

Editorial - Climate Risks Intensified

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Brazil has a quite a heavy schedule for 2014. The soccer World Cup will be held in June/July and will be followed by general elections in October. The international climate agenda is also heavy, with the publication of the Fifth Evaluation Report of the Intergovernmental Panel on Climate Change (AR5/IPCC), which confirmed that climate risks have worsened, and with the predicted drafting of the new global climate agreement.

2014 started out with an Investors' Summit of Climate Risk, held in New York, in January, which brought together more than 500 investors to discuss the risks that climate changes generate for the investment sector. Participants debated how the sector might contribute to mitigate climate change and support a transition to a low carbon economy. Some banks, like the HSBC, already employ specialized teams of climate change experts. This trend was confirmed at the World Economic Forum, held in Davos (Switzerland), on the same month. No less than 23 sessions or discussions on climate change happened during the event. The focus was on the well-known triad – impacts, risks and opportunities.

The second part of the Fifth Evaluation Report of the Intergovernmental Panel on Climate Change was publicized in March. It deals with impacts, adaptation and vulnerability. It points towards a deeper understanding and a more precise geographical evaluation of predicted impacts of climate change. The vulnerability of different areas of the planet and the urgent need for adaptations to face ongoing changes were more clearly identified. The major conclusions are that changes are happening faster, more intensively and more broadly than predicted in the previous report, and that adaptive mechanisms are behind schedule (see the interview with Carlos Nobre, IPCC specialist, in this issue). This should result in a strong shift in the perceptions of risk and in the opportunity costs of investing in mitigation efforts, besides a radical adaptation plan, with special attention given to the more vulnerable countries and regions.

The third part of the same report also came out in March. It deals with mitigation of climate change. It states that the window of opportunity for the reduction of emissions in a manner that will limit average global temperature to increase to a maximum of 2°C is closing. It also states that if we do not revert the growth of emissions before the current decade comes to a close, the chances of limiting temperature increase to 2°C will tend to be zero.

These reports have roused the negotiation agenda of the new global climate agreement, centered around the Durban Platform Working Group (ADP). The group came together in March and will convene again in December, together with the 20th Conference of the Parties of the The United Nations Framework Convention on Climate Change (UNFCCC), in Lima, Peru. The major expectation concerning the CoP-20 is the approval of the first draft of the text that will be the basis of a new climate agreement, to be presented in 2015, at CoP 21, in Paris.

In this key year for the international climate agenda, Saulo Rodrigues Filho, professor of the Center for Sustainable Development of the Universidade de Brasília, interviewed Dr. Carlos

Nobre for **SeD** [Interview: “It is Essential to Give to Adaptation Questions the Same Emphasis Given to Mitigation Issues”]. Nobre is an IPCC specialist and Secretary of Brazil’s Agency for Research and Development Policies and Programs, linked to the Brazilian Ministry of Science, Technology and Innovation. Having worked for many years in research and policy design related to climate change impacts, Nobre confirms that Brazil has made dramatic progress in the matter of avoiding serious climate risks in the future, by means of the reduction of greenhouse gases emissions. However, he also warns that the discussion about adaptation policies has not made as much progress as the discussion on mitigation. He believes that this must change, if we wish to make Brazilian society, its economic system and its natural environment less vulnerable to the increasingly volatile character of the climate and its extremes.

In our Debate section, on “Interdisciplinarity and Sustainability Challenges”, invited panelists Cristovam Buarque, Pedro Jacobi, Leila da Costa Ferreira, Maria do Carmo Sobral, Carlos Alberto Cioce Sampaio and Valdir Fernandes expressed their views on the interdisciplinary scientific field that deals with environmental issues in general and with sustainable development in particular. Their statements confirm that interdisciplinarity is expanding on a global scale, both in universities and in non-academic research institutions.

SeD 9 is also publishing six scientific articles. Three of them evaluate sugar cane production in Brazil, in different places and using different methodologies. In “Diagnóstico da expansão da cana de açúcar: aplicação do Barômetro da Sustentabilidade nos municípios de Barretos e Jaboticabal (SP)” [Assessment of the expansion of sugar cane: application of the Sustainability Barometer in the municipalities of Barretos and Jaboticabal], authors Pedro Gerber Machado, Daniel Garbellini Duft, Michelle Cristina Araujo Picoli and Arnaldo Walter present the results of their research in two municipalities of the state of São Paulo, the first (Barretos) going through a strong expansion of sugar cane cultivation, the second (Jaboticabal) suffering from stagnation of sugar cane cultivation. Comparing indicators for the two administrative units, they try to identify causality linked to the expansion of sugar cane cultivation.

Green economy is an emerging topic in the context of international scientific debates and policies. The major challenge of this area of study is to deal with sustainable productive activities. Karine Rocha Aguiar Bezerra, Minella Alves Martins, Maria Francisca Azeredo Velloso and Michelle Andrade Furtado, authors of “Índice de adaptabilidade à economia verde: avaliação da cana de açúcar na microrregião de Ribeirão Preto/SP” [Index of Adaptability to Green Economy: An Evaluation of the Sugar Cane Production Sector at the Micro-Region of Ribeirão Preto / São Paulo State, Brazil], developed an index composed by partial indexes measuring economic, social and environmental impacts.

In “Efeitos da Expansão da Cana de Açúcar no Sudeste do Mato Grosso do Sul e Possíveis Caminhos para uma Agenda Sustentável” [Effects of Sugar Cane Expansion in Southeastern Mato Grosso do Sul and Possible Pathways Towards a Sustainable Agenda], authors Rafael Morais Chiaravalloti, Silvia Santana, Maria Silvia Morais, Luciani Maria Vieira Rocha and Daniel Morais Freitas present the results of a study of the impacts of sugar cane cultivation, using interviews, published reports and field work.

The reporting model of the Global Reporting Initiative (GRI) is one of the most used in the international context to inform about sustainability strategies. The article “Relatório de sustentabilidade no Brasil: análise da utilização nos setores serviços financeiros e energia” [Sustainability Reporting in Brazil: an Analysis of the its Use in the Financial and Energy Services Sectors], by Milena Silva Melo and Adriana Cristina Ferreira Caldana, displays the results of the evolution of the full degree of observance of this model by the aforementioned sectors, based on their GRI sustainability reports published between 2007 and 2009.



In “Percepção da população de Rondonópolis (MT) sobre desafios e benefícios ambientais da coleta seletiva [Popular Perception of the Environmental Challenges and Benefits of Selective Waste Collection in Rondonópolis (MT)], authors Celso Correia de Souza, Leonel da Conceição Gomes Pinto and José Francisco dos Reis Neto discuss the results of their survey on the views of the local population on selective waste collection procedures.

Finally, in “Biodiversidade, conservação e sustentabilidade no livro didático de biologia no Brasil” [Biodiversity, Conservation and Sustainability in Biology Textbooks in Brazil], written by Daniel Louzada-Silva and Maria Helena da Silva Carneiro, the authors evaluate the contents of selected high school textbooks included in the National Program for Textbooks, in connection with the concepts of biodiversity, conservation and sustainability.

In their essay “Juazeiro do Norte/CE: Um Caso de (In) Sustentabilidade Urbana” [Juazeiro do Norte, Ceara State, Brazil: a Case of Urban (In)Sustainability], Diego Coelho do Nascimento, Cicera Cecília Esmeraldo Alves and Suely Salgueiro Chacon examine the perspectives for urban sustainability in the city of Juazeiro do Norte, in the Northeastern State of Ceara, which is going through considerable population growth as a result of significant economic investments in its area of influence.

SeD is publishing also reviews of five books, written or edited by Emílio Moran; Emílio Moran and Elinor Ostrom; Fania Fridman; Laura de Simone Borma and Carlos Afonso Nobre; Carolina Joana da Silva and Jane Simoni.

This issue is completed by a Gallery that combines original and unpublished photos and text describing research projects conducted in the Mamirauá Sustainable Development Reserve. Created in 1996, this is an Amazon state protected area located on the Solimões River, in the Brazilian Amazon region. The title of the gallery is “Mamirauá: A Conservação que Veio da Copa das Árvores” [Mamirauá: Conservation that Came from the Canopy]. The authors are José Luiz de Andrade Franco and Marcelo Ismar Santana; they visited the reserve recently and collected first hand materials. The gallery focuses on three distinct ongoing research projects on primates – the “uacari-branco” (*Cacajao calvus calvus*), the “macaco-de-cheiro-de-cabeça-preta” (*Saimiri vanzolinii*) and the “macaco-de-cheiro-de-cabeça-branca” (*Saimiri sciureus cassiquiarensis*). The gallery allows the reader to grasp the importance of these research projects, to see the aspects of the Amazonian flora, fauna, waters, landscapes, clouds and skies, to understand the participation of local riverside communities, and to get acquainted with the lead researchers and reserve managers.

Starting this year, **SeD** will publish three issues per year, allowing us to offer more articles and other texts. Issue number 10 of **SeD**, scheduled to come out in August, will contain a dossier entitled “Women and Sustainability”. Number 11, to be published in December, will include a dossier entitled “Innovations for the Valorization of the Products of Family Farmers and Agro-Extractive Communities in the Cerrado”.

Once again, we thank the support given by the members of our Editorial Board, authors, reviewers and readers. We hope that everybody will enjoy reading this issue.

The Editors

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