



## Sustainability as a Strategy for the Commons

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### Submission Info

Communicated by Olga Kordas  
Received 20 October 2018  
Accepted 2 June 2019  
Available online 1 January 2020

### Keywords

Tourism  
Used lubricating oil  
Cross content analysis  
Human-nature nexus  
Cleaner production  
Happiness  
Eco-design

### Abstract

The overexploitation of commons under the purpose of economic growth (i.e. the business-as-usual pattern) is resulting in serious environmental and social damages in many regions around the world. This claim for efforts to better understand the human-nature nexus that would support public policies focused on a real societal development. A sustainable development is mandatory, and for such a goal, higher amount of studies on the most diverse systems and topics are necessary to support better-oriented public policies. This special issue brings research show cases focused on the different aspects under the large umbrella of sustainability concept, including environmental assessments of production systems, natural-social interaction, and the current important theme of happiness. It is expected that the presented studies may collaborate to spread information on the strategy for the commons and, maybe, support further studies regarding such an important topic for a sustainable development.

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## 1 Introduction

*“We stand at a critical moment in Earth’s history, a time when humanity must choose its future. [...] To move forward we must recognize that in the midst of a magnificent diversity of cultures and life forms we are one human family and one Earth community with a common destiny. We must join together to bring forth a sustainable global society founded on respect for nature, universal human rights, economic justice, and a culture of peace.”*

(The Earth Charter, 2001 pg.1)

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This preamble of the Earth Charter tells us how important is to recognize that man is only part of a larger and complex system. The anthropocentric or *homo economicus* perspective in which man considers environmental resources as its private safe box and that those assumed limitless resources will always be available must, mandatorily, be replaced by a model of world in which resources are recognized as limited and viewed under an eco-centric perspective. Emphasizing the statement of Hardin (1968) that “freedom in a commons brings ruin to all”, without proper information, regulation, and recognizing that we live in a finite world with limited availability of resources, we will be living on the edge, walking on the tightrope. It is urgent to jump from the tragedies of the commons to the strategies for the commons, we need a societal sustainable development pattern.

The well know definition of sustainable development was provided by the Brundtland report named Our Common Future (1987), which emphasizes that we should meet our current needs without compromising the ability of future generations to meet their own needs. While this modern concept of sustainable development is derived from 1987 Brundtland’s report, it is also rooted in earlier ideas, some of them quoted here – updated books: *The Silent Spring* from Rachel Carson (2002); *The Population Bomb* from Paul R. Ehrlich (1995); *The Limits to Growth* written by Donella H. Meadows and colleagues (2004); *Small is Beautiful* of Ernest F. Schumacher (1989); the GAIA of James E. Lovelock (2000), *The Turning Point* of Fritjof Capra (1984), *For the Common Good* of Herman Dayle and John B. Coob Jr. (1994), *Colapse* of Jared Diamond (2005), and *The Prosperous Way Down* of Howard T. Odum and Elizabeth C. Odum (Odum and Odum, 2001).

In general, all these ideas point out that due to circumstances to the human life on Earth, it is not more possible take from the natural environment all human-needed resources and then throw away the so-called “wastes” simply because they have no more economic sense to humans. For a sustainable future, the man is called to transform its own existence by making itself responsible to maintain the life of the natural environment. Towards this end, it is imperative that we, the people of Earth, declare our responsibility to one another, to the greater community of life, and to future generations. For this purpose, The Earth Chapter (2001) proposes the following main principles: I. Respect and care for the community of life, II. Ecological integrity, III. Social and economic justice, IV. Democracy, nonviolence, and peace.

Efforts in putting all these principles in practice can be found in governmental, private and/or non-governmental organizations, as example, the 17 Sustainable Development Goals of United Nations (UN, 2019) are currently in the spotlight. Anyhow, all these efforts need scientific subsidies based on concepts and ideas related to human-nature nexus. Practically speaking, quantitative performance indicators are important to support decision towards a sustainable development. In this sense, key themes emerge as cleaner production, industrial ecology, all the nexus family (including energy, food, water, nature, human, and so on), circular economy, and other themes that are important to guide new projects and ideas for a more sustainable world. In parallel, a family of scientific tools and approaches are available to quantitatively measure the potential advantages - or sometimes disadvantages - achieved by alternative productive systems. Among these scientific tolls, it can be quoted the emergy accounting (Odum, 1996), material flow accounting (discussed by Fischer-Kowalski *et al*, 2011), ecological footprint (Wackernagel and Rees, 1996), embodied energy analysis (IFIAS, 1974), and life cycle assessment (ISO 14040, 2006; ISO 14044, 2006). All these tools try assessing the human-nature nexus that is closely related to Principles I and II of The Earth Charter. Additionally, considering the importance of principles III and IV, human-driven social indicators, as the happiness evaluation, plays crucial role.

In a world with restricted available resources and increasing social imbalance, the proposal or validation of alternative scenarios for production systems is an important step towards a more sustainable world. The design of sustainable management strategies for the commons can be investigated through multicriteria approaches to support police makers, and this is exactly what this special issue provides for the larger and general audience of Journal of Environmental Accounting and Management (JEAM).

## 2 Goal of this special issue

The main goal of this special issue is to present a set of studies that provide original contributions to sustainability assessments towards a strategic planning in using and preserving the commons. The human-nature nexus perspective is focused by the presented papers, including both social and environmental aspects.

## 3 Papers presented in the special issue

This special issue includes works discussed during the event “India and Sustainability Standards: International Dialogues & Conference” held in New Delhi, November 2017, as well the collaboration from worldwide researchers who were not able to attend the conference. All they are related to the current important and broad theme “sustainability”, including topics of environmental and ecological-economics, environmental accounting, social issues, planning and management, and policy. They are summarized as follows:

- Although acting as an important source for economic growth, when unrestrained, the tourism imposes potential threats to natural areas. Under this problematic, S. Sharma explores the relationship among culture, gender and sustainable tourism in the Kingdom of Bhutan. Two cultural dimensions including long-term orientation and indulgence versus restraint are considered to evaluate whether the perception regarding benefits, effects or attitude is influenced by cultural values and beliefs.
- Concerning with the most appropriated collection, treatment, and disposal for the used lubricating oil (ULO) in the southern region of Brazil, M.Z.A. Tsambe and colleagues applied the life cycle assessment approach to study, comparatively, the environmental performance of two ULO management existing models including TTR (transportation, transshipment, and re-refining) and TsTR (transportation, and re-refining).
- In an attempt to identify drivers for sustainability and propose new fields to apply efforts for future researches that aims to promote sustainability as an operational strategy, G.C. Oliveira Neto and L.F.R. Pinto applied a cross content analysis on 163 papers published in the special issues of *Journal of Cleaner Production* dedicated to the International Workshop Advances in Cleaner Production.
- Focusing on countries prone to natural disasters, L. Hancock and M. Cherian proposed a framework to guide public policies for climate compatible resilient energy systems and critical infrastructure. India is considered as a case study. It is expected that public policies based on the proposed framework could facilitate the achievement of renewable energy goals, Paris Agreement obligations for carbon reduction, as well reducing loss of life and infrastructure.
- R.R.J. Pacheco and colleagues applied the cleaner production (CP) technique into footwear factories in Brazil aiming to reduce their demand for resources and wastes generation. After implementing the recommendations derived from CP approach, energy and material flow accounting were used to assess, comparatively, the environmental performance of evaluated factories. Obtained data can be used as subsidies for practical policy recommendations on footwear production.
- The concept of happiness is intrinsic tangled to the concept of sustainability, in which an important tool that measures happiness is that of Bhutan Studies Center (BSC); however, considerable time and high application costs are required for its application. Trying to make it practical, R.R. Souza and colleagues proposed a reduced version of the BSC tool.
- Concerned with the increasing pressure on natural capital as result of electronic products life cycle, M.J. Alves-Pinto Jr. and J.V. Mendes obtained information from a literature review about practices of design

for environment (DfE) on electronic products development. Data *in situ* from an electronic company are also considered to identify in which contexts a DfE approach is applied, in other words, what are DfE's main drivers within a company management perspective.

#### 4 Concluding remarks

Sustainability is a deep, embracing, and essential concept that must be considered in any strategic planning concerning societal development on Earth. The human-nature nexus needs to be better understood to allow the establishment of public policies that brings real development for humans by respecting the limits of natural environment in supporting such pattern. This strategy is the foundation of a better management for the commons, and consequently a way for the so desired sustainable development.

The human-nature nexus is complex and branches for a high variety of themes and relationships, which claims for efforts in performing assessments under different focuses and systems. This is what this special issue tried brings to JEAM's readers and/or other interested people on the sustainability theme.

#### Acknowledgements

Guest editors of this special issue are grateful for the support of reviewers that provided an excellent work to guarantee the scientific quality of the published papers.

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