

EDITORIAL N.º 2/2019

NATURE IN DECLINE: WARNING OF IPBES REPORT
ON SPECIES EXTINCTION

PEDRO ROBERTO JACOBI¹;
ZENAIDA LUISA LAUDA-RODRIGUEZ²;
BEATRIZ MILZ³

Between April 29th and May 4th, a new summary of the report of the Intergovernmental Platform for Scientific Policies on Biodiversity and Ecosystem Services (IPBES) was approved by the IPBES Plenary in Paris⁴. It is a report produced with the collaboration of 145 expert authors from 50 countries in the last three years, with contributions from 310 other authors.

The paper assesses the changes over the past five decades, providing a comprehensive view of the relationship between the paths of economic development and its impacts on nature. It also offers several possible scenarios for the coming decades.

The conclusion is that nature is declining at an unprecedented pace in human history, with accelerated rates of species extinction and severe impacts to people around the world.

The statement by the President of IPBES, Sir Robert Watson, is very disturbing as, in his words, “the health of ecosystems on which we and all other species depend is deteriorating more rapidly than ever. We are eroding the very foundations of our economies, livelihoods, food security, [the] health and quality of life worldwide” (O GLOBO, 2019, free translation).

The report was produced from a systematic review of approximately 15,000 scientific and governmental sources, and for the first time includes knowledge of Indigenous Peoples and Local Communities.

1. Chief Editor of the journal *Ambiente & Sociedade*. Full Professor Faculty of Education, University of São Paulo. Professor of the Postgraduate Program in Environmental Science, University of São Paulo. <https://orcid.org/0000-0001-6143-3019>

2. Member of the Editorial Executive Secretariat of *Ambiente & Sociedade* Journal. PhD in the Post-Graduation Program in Environmental Science, University of São Paulo. <https://orcid.org/0000-0003-2432-0255>

3. Member of the Editorial Executive Secretariat of *Ambiente & Sociedade* Journal. Doctorate Student in the Post-Graduation Program in Environmental Science, University of São Paulo. <https://orcid.org/0000-0002-3064-4486?lang=pt>

4. Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. Available at: < https://www.ipbes.net/sites/default/files/downloads/spm_unedited_advance_for_posting_htn.pdf > Accessed on: 06 Jun 2019.

Another conclusion of the report is that about 1 million species of animals and plants are threatened with extinction, with more than 40% of amphibians, almost 33% of corals and more than one third of all marine mammals. Many of these species are in danger of disappearing in the coming decades, an extinction rate never seen in the history of mankind. It also shows that the average abundance of native species in most major terrestrial habitats has dropped by at least 20%, mainly since 1900.

It also points out that at least 680 vertebrate species have been extinct since the 16th century, and more than 9% of all domesticated breeds of mammals used for food and agriculture were extinguished in 2016. Furthermore, it is estimated that at least more than 1,000 species are still threatened.

The report presents data showing that since 1980, greenhouse gas emissions have doubled -raising the global average temperature by at least 0.7 degrees Celsius- and that climate change affects the nature of the ecosystem and even its genetics.

It also highlights the importance of the nexus, integrated and intersectoral management approaches that emphasize the compensation of the production of food and energy, infrastructure, management of freshwater and coastal as well as biodiversity conservation.

Supported by these data, the report shows that this loss of biodiversity threatens much of the Sustainable Development Goals (ODS) set by the United Nations, and identifies and classifies, for the first time, the five factors that contribute most globally to changes in nature, which have also accelerated over the past 50 years, according to the studies. The first factor refers to changes in land and sea use: three quarters of the land environment and about two-thirds of the marine are “significantly altered” by human action. A second factor is the exploitation of organisms - 33% of marine fishery resources were exploited to unsustainable levels by 2015. The third factor, with increasing impact, is climate change . The fourth factor is pollution - the plastic waste - that has increased tenfold since 1980. And, finally, invasive alien species, whose presence has grown 70% since 1970 in at least 21 countries.

According to researchers who participated in the preparation of the report, the negative trends in nature will continue until 2050. Despite the progress in preservation policies, it is considered that the overall goals to conserve nature in a sustainable way can not be achieved in the current paths. They emphasize that the goals until 2030 and beyond this period, can be reached only through transformative change and political and technological factors.

In Brazil, according to data from the Ministry of the Environment in 2014, the threatened species amount to 3,286, of which 1,173 are fauna⁵ and 2,113 are flora⁶. Of this total, 316 are species without any official instrumental protection. That is, they are not in Conservation Units, have no National Action Plan and are not included in any other protection measures (MENEZES, 2019).

5. MMA in Numbers. Biodiversity - Fauna. Available at: < <http://www.mma.gov.br/mma-em-numeros/biodiversidade> > Accessed on: 06 Jun 2019.

6. MMA in Numbers. Biodiversity - Flora. Available at: < <http://www.mma.gov.br/mma-em-numeros/biodiversidade-flora> > Accessed on: 06 Jun 2019.

After this brief reflection on the IPBES report, which presents impressive figures on the acceleration of the loss of biodiversity on the planet, which is affecting the functions of nature, we invite everyone to read the new articles published corresponding to the 2019 Annual Volume.

In line with our policy of free access to articles, published both in the original language and translated to English, we invite our readers to contribute sharing in various national and international media, in order to expand the scope of the work of this volume and contribute, with quality, to the socio-environmental debate. We would like to thank the editorial team of *Ambiente & Sociedade Journal* for their fundamental contribution to ensuring the continuity of the publication.

Opening this new group of articles, we present our section **Featured Themes**, this year with the theme “**Oceans**”, which includes the article **Maritime Spaces and their Geography**. In this paper, the author *Gisela Aquino Pires do Rio* presents a set of relevant topics in the research agenda on maritime spaces: a) circulation; b) boundaries and limits; c) resources; and d) environment, linked to broader issues such as international networks and flows, space regulation, conflicts and tensions, vulnerability of land-sea interface zones.

As original articles, the author *Leandra Regina Gonçalves* presents the paper **Is power listening to science? The case of ICCAT and the Eastern Bluefin Tuna (2004-2014)**, examining the role and influence of science and epistemic communities in policy decisions at ICCAT for bluefin tuna management from 2004 to 2014. This case illustrates a situation which, in a context of crisis and full of uncertainties, decision-makers have resorted to and accepted the advice of scientists, resulting in more effective fisheries management.

In the article: “**Favela**” territory (ies) and socio-environmental conflicts: in the **Arvoredo Community, Florianópolis-SC**, the authors *Cristienne Magalhães Pereira Pavez; Mário Jorge Cardoso Coelho Freitas and Vera Lúcia Nehls Dias*, identify the forms of territorialization in the Arvoredo Community (Favela do Siri) and how they are built in the social and environmental conflicts experienced by its residents, whose occupation is located in a Permanent Preservation Area.

The authors *Greici Maia Behling and Vanessa Hernandez Caporlingua*, in the article **Critical Environmental Education and the paradigmatic transition of Environmental Law in the disobjection of animals**, debate the new paradigmatic possibility of Animal Rights from animalistic theories, with the contributions brought by Critical Environmental Education and with the ethical challenges arising from accepting animals as subjects of law and limiting Critical Environmental Education itself.

Through two integrative reviews, the article: **Water management: limitations and contributions of Brazilian watershed management groups**, by the authors *Larissa de Lima Trindade and Luiz Fernando Scheibe*, concludes that, in most cases, these groups can not contribute effectively for the purpose of its creation by several factors. However, as contributions stand out their performance in environmental education actions and their potential for greater social participation in water management.

Based on the assessment of 614 households located in rural areas of Cartago province in Costa Rica during the years 2014 to 2016, the authors *Silvia M. Soto-Córdoba*,

Lilliana Gaviria-Montoya and Macario Pino-Gomez, in the article **Cartago case study: Waste water management in rural areas of Costa Rica**, verified that in 100% of communities gray water is dumped directly into surrounding untreated rivers and 87% of blackwater is treated in septic tanks.

The authors *Denise de Castro Pereira; Paulo Vitor Siffert; Patrícia Generoso Tomás Guerra; Liliane de Oliveira Guimarães and Paula Pessoa de Castro Gentil*, in the article **Organizational irresponsibilities or absence of territorial governance? Reflections on environmental management in the Minas-Rio Project**, analyzed the social and organizational dimensions of environmental licensing and the implementation of the Minas-Rio mining project, discussing methodological and managerial weaknesses evidenced by reports of irregularities, socio-environmental conflicts and planning failures.

Based on the news from the websites of the Cantareira Basin Committees (Alto Tietê and Piracicaba, Capivari and Jundiá Committees - PCJ) and the Brazilian Network of Basin Organizations (Rebob), the article: **Information about the water crisis in São Paulo offered by the Watershed Committees**, from the authors *Jane M. Mazzarino; Luciana Turatti; Sabrina T. Petter; Denise B. Scheibe and Rodrigo M. Marques*, discusses the way the São Paulo water crisis is approached by the committees.

Finally, the authors *Pedro Henrique Campello Torres; Ruth Ferreira Ramos and Leandra Regina Gonçalves*, in the article: **Environmental conflicts in the Sao Paulo Macrometropolis: Paranapiacaba and São Sebastião**, analyzed these two cases, related to the territorial development as well as the installation of large logistic enterprises, verifying its framework in the planning logic and vision of the State, as well as the reactions of civil society to the impacts of these enterprises.

We wish you all a very good reading!

References

O GLOBO. **Mais de 1 milhão de espécies do planeta estão ameaçadas de extinção**. O GLOBO, 2019. Available at: < <https://oglobo.globo.com/sociedade/mais-de-1-milhao-de-especies-do-planta-estao-ameacadas-de-extincao-23643649> > Accessed on: 03 jun. 2019

MENEZES, Mariana. **Segundo relatório do IPBES, 1 milhão de espécies está em risco**. WWF Brasil, 2019. Available at: < https://www.wwf.org.br/informacoes/sala_de_imprensa/?uNewsID=70942 > Accessed on: 06 Jun 2019.

<http://dx.doi.org/10.1590/1809-4422asoceditorialvu2019L2>
2019;22:e00003
Editorial

