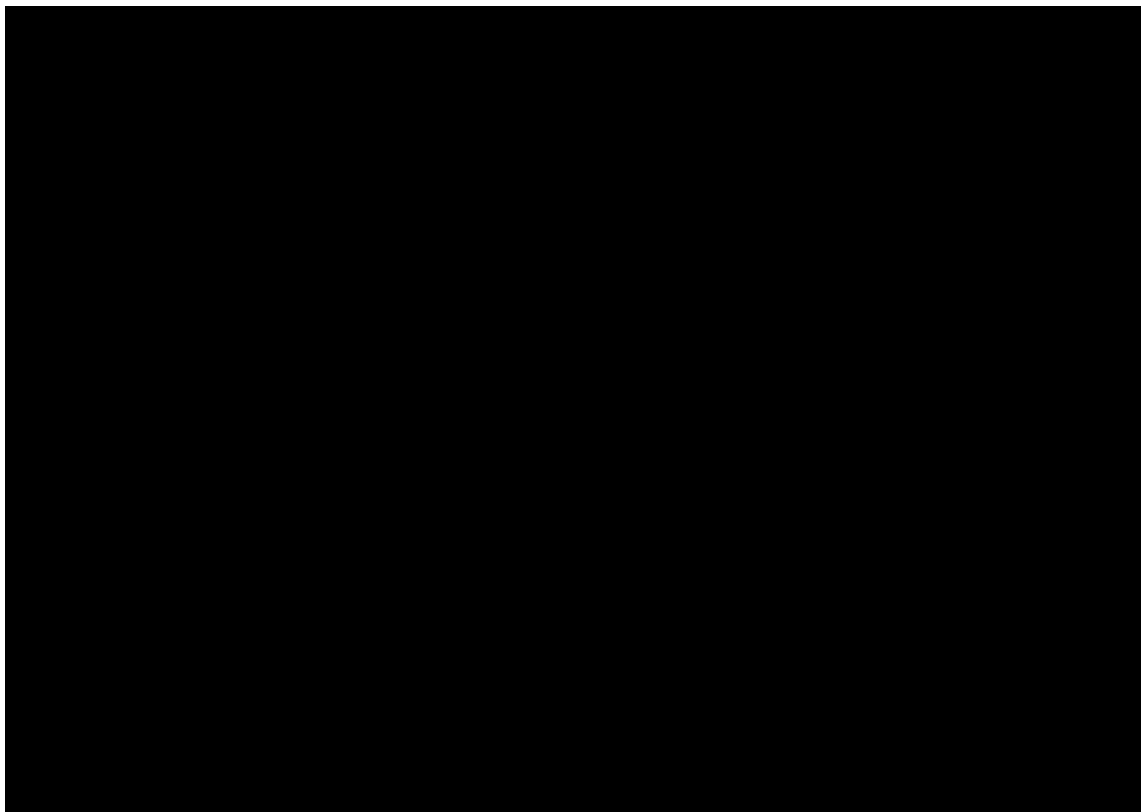
At the level of state governance, such characteristics reflect:

- In promoting actions in a public sphere understood beyond the exclusive action of the State sector;
- In creating institutionalized spaces for consultation and popular participation;
- In facilitating the involvement of several departments, from a multi-sectoral management effort;
- The use of pre-existing organizational structures or the creation of specific organs.

Although, in the broadest sense, both the regulatory as the instruments are part of governance, in this section we analyze which institutions were created in the states to allow the implementation of state policy on climate change.

The objective was to map the institutions and spaces created for formulation, implementation/operation and evaluation/monitoring of the State Climate Change Policy. The spaces for consultation, coordination and participation to diverse stakeholders were also researched.

The Table 3 confirms the characteristics mentioned above. In it were synthesized information contained in the legislations that mentioned references for institutions of consultation and implementation, created by each State Climate Change Policy.



In general, states foresee the creation of a specific organ for the implementation of their policy of climate change. The exceptions are the Espírito Santo, Mato Grosso, Minas Gerais, Paraíba and Rio de Janeiro, using previously existing institutional structures. In the case of Espírito Santo, for example, the climate change policy is a responsibility of Environmental State Secretary and the State Policy on Water Resources may consider the issue in their actions.

Among the 17 states with legislation on the subject, eight states have a multisetorial approach to coping with the challenges that climate change requires. Thus, the eight states predict the creation of multi-thematic collegiate or articulation spaces, by means of a

collective work that involves multiple departments where the climate change issue crosses their actions.

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Most laws – 12 of 17 – provides for the establishment spaces for popular participation and advice, as their own state and local forum of climate change policy and public consultations to be held by the State Council on the Environment or related organs.

There are only a few states that understand the management of climate change policy in a more decentralized way, recognizing the local organizations and municipal forums as institutions to be included in the organisms responsible for policy implementation, thus ensuring greater capillarity to adaptation and mitigation actions throughout state. They are Amapá, Mato Grosso, Pará and Pernambuco.

Finally, the states of Amazonas and Bahia foresee the creation of environmental education centers, aiming to sensitize and mobilize the local population to a co-participation in coping with the effects of global climate changes, the consequent need for implementation actions on mitigation and adaptation and also the changes in behavior and culture to be implemented by the whole society.

### **3. The harmonization challenge of public policies on climate change**

So far, the constitution of the State Laws on Climate Change Policy has occurred independently and disconnected in the country. The laws that have been developed after the adoption of national policy maintain this pattern, with some exceptions, such as the goal of

GEE reductions of Paraíba. If, on the one hand, this feature enhances the initiative and specificity of the process in each state, on the other hand, the lack of coordination and standardization can lead to difficulties for governance state policies on climate change.

Thus, this section aims to investigate the similarities and differences that exist between the various policies of climate change from states and from the set these policies in relation to national policy.

We hope to contribute to the debate on the challenge of harmonizing the state policies on climate change, with the purpose of promoting the transition to a low carbon economy in the country and creation of an integrated system to cope with consequences of global warming.

At various points, the differences in approach and content may be causing conflict or inefficiency in implementation of policies, as in the examples below.

- Scope and coverage
  - Public sector x Private sector
  - Specific sectors of the economy
  - Compulsory actions x Voluntary actions
- Targets for reducing greenhouse gas emissions
  - Different measurement methods (absolute value or intensity)
  - Mismatch at baseline (different reference years)
- Sectoral regulation
  - Non-standard definition of sectors
  - Sectoral coverage is not convergent
  - Differently sector priorities
- Application of market instruments to emissions reduction
  - System and market mechanisms independent
  - Possibility of conflict between the voluntary and compulsory market
  - Indefiniteness in the compensation of interstate methods

- Calculation of emissions
  - Metrics and calculation methods not standardized (accounting at the origin of production or any supply chain)
  - Systems are not integrated into the record inventories
  - State and local inventories without resolution of shades
- Different instruments of regulation and stimulus to mitigation of emissions
  - Because the activities of companies may cover several states, the existence of distinctive regulations can easily result in loss of efficiency and increased costs, among other impacts

In terms of harmonization of state policies with national policy, if the state policies are very specific, then it will be more difficult to harmonize them with the national guidelines. On the other hand, if they are more general, the chances of obtaining compliance with the federal sphere are bigger.

Importantly, the proposal for harmonization of public policies on climate change is not contrary to the argument that physical, social and economical diversities must be recognized by state legislations.

It is essential that each policy at the state level is adequate to a local reality. For example, for the state of São Paulo, issues related to transportation and sustainable construction gain greater relevance than in the states of South. Likewise, the management of forests and protected areas is a theme that appears with greater intensity in the formulation of policies of the Northern Region.

Analyzing the various points of potential conflict between laws, it was found preliminary some key themes:

- a) Emissions mitigation targets
- b) Sectoral regulation
- c) Market and compensation systems emissions
- d) Inventory, verification and recording emissions

- e) Sources of financing to implementation the policy
- f) Use of licensing as instrument to regulate the actions of GEE emissions mitigation

### **3.1. Mitigation Goals GEE Emissions**

The existence of differentiated targets among the states do not is a problem in itself. It is understandable that there are differences according to each local situation, especially in composition of the emissions.

Moreover, it is critical that there is a clear coordination in the description of this goal, in relation to its shape and expression (absolute reduction or intensity, for example), in relation to its breadth (global, sectoral, etc.), especially when it considered in conjunction with national target of reducing emissions - in order to guide the actions of economic agents.

It is essential to translate for each sector of the economy or agent what the sum of the goals of the state and Union means for your group or your business. The São Paulo transport sector, for example, needs to know unequivocally which should be your goal to reduce emissions when the Brazilian and São Paulo goals are applied together.

As shown in Map 2, only two states (São Paulo and Paraíba) have specific goals for reducing their emissions, but eight other states have already undertaken to establish specific goals soon (such as Rio de Janeiro and Rio Grande do Sul).

Since the goal of Paraíba coincides with the national, currently the harmonization process, with respect to goals, basically involves three actions: 1) Establishing the process to interpret, for each sector, the significance of implementing the national target and the target of São Paulo; 2) Undertaking process to establish criteria/methodology for the generation of the state targets already in congruence with each other and national goal; 3) Establishing a protocol for the implementation of goals by entrepreneurs who work in different states.



Another important point is the need to understand and clarify the mechanisms of recovery or "punishment" that will exist for the case of a state or economic sector cannot meet the target agreed by state law. No legislation has defined procedure for the case of non-compliance.

### **3.2. Sectoral regulation**

The National Policy on Climate Change sets some sectors for which specific plans will be created to mitigate GHG emissions. The state laws refer to sectors to implement the instruments that do not align with each other or with the national policy.

A good example is the energy sector. Some state laws only refer to the production of electricity, while other include the generation of heat boilers or fuel for transportation. The implication of this is that a goal or even a setorial measure can be applied to different scopes, depending on what was included in the understanding of the sector according to law.

### **3.3. Emission Inventory, verification and registration**

Although, in general, all states point to the inventories of their emissions, they differ in the specification of the periodicity of these inventories and also in the definition of reference of its scope. One example is how each inventory realizes the load transportation accounting with origin and destination outside the state.

Such information is essential for monitoring the goals and effectiveness of the instruments used to mitigate emissions.

Simultaneously, several states predict instruments targeted to sectors that have a prerequisite that the emissions of companies and sectors are identified. The rules or protocols of these inventories must be defined and require a common denominator. Although they do not specifically use the same methodology, they need to be harmonized. The same applies for the verification / validation of them.

Another important aspect is the integration of the system of reporting and recording of inventories, so that they are compatible.

From the perspective of companies and institutions involved in different states, it is important to have a single gateway of information. That is, when choosing a methodology recognized by the state to identify, verify and record their emissions, it will be recognized and accessible to all other states and the Union to avoid double work.

It is extremely important to define the minimum criteria and, if possible, a single standard for the inventory of GHG emissions, including their verification and record.

### **3.4. Market and Carbon offset**

All state laws already approved and even the bills reference market instruments to implement climate change policy. On the other hand, the meaning and application of market instruments vary greatly.

Some states treat the market instruments considering a set of environmental assets, not just the reduction of emissions (Acre and Amazonas, for example). In other cases, reference is made to the possible definition of emission limits (as in the politics of São Paulo) or specific targets for each sector (as in national politics).

From the standpoint of economic agents, is essential to understand the application of the market instruments to answer questions like: Is it possible to perform compensation inter or between sectors? In other words, emission reductions of a state could be used to meet targets/commitments in other states? Or, the fulfillment of commitments will be in aggregate by company or by the sending unit (a plant, for example)?

The definition of how the assets will be created in the market emission reduction (via emission limits or reductions proven, among other methods) is also crucial to the

participation of economic agents.

Equally important is to define how the markets to reduce emissions in Brazil are going to connect or relate to the international market, including the initiatives derived from international processes, such as the Kyoto Protocol.

Finally, we need to promote a discussion with all society about how the economic and social benefits obtained through the carbon market will be distributed.

### **3.5. Funding Sources**

Funding for the implementation of state policies on climate change includes, in general: credit facilities and financing, investments from the budget resources and the establishment of funds with different sources.

The data in Table 4 point to the fact that 15 states make reference to state funds. Of these, nine funds are specific to climate change, adding to the National Fund on Climate Change (Climate Fund).

How these funds will be regulated, the definitions sources of resources and management model will be key to fostering the integration of its application so as to maximize the potential of every Real invested.

It is very appropriate that the Climatic Fund's investment are integrated and coordinated with the investments of state funds.

**Table 4: Financing instrument**

State	Fund	Articles Reference
AC*	State Forest Fund and Special Fund for the Environment	
AP**	<b>State Fund on Climate Change and Sustainable Development</b>	Section III , page. 14
AM	<b>State Fund for Climate Change, Environmental Conservation and Sustainable Development</b>	Art. 5º I
PA**	<b>State Fund on Climate Change and Payments for Environmental Services</b>	Section XIX, page.18
TO	State Environmental Fund	
BA	State Fund of Water Resources and the State Fund for Environmental Resources	
PB	--	
PE	<b>State Fund on Climate Change</b>	Art. 42
GO	--	
MT**	<b>State Fund on Climate Change</b>	Art.29 a 33 e Art.35
ES	<b>State Fund of Water Resources and Climate Change</b>	Art. 5º II
MG**	State Water Resources Fund	
RJ	State Fund for Environmental Conservation and Urban Development	
SP	State Fund of Water Resources and the State Fund for Prevention and Control of Pollution	
PR**	<b>State Fund on Climate Change</b>	Art.7, Art.8, Art.19 (III)
RS	<b>State Fund on Climate Change and Environmental Disasters</b>	Art.3 (VIII), Art.26
SC	<b>Catarinense Fund on Climate Change</b>	Art.6 (III), Art.15-17

\* Law No. 2308 - of October 22, 2010 - which creates the SISA, ISA Carbon and other programs for Environmental Services and Ecosystemic Products of Acre State.

\*\* Bill

### 3.6. Licensing as a tool to promote the mitigation of emissions

The environmental licensing is important because it acts as a regulatory tool of private sector activities. Indeed, some state laws now require that companies with large GEE emissions have to neutralize them completely or almost completely, as we shall see.

Of the 17 states with legislation enacted or proposed law that defines the state policy of climate change, 12 mention this tool to adjust its policy: Amapá, Amazonas, Pará, Tocantins, Pernambuco, Goiás, Mato Grosso, Espírito Santo, Rio de Janeiro , São Paulo, Rio Grande do Sul and Santa Catarina.

The way the issue of mitigation of GEE emissions is treated in the licensing vary widely. Some cases mention only that the issue should be considered by licensing. In others, there is a requirement inventory of emissions for renewal of licenses. In other stricter cases, the license is conditioned to technological advances or to specific emission limits.

It is important to ensure convergence of criteria applied in the environmental licensing to avoid distortions between sectors and states that generate economic and environmental imbalances. This is because the way of environmental licensing incorporates the themes of global climate change and mitigation of GEE emissions is strategic to the overall competitiveness of the productive sectors.

We must avoid the occurrence of a distortion in the market which may lead to companies settling in states where the climate and environmental legislation is more soft or even in cases of states with a more rigid and punitive legislation, but without the same pattern in relation to the entry of foreign products that may be major emitters of greenhouse gases.

One way to deal with such distortions is to create general guidance through the National Environment Council (CONAMA) which includes all states and different interest groups in civil society.

The difference in the degree of detail itself has no major impact for the harmonization of policies, but may pose a challenge, as the details of implementation can generate conflicts. An example would be the definition of the regulation or taxation of emissions of freight transportation in interstate origin or source. This analysis was not performed in this study.