

EDITORIAL Nº 1 / 2019

## CRITICAL INTERDISCIPLINARY SCIENCES, CRISES AND DISASTERS

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In 2019, the Journal *Ambiente & Sociedade* (Environment & Society) maintains the format of annual volume, with a renewed team of editorial executive secretariat. With the challenge of continuing our editorial policy, in our 22nd year we seek to extend our reach to the national and international public.

However, it should be emphasized to our readers that we live in a national reality in which science undergoes an unprecedented budget cut, passing through a process of abandonment and dismantling of its knowledge-generating institutions (NEHER, 2019). The drastic cuts recently made in the budgets of Science, Technology and Innovation, which were already at very low levels, has created serious problems for academic publications. This drastic reduction directly affects the Journal *Environment and Society*, considering that it does not count on the granting of financial support from CNPq, causing the Journal to be maintained by its own resources.

Because of this reality, and to ensure its continuity with the quality recognized in national and international scientific community, the Journal will change its payment model. In addition to the submission fee of R\$ 300.00, effective as from 2019, an addi-

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tional amount of R\$ 500.00 (Five Hundred Reais) will be charged for articles approved for publication, after the evaluation process. This billing will be made only for articles submitted from May 1, 2019. The additional financial resource will complement the production costs which include the operating structure in its several stages: the executive editorial secretarial team, review, layout and editorial production. It should be noted that the stages of desk review, the accompaniment of the associate editors, the contributions of the referees and other activities of the editorial staff are carried out by an academic team made up of professors from several Brazilian and foreign universities, researchers and post doctors who collaborate voluntarily and unpaid.

It is noted, for example, that public international scientific institutions, such as some European ones, have been stimulating and sometimes demanding that the results of research funded by them are published in open access journals. The most widely used term internationally for this modality is “open access”, which is strongly associated with the rise of a growing modality of services provided by private publishing groups that charge publication fees, but in a corporate logic. The model that prevails in *Ambiente & Sociedade* differs by only charging essential costs for editorial expenses. We develop the reproduction of an editorial practice committed solely and exclusively to the scientific dissemination of quality, free access and strongly supported by public institutions. In this way, we reinforce our commitment to ensure visibility and universal access to scientific literature, as well as other journals available on the Scielo platform, within a cooperative electronic publication model of scientific journals through the Internet.

With the collaboration and commitment of editorial board of the journal *Ambiente & Sociedade*, we present the contents of this new volume. As in the previous edition, the systematic inclusion of articles approved in the different sections of the Journal (original texts, Featured Themes, among others) will be done throughout the year until November. Thus, in addition to the articles presented in this edition, in the following months will be published new articles corresponding to the Annual Volume 2019, including all available sections of the Journal.

The theme featured in 2019 is “Oceans”, and for 2020 the theme is “Urbanization, planning and climate change”, highlighting the central debate of the role of climate change and its impacts on spatial dynamics, in particular related to urbanization and globalization, and in the planning processes of the territories.

The editors of *Ambiente & Sociedade* could not fail to address the fact that the year 2019 also began with the socio-environmental tragedy of Brumadinho, that caused more than 230 people dead and dozens of missing (G1 MINAS, 2019), thus revealing the serious problems of the privatization model of mineral exploration, reflected in the multiplication of high risk situations. Risks generated not only by dams still remaining, commissioned or decommissioned, but also by the toxicity of the mud, which generates concerns and uncertainties in the affected communities about the contamination of land, its water sources and the possible contamination of food produced in these areas (ZHOURI et al., 2016). Following the Samarco dam disaster in 2015, measures should have been implemented to prevent collapse of other dams; however, these actions were neglected, leading to the death of people and causing serious socio-environmental disasters.

The disaster that occurred in the city of Mariana (MG) left 19 people dead, a significant part of the Rio Doce basin contaminated by waste and more than 1,200 homeless people with serious impacts on their economic survival conditions (G1 MINAS, 2016; FERNANDES, 2016), which was a warning sign for the entire mining region in Minas Gerais.

Nevertheless, it is clear - by subsequent events - it was believed that the Mariana disaster was an occasional occurrence. New security procedures were not internalized by mining companies and a new regulatory framework was processed very slowly in the mining legislation. Only one month after the Brumadinho disaster, the Minas Gerais Government approved the State Policy for the Safety of Dams in Minas Gerais (MINAS GERAIS, 2019). But, the National Mining Agency still shows difficulties with the lack of staff and budget to increase the inspection of dams (JUCÁ, 2019).

After the rupture of the dam located in the Córrego do Feijão, the total area of the contaminated debris spot occupies 8 km<sup>2</sup> of a total of approximately 640 km<sup>2</sup>. The Paraopeba River has become a toxic river for more than 300 km, the region being most impacted by the dumping of 14 thousand tons of ore tailings in the surrounding area. Analysis made at different points in the river shows that its waters have become unsuitable for various uses, such as public water supply, irrigation and watering livestock food. In all sampling points analyzed, microbiological concentrations were far above the permitted by law. Heavy metal components such as iron, copper, manganese and chromium were found in water at a concentration above the maximum limits permitted by law. These heavy metal concentrations are harmful to the environment, human health, fauna, fish and living organisms throughout the Paraopeba River (SOS MATA ATLÂNTICA, 2019).

It is an environmental crime that reveals the serious problems of the privatization model of mineral exploration, generating irreversible impacts and increasing high risk situations. The companies work in a perspective in which profit prevails over security. With post-disaster evaluations, in this era of neo-liberal arguments for deregulation and financialization, there is a proposal or adoption of cheaper measures that reproduce the predatory structures and mechanisms that govern capitalist competition, at the expense of the environment and human health.

Therefore, there is an urgent need to review the existing model in the mining sector. In this scenario, the understanding of the mining sector's about the importance of monitoring and control in a systematic and continuous way by qualified technical teams in the public interest is extremely important.

The environmental crimes of Mariana and Brumadinho highlight the importance of addressing the issue of environmental licensing in Brazil. Contrary to what the Federal Government has proposed regarding the easing of environmental licensing, there is a need to improve and enhance this important instrument, combined with an increasingly efficient supervision.

Criticisms of possible delays in processing licensing applications require a reduction in the number of qualified technical staff (which will further complicate the process). Symptomatically, all the manifestations that advocate a more expeditious and lenient licensing have never been accompanied by demands for funds to expand the technical teams.

In general, in the face of these disasters and their amplified consequences, of doubts in the causal situations and in the needed responsibilities, it is necessary to reiterate, as to the role of the production of academic criticism and its respective disclosure, that they are free from permeability by financial interests and really committed with society.

After this brief reflection, we invite everyone to enjoy the articles to be published throughout 2019, and thanking the entire editorial staff of the journal *Ambiente & Sociedade* that with academic rigour and quality, makes possible the continued publication of articles with interdisciplinary framework and discussion.

Opening the new annual volume, the authors: Éric Cesar Pagliarini, Vanessa Menezes Oliveira and Evaldo Luiz Gaeta Espindola present and discuss the results of applying the Ecological Risk Assessment (AER) method for assessing the probability of occurrence of adverse effects in waters in the municipality of Bom Repouso (MG), in the article: **Ecological Risk Assessment (ARE) application for the evaluation of the impacts in natural aquatic ecosystems.**

In the article **A monitoring system proposal for urban parks in valley bottoms**, the authors: Larissa Fernanda Viera Martins, Luis Antonio Bittar Venturi and Giovanna Belem Wingter, present the results of the application of a protocol for the monitoring of urban parks, based in indicators of two categories: i) conservation and; ii) public use. This protocol was applied in the Nascentes do Belém Park, in Curitiba-Paraná.

The authors Rafaela Vieira, Gabriela Schmidt and João Marcos Bosi Mendonça de Moura, in the article: **Urban public policy for natural disaster risk management in Blumenau-SC: Processes and activities**, carry out an analysis about municipal public agencies responsible for risk management of disasters, as well as the actions and ideas reported by the representatives of the bodies researched, on the subject of the risks of natural disasters.

Through a bibliographical study and semi-structured interviews, the article: **Differentiated Education and Community-based Tourism in the Caiçara Territories of Paraty (RJ)**, by the authors: André Loureiro Ribeiro Barros and Camila Gonçalves de Oliveira Rodrigues, discusses the process of construction of school education and its contribution to the development of tourism in the caiçaras communities of Praia do Sono and Pousa da Cajaíba.

In the article: **Participatory design of a Monitoring Protocol for the Small-Scale Fisheries at the community of Tarituba, Paraty, RJ, Brazil**, the authors: Ana Carolina Esteves Dias and Cristiana Simão Seixas, analyze the process of elaboration of the protocol of monitoring in the community, experimenting a pioneering method in the Brazil, SocMon. The monitoring aims at the sustainability of the local fishing to solve conflicts resulting from the restriction to this participatory activity of the artisanal fishing.

Based on the case study of the Caiçara community of Martin de Sá, in Rio de Janeiro, the authors: Laura Sinay, Maria Cristina Fogliatti de Sinay and Gabriel Aguiar de Araújo, describe fifteen years (2000 - 2015) of changes in the way of thinking and the community's lifestyle, influenced, among other factors, by the implantation of nature conservation units and tourism; in the article: **Traditional people, protected areas and tourism: a 15-year Brazilian case study of cultural change.**

The authors: Maria Accioly Dias and Carlos Frederico Bernardo Loureiro, in the article: **A systemic approach to sustainability - The interconnection of its dimensions in ecovillage practices**, analyze how the different dimensions of sustainability are worked out in ecovillage practices. They conclude that the so-called “social sustainability” (including political, economic and cultural aspects) involves much more significant challenges than so-called “ecological sustainability”.

Finally, in the article: **River dredging: when the public power ignores the causes, biodiversity and science**, the authors: Welber Senteio Smith, Fabio Leandro Silva and Renata Cassemiro Biagioni, expose the lack of technical criteria for the execution of dredging of the sediments deposited in the bed of the Sorocaba River, the impacts for the aquatic biota and the real necessity of this intervention. The intention is to detail the causes of the urban floods and to discuss how the public power should proceed.

To conclude this editorial, we announce the beginning of a new section called “Narratives and Reflections”. In this new space, we invite the academic community and organized civil society to share short texts about socio-environmental issues that require a deep and urgent reflective process based on own experiences or research, especially in the field. These texts are required to contain solid and robust arguments, but without the rigor of academic research. For this edition, the text: **What have we learned from Mariana? The importance of names, places and affections** of the authors: Nadja Araújo, Keila Carnavalli, Leticia Barbosa, Nathalia Silva, Patrícia Barcelos, Raphael Saldanha, Teresa Neves and Vinicius Klein, present a reflection on this tragedy after their visit to communities affected by the rupture of the Mariana-MG dam.

We wish you all a very good reading!

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