Opinion

To Be a Brazilian City Dweller, Sometimes We Must Learn to Say Enough!

Franco L. Souza [1,*] , María S. Fenoglio [2] and Fabio Angeoletto [3,4]

1 Bioscience Institute, Federal University of Mato Grosso do Sul, Campo Grande 79070-900, Brazil
2 Instituto Multidisciplinario de Biología Vegetal (IMBIV), Universidad Nacional de Córdoba (UNC), CONICE, Córdoba X5016GCA, Argentina
3 Geography Undergraduate Program, Federal University of Rondonópolis, Rondonópolis 78736-900, Brazil
4 Ecology and Conservation Undergraduate Program, Federal University of Mato Grosso do Sul, Campo Grande 79070-900, Brazil
* Correspondence: franco.souza@ufms.br

Abstract: In several Brazilian localities, a local-scale problem can be detected regarding an absence of citizens compromising that is negatively associated with a greater engagement in public policies that could reflect, in the end, a better understanding of the importance of ecosystem services for their lives. Whatever the governance initiatives, by considering the neighborhoods' boundaries and their particularities, they should be accompanied by a strong informative commitment to encourage the local population to break away from their harmful attitudes that result in bizarre idiosyncrasies associated with human–nature connections. The conservation agenda, sustainable developmental goals, or other similar targets seem to be unconnected with social demands at a more local scale, while local stakeholders find it difficult to spread some specific and important ideas at a wider governmental scale. Without these connections, also fomented by weak or absent proactive academic initiatives and governance, most citizens will continue to live in cities that, instead of offering a better quality of life, will only bring environmental problems, such as smoke from burning forests and vacant lots, public areas filled with domestic garbage, polluted rivers, animals killed on the roads, and zoonosis. It is time to change the idiosyncrasies of these Brazilian cities, acting as if they were only part of the urban landscape and as if society has nothing to do with their actions. It is time to say enough!

Keywords: academy; Brazilian cities; Global South; governance; human–nature connection; public policy

1. Introduction

Considering the global environmental changes that our world is facing, it is a good time to look at our cities and search for new ideas to deal with local phenomena, trying to resolve some important differences between the Northern and Southern hemispheres that have become exacerbated after the recent pandemic [1]. Here, we explicitly address common and inconvenient issues that, by a sum of different socioeconomic factors, such as people's ignorance, public policy lenience, and lack of extensive compromises from the academic sphere, have led society to coexist with bizarre idiosyncrasies that compromise our lives. Taking the Brazilian cities' realities as examples, many problems are still widespread in urban areas, most of them being possibly unusual or incomprehensible for Global Northern citizens, such as burning vegetation in vacant lots as a way to "clean" the ground, road-killed animals in streets, the accumulation of garbage in urban forest fragments, and water pollution in rivers, floods, and mosquito-borne diseases (Figure 1). Similar environmental problems are seen in other Latin American countries, such as Argentina, with the aggravating circumstance that these problems sometimes are insufficient to generate a generalized environmental conscience from the society [2]. This gulf between

society and the environmental issues reflects a lack of consciousness regarding the environmental rights of the population and the functioning of justice that protects them [2,3]. It cannot be denied that cities within this region are characterized by marked social and environmental inequalities [4], which in addition to the gap between theory and practice in implementing the public policies accordingly, ranging from federal and state level to municipal levels [5], exacerbates the situation.

Figure 1. In Brazilian cities, some urban scenes have sadly become common and a part of people's routine without a strong societal commitment to extirpate them, reflecting a kind of bizarre idiosyncratic behavior. (**A**) Burning vegetation in urban vacant lots as a practice to "clean" the ground; (**B**) Road-killed animals (a capybara; *Hydrochoerus hydrochaeris*) in urban streets; (**C**) Accumulation of garbage along river banks; and (**D**) Accumulation of garbage in urban forests fragments (source: www.campograndenews.com.br; accessed on 9 November 2022).

It is clear that some global organizations (e.g., United Nations, World Health Organization) could help to foster adaptive innovative practices, ideas, and attitudes that enhance planning to improve human well-being in urban areas. These global attitudes are useful in avoiding present and future problems (e.g., climate change, zoonotic diseases, and pandemics). Although international agreements such as the Convention on Biological Diversity (CBD), Sustainable Development Goals (SDG), Aichi targets, and climate protocols are intended to reach all people, often the success of these actions is limited for several reasons, including inadequate communication, dissociation from local realities, or lack of political compromises. It is not only that these agreements are complex but also the national commissions that could represent the countries are composed of people who often are not connected with the related social demands at more local scales (i.e., states, cities, and neighborhoods). Top-down policies need more connections among the local stakeholders [6], while bottom-up approaches must be considered relevant as a potential contribution to urban environmental governance [7]. Therefore, societal challenges require transformative changes across administrative scales, from bottom-up to top-down, including new relationships associated with cultural values and beliefs [8]. Since cities are subject to many types of top-down decisions (e.g., SDGs), there are inherent filters (e.g., socioeconomic variables, such as education, income, and civil societal organizations) in this information–reception flow that, consequently, means the important information often does not reach local people [9,10].

Most Brazilian cities exhibit agendas of biodiversity targets and sustainable development goals in their cities' master plans [11], even though most small- and medium-sized cities exhibit a low capacity to put them into practice [12]. This is an important concern because even at a local scale people do not understand (or care) about the local policy objectives since the filters prevent governments from reaching all the citizens. Therefore, sometimes it can be difficult for dwellers to understand the local value of ecosystem services or they would not perceive the impacts of large-scale events in their lives, such as global warming. A green area, a lake, or a square are important leisure areas for some people but can bring inconvenience for others. Behind this idea is the perception that the negative consequences of such urban interventions for people extend towards physical and emotional injuries (e.g., security) [13]. In Brazil, some of these urban forested areas, squares, or public parks are not good places for people who live nearby, configuring areas for waste dumping, noise, habitats for harmful animals, or unsafe places [14,15]. On the other hand, people perceive urban interventions such as river channelization to control floods and the extensive paving of streets and parking lots as positive development initiatives even though these urban practices are often implemented at the expense of ecosystem services by creating heat islands, homogenizing biodiversity, favoring of exotic species, increasing flooding, negative changes in the aquatic habitat, and downstream sediment transfer to coastal zones [16,17]. Nevertheless, a study of environmental perception among residents of a polluted watershed in Buenos Aires, Argentina, showed that although people did not value the wildlife or scenery of watercourses and did not use them for recreation, they would like them to be improved [18]. Environmental perception is frequently positively related to socioeconomic status and levels of education of the population [19], which highlights that education could be an important element in solving environmental problems.

In Brazilian cities, there are significant hierarchical levels of organization in the form of neighborhoods that practically are independent societal units. People relate more with their neighborhoods than with the whole city. As a result, any decision-making and governance practices at this spatial and social scale could have more chances to be reached than at broader scales (i.e., city, state, and country). Initiatives evidencing that changes are having some effect on the urban planning process are important to communicate effectiveness [20]. Because of local characteristics, neighborhoods are the most effective targets for interventions that will contribute to the quality of the entire city. For example, some areas are prone to flooding, so efforts to avoid this problem are best prioritized locally at an appropriate scale to avoid flash flooding from excessive impermeable surfaces of roads, parking lots, and rooftops. Others need more attention to alleviate heat islands, so consolidation of green areas is recommended. These participatory planning projects, as an example of socio-environmental changes at the neighborhood scale, were accepted in some Brazilian regions, where low-income families living close to unsafe urban parks were proactive players in the revitalization process of the area [21].

2. Discussion

The simple-minded paradigm that classified cities early on as the antithesis of nature (or biodiversity centers) has been superseded by the evidence that cities need to be planned as additional spaces for biological conservation [22]. However, how to apply knowledge to solve urban environmental problems is a challenge for most Latin American countries [23]. For instance, the luxury effect (urban biodiversity positively correlated with neighborhood wealth [24]) is particularly exacerbated in Latin America, in general, and in Brazil, in particular [23], reflecting a high inequality and environmental injustice in ecosystems services delivery through urban landscapes [25]. In this sense, one of the causes of injustice in access to green areas in Brazilian cities is the negligence of urban planning in poor neighborhoods, suggesting that much has to be achieved in relation to the interplay between governance and local people. One of the potential solutions to change this situation is increasing public green areas in the less favored regions of the city by including specific public policies and popular participation in order to build more

sustainable and resilient cities [26]. For instance, socioeconomic characteristics, such as geographic, economic, demographic, and educational conditions, are significant factors in predicting the spatial variation of greenness that students are exposed to in Brazilian public and private schools [27]. This suggests that important public policies must be addressed to protect Brazilian students from environmental hazards and improve their safety, health, and learning performance through targeted interventions.

Globally, much of the knowledge generated on the relationship between biodiversity and human well-being comes from the Global North regions, originating from local management practices (growing vegetables in gardens and public and private areas), individual behavior and experience (citizen-science activities), and actions of stakeholders and public policies (safety, environmentally friendly architectures) [28]. It is apparent that Brazilian cities exhibit a type of tragedy of the commons in urban habitats [29]. Although access to urban ecosystem services presupposes their use by most people, they can contribute to depleting the resources through overuse and excessive exploitation. A city (or a neighborhood) that sporadically attracts people to live or socialize there because of its excellent quality of life resulting from reliable good governance can have problems meeting the demands of its local dwellers due to increases in the use of its ecosystem services (in Brazil, this phenomenon is verified every year in beach cities during summer vacations). If local groups and cities are willing to contribute to solutions, what can they do to avoid failure? There is no single answer. A set of factors must be considered, from individual to collective, from cultural to environmental. At the same time, as society begins to feel more represented and better served by goods and services, communities will have greater power to participate in decisions. Tax incentives for companies and taxpayers in the form of discounts for those who contribute with their properties to benefit from biodiversity and ecosystem services (e.g., by increasing soil permeability and tree planting, garden maintenance, green roof installation); that is, decisions that allow habitat heterogeneity as a practical management strategy through different spatial scales, from gardens to urban parks and cities' green areas. At the same time, the willingness to pay for practices can be encouraged as a mechanism to strengthen public participation [30,31].

Whatever the governance initiatives, they must be accompanied by a strong commitment to informing people about the reasons and principles that led to certain attitudes [7]. Communication involving schools, museums, lectures, outdoor events, digital platforms on the municipality's website, and neighborhood associations all require continuous development and commitment to local issues to ensure rapid responses for resolving problems. Governance has a direct impact on this process because it determines how cities and neighborhoods are organized. Therefore, there is a dynamic multidisciplinary process, even in neighborhoods, consisting of a participatory agenda in which stakeholders, secretariats, and civil society have a common interest regarding urban planning [32]. Dealing with policies and practical ways of achieving the sustainability of ecosystem services and biodiversity conservation in urban areas, as well as making cities nature-friendly and more resilient, will remain a major challenge for tropical cities in South America in the coming years [33]. For example, throughout its history, urban planning in Argentina has not, with few exceptions, had any connection with environmental policies [34], which shows one of the weaknesses that the region faces. Considering that each single city has its own idiosyncrasies, we must be aware that challenges are ever present. Innovative approaches should be seen as long-term initiatives and incorporated in the short term into local planning as a strategic policy for the enhanced development of resilient cities.

Finally, academic researchers and government agencies need to recognize their role in these problems as well as their importance in resolving complex issues. How is it possible that people still live in cities with many ecological caveats? How can we, the many scientists, researchers, and professors from different disciplines, close our eyes to such day-by-day disruptions? There is a widespread absence of deep academic engagement in applying the most effective ideas created by researchers to solve local problems. We need to do much more as players to convince policymakers to enhance urban resilience by actively

participating in governance across a broad range of administrative spheres. However, sometimes the real problem is not the lack of researchers' commitment to spreading their word but that stakeholders and decision-makers properly listen to them and apply their advice. On the other hand, one of the possible causes for the low match between the academic world and citizens is the enormous pressure on Brazilian scientists to write and publish articles in prestigious academic journals, which is a time-consuming process. Considering that urban environmental impacts are also social, an interesting way to democratize scientific knowledge should be translating it into adequate journalistic language by occupying spaces available in the press and distinct electronic media. Another way in which scientists could gather, discuss, and propose potential solutions to urban environmental problems is through the consolidation of networks of academics as occurs in other countries of the Northern Hemisphere [35]. In Latin America, after an Urban Biodiversity workshop, held in Argentina in 2022, there was a clear intention to create the first Urban Ecology Network in the region with the aim of developing common methodologies, obtaining financial support, providing information in native languages, and last but not least, finding a channel of communication between the academic world, society, and governments about the possible solutions for cities (Fenoglio, unpublished data).

3. Conclusions and Future Directions

Brazilian cities have idiosyncrasies that must be identified as shaping local communities, such as people's origin, main income source, different operational activities, and input–output commercial resources. When some of these characteristics negatively influence whole socio-ecosystems, then something is wrong. The solutions are not just a matter for the actual or past government to consider, but the people themselves need to become more aware. There are examples of environmental justice networks in Latin America, from Brazil to Argentina and Mexico, that can be a model to follow [3]. Despite the great advances in all branches of science, the solutions for socio-ecological and economic problems are far from being resolved, and this is a field where the academic world must be more engaged in practical initiatives and open to discussions with other specialists, stakeholders, and dwellers to shape a sustainable urban future [31,36]. Although it is recognized that Brazilian public policy needs to deal with immediate necessities (e.g., jobs, security, education, health), the confounding effects of this immediateness deserve caution to ensure long-term successful solutions. Moreover, even though the governments of the regions affirm the environmental sustainability of the applied policies, environmental inequities are still increasing [3].

The tradeoffs among alternative solutions to managing extreme conditions are typically not considered in terms of long-term attitudes. Conservation agendas, developmental goals, and all proposals for sustaining urban ecosystem services must also consider climatic impacts. Extreme climatic events will be more frequent in the future [37]. Although Brazilian cities contain more than 80% of the country's population [38], the impacts of fires, smoke, particulate air pollution, heat waves, floods, and wildlife losses will have major effects on urban populations. One way to counteract those effects is by increasing the amount of green and blue infrastructures as well as managing natural areas in urban landscapes. For instance, wetlands throughout the world contribute to important ecosystem services in urban areas, including improvement of water quality, carbon sequestration, habitats for wildlife species, reduction in effects of heat islands, and recreation opportunities [39]. Brazilian cities need a proactive research agenda that prioritizes immediateness in searching for practical actions in urban management while also considering the long-term realities of climatic change and social needs. Initiatives such as blue and green architecture, nature-based solutions, citizen science, resilient, and biodiversity-friendly cities need to be put into practice. In other words, Brazilian cities should be engaged in a translational ecology, an approach in which scientists, stakeholders, and decision-makers work collaboratively to develop and deliver ecological research that ideally results in better decisions related to the environment [40]. These responses can be fostered by having new environmental and social

science approaches strengthened in the educational curriculum at all levels. Without these practical perceptions based on the newest achievements in environmental sciences and strong governance, most Brazilian citizens will continue to breathe smoke from burning forests and vacant lots while walking through areas filled with domestic garbage as if these backgrounds were part of their cities. Too much is wrong with our cities; we must learn to say enough!

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