

RISKS AND ENVIRONMENTAL GOVERNANCE IN BAIXADA SANTISTA: CLIMATE POLICIES OR DISASTER MANAGEMENT?¹

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BARBI, F. **Environmental changes and political responses in the cities: The risks in Baixada Santista.** Campinas, Editora da Unicamp, 2015.

In *Environmental changes and political responses in the cities: The risks in Baixada Santista*, Fabiana Barbi presents an analytical and methodological approach for the study of the internalization process of climate change risks in terms of political responses from local governments in coastal cities. The book is the result of her doctoral research – defended in 2013 at the *Environment & Society* program (NEPAM/UNICAMP) – in which the author undertook an in-depth study on mitigation and adaptation policies to climate change in the cities of the Metropolitan Region of Baixada Santista (MRBS) between 2004 and 2012.

The research adopted an interdisciplinary perspective based on the ‘sociology of risks’, environmental sciences and public policies analysis. In regard to the methodology, the author justified her arguments through an articulation of primary and secondary data encompassing document analysis of public policies, semi-structured interviews with public managers from the MRBS and bibliographical references on climate change governance. The results converged to a critical evaluation of responses to climate change that might be seen both as a contribution to environmental sociology and as support for public managers in charge of planning socioenvironmental policies.

The diagnosis takes into consideration the *Fifth Assessment Report* – published by the Intergovernmental Panel on Climate Change – which reinforced the conclusions about the unequivocal and anthropogenic character of global warming. The cumulative human impacts would have inaugurated the anthropocene as a new geological era, in which the by-products of industrial activity collide with the biophysical limits of the planet (IPCC, 2013). In sum, the increase in the volume of greenhouse gases – mostly associated with the predominance of fossil fuels, deforestation, agricultural and cattle raising activities – has provoked disturbances in the atmospheric dynamics that might lead to irreversible alteration in the functioning of ecosystems, in case

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structural modifications of the current development pattern are not implemented.

The ascertainment of climate change as an unintended consequence of the development of industrial societies and economic dynamics of globalization is intimately related to Fabiana Barbi's strategy of taking the premises from the 'sociology of risks' as the theoretical framework of her investigation. On the one hand, the author grounds her analysis on Ulrich Beck's (1992) view concerning the ubiquity of risks and the dilemmas that they represent for political action, inasmuch as the complexity level of human activities do not allow science to unequivocally clarify the causal chain associated with the interactions between societies and the environment. On the other hand, Barbi takes up Anthony Giddens' idea of '*runway world*' (1991, 2005), according to which human beings unleashed more powerful processes than they are able to control. Therefore, the study focuses on the discussion about the attitude of social actors in face of the menaces and uncertainties brought up by socially fabricated risks.

The MRBS was taken as the focus of Fabiana Barbi's empirical analysis in virtue of its high degree of vulnerability to climate change. For its geomorphological characteristics of acute hollow in the area of Serra do Mar, socioeconomic specificities and populational density, the MRBS is considerably exposed and susceptible to the environmental risks resulting or intensified by climate change – such as the rise of sea level, storms, flood, landslides and the proliferation of contagious diseases associated to the changes in rain patterns.

According to data modelling studies applied to sea level analysis in the region up to 2100, the city of Santos appears completely inundated (including the harbour area) in the most critical scenario when the the water rises 1.5 m, with the sole exceptions of the hills and the city centre. The consequences would be drastic, seriously damaging the rainwater drainage and the sewage collection systems, besides compromising the drinking water sources due to salt water intrusion in estuaries and aquifers.

Furthermore, the methodological option for focusing the investigation on socio-environmental public policies in the metropolitan level is related to the author's theoretical interest on the examination of the nexus between democracy and climate governance. In fact, Fabiana Barbi emphasizes that the efficacy of climate change mitigation and adaptation measures depends fundamentally on the 'multilevel' and 'cross-sectoral' articulation of public policies. Thus, her document analysis encompasses the participation of Brazilian cities in transnational networks for environmental cooperation, the internalization of the climate question in both national (*National Policies for Climate Change*) and state levels (*State Policies for Climate Change*), as well as solutions elaborated on the local level. At the same time, Barbi argues that the success of climate policies also depends on the horizontal articulation between the different departments and secretaries in order to avoid that they are reduced to sparse and insufficient measures.

The multilevel governance perspective is also important in the sense that – in spite of the national State's relevance in what concerns energy planning and international negotiations – the cities have their autonomy to promote local reorganisation in order to diminish greenhouse gases emissions and, at the same time, to plan urban development so that its resilience in face of climate change risks might increase. Concrete initiatives

mentioned by the author were the incentive policies to the use of public transportation and the construction of bicycle paths, specially considering that in Brazil most energy consumed by the transport sector (71%) is originating from fossil fuels. Consequently, 'a centralized State is less and less necessary because populations from urban centres can solve many of their problems locally' (p. 81).

According to the author's definition, the political responses to climate changes are 'any actions taken by any governmental actor in different levels and sectors to cope with climate change' (p. 52). These actions encompass mitigation policies – that aim to reduce the volume of GHG and consequently the pace and magnitude of such changes –, as well as adaptation measures, which seek to make cities less vulnerable to their impacts. Hence, the distinction between mitigation and adaptation strategies is important as analytical reference. However, considering that climate change is already in course, both are essential for the reduction of risks, and their practical efficacy depends to a great extent on the institutional synergies between themselves.

Fabiana Barbi's interviews with city government officials have shown that most of them do realize the effects of climate change in the region, specially those risks concerning the sea level rise and the change in rain patterns. Furthermore, the institutional analysis has revealed that, even though Santos does not have any specific agency to cope with climate issues, the existing secretaries and departments are structured according to an arrangement that favors all relevant sectors associated with mitigation and adaptation to climate changes.

Based on the assembled data, a systematic mapping of climate policies in Santos was made. Among those measures that could be classified as mitigation policies, the author listed the expansion from 21 km to 31 km of bicycle paths between 2009 and 2012, a vehicle inspection program for public transportation (ConscientizAR Program), the Program for the Maintenance and Environmental Inspection of the Municipal Fleet (2010), the creation of incentives for the so-called 'green buildings' (2011), the use of solar panel at a municipal school (2011), the designation by the Directive Plan of 86% of the city continental area for environmental protection (2011), a Municipal Tree Planting Program that envisages the expansion of green areas, and a threefold increase in the volume of waste collection between 2001 and 2011. Nevertheless, the author emphasizes the contradictory aspects of such policies in that the intensification of port transit concretely implied the reduction of environmental preservation and protection areas. Besides, the success of the solid waste management policy shall not be overestimated, since less than 1.74% of the solid waste were effectively destined to selective collection in 2011.

In relation to the 'adaptive' measures, Barbi highlights *Santos New Times Program* and the *Municipal Plan for the Reduction of Risks* (MPRR). The first one refers to a set of infrastructure interventions with the objective of increasing investments in the socioeconomic development in some regions where the vulnerability to climate change is particularly high. In the 120,000 inhabitants Northwest zone, which lies below the sea level, floods and inundations are recurrent even when rains are not particularly intense. The MPRR, on its turn, was conceived as a tool for the diagnosis and planning of actions designed to increase the security in the previously mapped risk areas.

Fabiana Barbi evaluates the content of such policies and recognizes that ‘the local government of Santos has presented important efforts (...) towards the internalization of climate change policies on its agenda’ (p. 190). In spite of that, progress is still very incipient and the municipality does not have a GHG emissions inventory nor a strategic plan to mitigate them. In concern to adaptative measures, the author highlights that – even though Santos civil defense is a positive reference for the other cities in the region – there are very few initiatives related to urban drainage and coastal erosion. The actions are devoted to coping with already existing urban problems and predominantly designed according to a disaster prevention model.

The climate change policies’ weakness in the MRBS would reflect the lack of an integrated action plan between the cities of this region, as well as the inexistence of coordinated intervention between the different sectors and government spheres. Thus, local policies approach the climate risks in a merely tangential form and without recognizing the co-benefits of mitigation and adaptation policies for the reorganization of the current development pattern. The critics become even more acute when the author refers to the centrality given to the exploration of the Tupi pre-salt reserves in the future development of the region (Greenpeace, 2013).

(...) climate change risks are produced by the development processes of contemporary societies, which implies questioning such processes – something that the climate policies or the policies associated to climate change studied in this book do not address at all. In other words, they leave the core issues untouched, configuring themselves as mere palliatives that reinforce the same and well-known pollutant and GHG emitter development patterns (p. 215).

Consequently, Fabiana Barbi concludes that climate police is not precisely about the climate, but rather about the transformation of the basic concepts and institutions of contemporary societies. The empirical results of this investigation are interpreted in the light of the ‘Giddens’ Paradox’, according to which governments’ concrete efforts to mitigate climate change are very inexpressive in view of its risks, inasmuch as they are imperceptible in everyday life, but waiting until these risks become evident would rather be an irresponsible attitude that can make future measures useless (Giddens, 2009).

In any case, Fabiana Barbi’s book does not incur hopeless fatalism, reminding us that risks also mean that we can interfere in our destinies. Future investigations on the nexus between democracy and climate governance could complement her research by discussing and revealing the meanings associated to global warming in municipal elections. That would help to clarify to which extent climate policies in the local level are endorsed by voters or a merely technical decision from policy makers accountable to politicians who won the elections without committing themselves to the climate agenda. Considering the importance of elections for legitimizing and strengthening a collective action plan, the question to be answered is whether it is possible to develop climate policies that are not restricted to disaster management in a context in which climate change remain invisible or of marginal importance in the electoral debate.

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