

EDITORIAL

This volume of *Ambiente e Sociedade* features nine articles that discuss alternative food networks, environmental conflicts in mining and hydroelectric projects, strategic environmental assessment, climate change adaptation and risk, reverse logistics, environmental services and recovery of degraded areas, associations in protected areas and social representation of sustainability.

It also contains a special dossier, organized and coordinated by Emilio Moran full professor and researcher of University of Michigan and Nepam/Unicamp and Marcia Grisotti, professor and researcher of Federal University of Santa Catarina, that contains five articles on the social and environmental impacts of infrastructure projects in the Amazon. The dossier presents the outcomes of research coordinated by Professor Emilio Moran, addressing the relationship between population and environment in the development of large-scale infrastructure. The focus is on the impacts caused during the construction of the Belo Monte Dam in the Brazilian Amazon.

The construction of hydroelectric dams, and specially the forecast construction of more than 65 in the future is a key issue that *Ambiente e Sociedade* shares with its readers from the perspective of environmental justice.

Since its inception in 1975, the construction project of the Belo Monte hydroelectric mobilizes Brazilian and international environmental movements and mainly local indigenous communities, triggering controversy, protests, conflicts and a sequence of reports and uncontested expertise. These demands resulted in a reduction of the project scope and changes in the location of the dam and reservoir.

Its installed capacity of 11,233 MW, however, the fact that it operates with a very small reservoir, should produce effectively, something around 4 500 MW / year, which represents approximately 10% of national consumption. In installed capacity, it will be the third largest dam in the world, behind only China Three Gorges and the Brazilian and Paraguayan Itaipu. Belo Monte is installed in one of the most sociobiodiverse regions of Brazil, very close to the Xingu Indigenous Reserve.

The questionings focus primarily on environmental and social liabilities since its beginning of construction in 2011. The original project was reduced, as well as the initial proposal of five dams, being built only one. The plant will operate with a thread of water process, which requires smaller area of flooding. But despite this decrease, it causes the deforestation of nearly 12 hectares, with impacts on biodiversity and on indigenous communities who depend on the Xingu Indigenous Reserve for survival

The problems have multiplied throughout the construction, mainly issues related to the execution of works of road and health infrastructure in the cities and relocation of inappropriate families living in the affected areas. Construction took thousands of workers and migrants to the region, causing a huge impact on public services of the

city of Altamira, which has an increase of 100,000 to 150,000 people, reflected in the volume of police reports. The homicide rate rose from 48 murders for every 100 thousand inhabitants in 2012 to 57 per 100,000 inhabitants in 2015, being the national average of 32.

Health and education services were also affected by this growing population demand, mainly formed by company employees, their families, service providers, in addition to riverine and rural populations, displaced from their homes due to the works and the flood area the Xingu river dam.

The hydroelectric power plant also caused an impact on fisheries, an important element of income generation and food security for riverine communities and indigenous peoples.

Throughout its construction, prevailed a conduct of little dialogue. The resettlement of rural populations and the creation of urban settlements followed the conventional *modus operandi*, guided by the lack of flexibility and lack of transparency in relation to investments, the financing and the volume of funds allocated in the whole process of planning, licensing and construction of Belo Monte.

In November 2015, the company responsible for the venture opened the floodgates and started filling operation of the reservoir. But in September of that year, when the works of reservoirs were completed, the National Institute of Environment - IBAMA had already pointed out the failure of 12 of 41 obligations imposed on the company in 2011, when it received the license to start the work and agreed to meet counterparts.

The example of Belo Monte brings up the debate about the environmental costs of implementing an infrastructure project in the Amazon. Despite the arguments of socioenvironmental entities, it remains attached to anachronistic energy models, which do not contribute to progress towards sustainability given their environmental and social impacts. It adds to other conflicts that reveal the limits and difficulties of modernizing the concept of development, which is based on the power generation as a condition for industrial and national economic growth.

The discourse that prevails is to produce electricity with low emission of gases which contribute to the greenhouse effect, using the hydroelectric potential of the Amazon rivers. The choice of this energy matrix, is being questioned due to the negative impacts arising from the construction of large hydroelectric plants. Moreover, the process has been notified by reports of civil society organizations concerned with issues relating to environmental justice, which have shown the continuing lack of dialogue between the state and the scientific community, local communities and social movements.

The first article "*Alternative food networks and new producer-consumer relations in France and in Brazil*" written by **Moacir Roberto Darolt, Claire Lamine, Alfio Brandenburg, Maria De Cleophas Faggion Alencar and Lucimar Santiago Abreu** analyzes alternative networks marketing green products and new relations of production-consumption in France and Brazil. The research method was based in 20 descriptive and qualitative experiences with actors who sell natural food in France and southern Brazil. As an outcome it presents a typology, its characteristics and the organization of small marketing networks.

In “*Perception of socioenvironmental conflicts in mining areas: The case of the Mirador Project in Ecuador*”, **Luis Sánchez-Vázquez**; **María Gabriela Espinosa** and **María Beatriz Eguiguren** develop an article that presents the public’s perception of the different socio-environmental conflicts in the area of direct influence of the Mirador Project, the first large-scale mining project in Ecuador.

Hemerson Luiz Pase, **Humberto José da Rocha**, **Everton Rodrigo dos Santos** and **Ana Paula Dupuy Patella** analyze in “*The sociopolitical conflict in hydroelectric enterprises*” the conflict between the Companies Specific Purposes (SPE), proponents of hydroelectric plants, and the Movement of People Affected by Dams (MAB), representative parts of the local people forcibly displaced as a result of these works. With a locus in the basin of Uruguay river, southern Brazil, it discusses the conflict through a “mesh analysis” that includes of hydro and resettlements, which requires the construction of major infrastructure projects and boost social and contradictory political processes.

In “*Strategic Environmental Assessment for planning sugarcane expansion: a framework proposal*” **Amarilis Lucia Casteli Figueiredo Gallardo**, **Carla Grigoletto Duarte** and **Ana Paula Alves Dibo** develop an analysis on the information for planning the expansion of sugarcane within the scope of Brazil’s Decennial Energy Expansion Plan in order to integrate sustainability into the planning decision-making.

In “*Risk, vulnerability and adaptation to Climate Change: An interdisciplinary approach*” **Allan Yu Iwama**, **Mateus Batistella**, **Lúcia da Costa Ferreira**, **Diogenes Salas Alves** and **Leila da Costa Ferreira** feature based on the literature on the subject and a study case on the northern coast of São Paulo – Brazil, a vulnerability analysis under three interconnected axes (physical risk, vulnerability and social role). It emphasizes the degree of the population prominence facing situations of risk of the physical environment, and reduce those arising from recurring and historical problems - poverty, social segregation and space - or those who are to come, as the climate changes.

In “*Reverse logistics of e-waste in Developing Countries: challenges and prospects for the Brazilian Model*” **Jacques Demajorovic**, **Eryka Eugênia Fernandes Augusto** and **Maria Tereza Saraiva de Souza** discuss the main challenges and opportunities for the implementation of the Brazilian model of reverse logistics for computers and cell phones. The methodological procedures included 21 in-depth interviews with various stakeholders, including government, manufacturers, retailers, recycling companies, collectors and academic organizations. The outcomes show the importance of new rules to strengthen dialogue among members of the electro-electronic supply chain for the development of the Brazilian model of reverse logistics.

The article “*Environmental services associated with the reclamation of areas degraded by mining: potential for payments for Environmental Services*” written by **Caroline Almeida Souza**, **Amarilis Lucia Casteli Figueiredo Gallardo**, **Érica Donaire da Silva**, **Yohana Cunha Mello**, **Ciro Abbud Righi** and **Maria Lucia Solera** discusses the potential association of environmental services (ES) recovery techniques of degraded areas (RAD) for mining, in light of the current trend of payment for environmental services (PES) in Brazil. It concludes that there is a potential scenario of diverse offering of SA in the recovery phase of mining projects – a first step to stimulate participation in PES schemes

and that additional studies are needed to develop criteria for a probable specific PSA scheme for the mining sector.

In “*Associations in protected areas: restrictions and possibilities in the experience of tourist guides in Catimbau, Pernambuco*”, **Josilene Henriques da Silva** and **Maria Luiza Lins e Silva Pires** analyze the organizational dynamics established by the Tourism Guides Association and Development of the National Park Catimbau (AGTURC) as a means of structuring tourism around this park, located in the northern state of Pernambuco. Its findings indicate a reduced presence of local government, the precariousness of logistics infrastructure of the association, as well as poor management of scarce resources, which has favored internal disputes over the conduct of visitors, revealing difficulties and tensions in the Conservation Unit.

Elza Maria Techio, **Jardel Pereira Goncalves** and **Poliana Neres Costa** present in “*Social Representation of Sustainability in Civil Construction among College Students*” research developed within an interdisciplinary approach involving social psychology and civil engineering, to identify the social representations university students of engineering sciences and humanities on sustainability.

The dossier on *Environmental Impacts of Major Infrastructure Projects*¹ coordinated by Professors **Emilio Moran** and **Marcia Grisotti**, is a contribution to the debate on the interactions between environment and society and, in mainly, on the impact of hydroelectric projects on the affected communities. The papers emphasize the need of a historical perspective, indicating that the main road construction projects (such as the Trans-Amazon, the Belem-Brasilia, Cuiabá-Santarém, and more recently the roads that will flow production via the Pacific) lead to major side effects that are not always taken into consideration when they were designed and built. The authors while recognizing the importance of roads, the electricity sector and ultimately the production of energy for the country’s development, present its concern as to the repetition of mistakes of the past, and how often it ignores the requirements of law, constitution and the rights of local people in the construction of these major infrastructure works.

The dossier begins with **Emilio Moran** work “*Roads and dams: infrastructure-driven transformations in the Brazilian Amazon*” that shows the continuity of the economic development model built during the military era and that has been reaffirmed for decades by governments followed.

Vanessa Boanada Fuchs in “*Blaming the weather, blaming the people: socio-environmental governance and a crisis attitude in the Brazilian electricity sector*”, discusses how an installed mentality of crisis in the electricity sector, as well as a huge dependence on water sources for national energy production, lead to an attitude that seeks to reduce the time needed for consultation with local populations and for planning mitigating actions on behalf of the urgency to produce energy.

1. The authors recognize the financial support of FAPESP, CNPq and Capes. That have made their research possible. The funding agencies should not be held responsible for the conclusions presented by the authors.

Maira Borges Fainguelernt presents in “*The historical trajectory of the Belo Monte hydroelectric plant’s environmental licensing process*” the main issues that arise from the development model and its impact on energy planning in the Amazon region.

Guillaume Leturcq compares in “*Differences and similarities of impacts of hydroelectric dams between north and south of Brazil*” the differences and similarities in the socio-environmental processes between North and South of the country, and how the people in these two regions have been affected. Similar situations found in both regions show a process that seems to be inherent in large projects development model in Brazil, while other situations are related to regional and geospatial specificities.

Marcia Grisotti explores in the article “*The construction of health relations in the Belo Monte dam context*” how the causal relationships between health problems and construction of hydropower has been explained by various actors and how it affects the perception and the responses facing the challenges of public health of large infrastructure projects. It also highlights the lack of more specific analysis of health on impact statements and reports (social and environmental), and how this lack of data makes it difficult to build reliable causal relationships.

This volume includes also a review “*Is the Pantanal a pristine place? Conflicts related to the conservation of the Pantanal*” by **Rafael Morais Chiaravalloti**. It discusses the book: Biodiversity and human occupation of the Pantanal: conflicts and opportunities by José Luis Andrade Franco, Jose Augusto Drummond, Gentile Chiara e Aldemir Inácio de Azevedo.

We wish you all a good reading and reinforce the importance of multiplying their networks the dissemination of published articles.

Pedro Roberto Jacobi and Editorial Staff

Editor-in-Chief, Ambiente & Sociedade Journal

Full Professor, Graduate Program in Environmental Science, University of São Paulo

Full Professor, Education School, University of São Paulo

<http://dx.doi.org/10.1590/1809-4422ASOCeditorialV1922016>

