



Guest Editorial: a Pragmatic Approach of Ethics in Interdisciplinary Research on Biodiversity Conservation

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Biological diversity is the variability of living systems. Biodiversity is now being lost at an alarming rate, to an extent that some scientists refer to the current period as the 6th (or Anthropocene) mass extinction. Meanwhile, due to their fundamental role for life on Earth, biodiversity and ecosystems are highly promoted across many Sustainable Development Goals (SDGs) and their associated targets in the 2030 Agenda for Sustainable Development. Concurrently, the link between biodiversity and human health is increasingly recognized—as in SDG 3 on health—and major multilateral environmental agreements are showing the importance of considering health in an integrative manner, taking into account not only human health but also animal and environmental health in a One Health perspective (Morand and Lajaunie 2017).

There is a multitude of topics under the banner of biodiversity conservation research. Thus, multiple levels of cooperation, as mentioned in SDG 17, are called for in research on biodiversity. Nevertheless, as highlighted by Masood (2018), the scientific community working on biodiversity conservation is highly divided, with rifts between natural sciences and social sciences as well as between researchers from the north and south.

The Conference of the Parties to the Convention on Biological Diversity (2018) also calls for Integrative research in its “New Long Term Strategic Direction to the 2050 Vision for Biodiversity.” Several ethical questions arise from biodiversity conservation itself, from interdisciplinary research, and from the use of research in the science and

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policy dialog called upon by the Convention on Biological Diversity (CBD) to inform Multilateral Environmental Agreements (MEAs). Some of the ethical questions resulting from the most recent scientific investigations are considered in this special issue by specialists in various research areas linked to biodiversity conservation.

The CRISPR/cas9 technique has revolutionized gene editing, and the article of Christophe Boëte raises many bioethical issues about this in the light of biodiversity protection. Indeed, while the technique is more prominently used in a medical context, it has also become a new tool for biodiversity conservation. The modifications it induces relate to biological and ecological aspects as well as to ethical and moral values. The use of gene editing to fight invasive species or for de-extinction projects, for example, is highly controversial, notably due to the lack of control over its consequences.

Conservation measures can also lead to exclusion. The work of Fernanda Castelo Branco Araujo and Edvaldo de Aguiar Portela Moita on the marine protected areas in Brazil shows that conservation policy can really affect, and even exclude, traditional fishing communities although their practices only have a low impact on the environment. Biodiversity conservation, in this case, deprives fishing communities from their property rights. It directly strikes their livelihood by limiting artisanal fishing to the benefit of non-artisanal fisheries, accelerating natural resource depletion. The consideration of these ethical issues could usefully inform the implementation of the SDG 14 on the ocean.

Although the rights of indigenous people and their role in biodiversity conservation have been recognized, notably by the CBD, they are nevertheless sometimes forgotten when it comes to adopting biodiversity conservation measures, as explained by Nicolas Lainé in his article on the conservation of elephants in Southeast Asia. The choice to concentrate conservation efforts on one animal species without taking into consideration the socio-ecological context can have huge impacts on local populations of both humans and animals. Rewilding of species, positive according to some, probably narrow, views of the relation between elephants and humans can be harmful to biodiversity in the sense that the presence of elephants in villages contributes directly to the conservation of biodiversity and maintains the balance of the ecosystem constituted by the village and the forest.

In his article, Pierre Mazzega argues that scientific results, in line with what is expected from the CBD, have an influence on the measures taken by decision makers at various levels, from international to local. The article also poses the question of the adequate scale of implementation with regard to the scale of observations leading to the results. The analysis of biodiversity data, the impact assessment modeling, and the construction of prospective scenarios are mainly questioned on two premises: as to the transparency of the technical choices made at each stage and as to the legitimacy of the design and the use of simulated scenarios to decide on political choices with societal impact.

These various contributions all reflect the need for a pragmatic approach of ethical issues in biodiversity conservation. The context of each research project is specific because of the variety of socio-environmental interlinkages that are at stake. The ethical questions arising from the practice of interdisciplinary research cannot be a priori determined. The ethical reflection needs to be a shared process that evolves over time, depending on the interactions of the researchers involved. It implies a real engagement of the researchers to consider the ethical issues in context.

In this respect, as suggested by Claire Lajaunie, a common ethical approach should rely on scientific integrity towards society and the coherence of values shared between the scientific community and society. Furthermore, the notion of congruence, expressing the consistency of a system appears necessary in interdisciplinary research, in relation to the pluralism of ethics.

The very recent report of the Secretary-General of the United Nations “Gaps in international environmental law and environment-related instruments: towards a global pact for the environment” (United Nations General Assembly 2018) highlights the fact that concerning biodiversity, the science is incomplete or lacking in some respects. Surprisingly, the report does not mention the ethical issues that are unavoidably associated with that global pact for the environment.

The various contributions to this special issue of Asian Bioethics Review constitute an invitation to open the already very rich field of bioethics to new questions that arise in biodiversity conservation. This special issue thus contributes to giving shape to the ethical dimensions of the Sustainable Development Goals which should be embedded into Sustainability Science.

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