Special Issue Proposal to Sustainability Journal

Footprints on sustainable consumption and production in emerging economies

The material footprints is to present an overview of the status, trends and alternative scenarios of global, regional and local resource use. Footprints comprise both direct resource use (Direct material consumption use or direct energy consumption use) within a certain geographic boundary, as well as the imported resources needed to support various economic activities (production, i.e., final demand, consumption and infrastructure use) within that boundary. The footprint approach thus represents the global scope of each geographies' resource use activities (whether a city, nation or region).

The footprints can focus on different subsets of activities within geography – such as consumption, production and infrastructure use– which informs different policy/planning solutions. The contributors encourages to provide examples at multiple scales (regional, national, local /city) to showcase how a systems approach, and specifically through the lens of material footprints, can shape impacts of interest to the SDGs, and can be used to support decision and policy-making. This SI proposed to include all 4 resource-footprints representing the four resource categories of energy, materials, land and water. These four resource footprints would be supplemented with information on environmental pollution potential.

This SI will focus and encourage on select case studies or cities in different nations, and may include data analysis on energy and GHG footprints, water footprints, and material footprints related to infrastructure provision in cities or nations. For instance, (1) Delhi, India where present day challenges include high levels of air pollution, traffic congestion, large slum population and severe water scarcity.; (2) Several cities in China – illustrating the twinning impact of urbanization with industrialization and opportunities for sustainable consumption, production and infrastructure change; (3) Cities in developed nations, including US cities where both energy/GHG and water footprints have been developed. Through energy-GHG footprints and water footprints, these case studies highlight the business-as-usual case, business-as-usual-case with more inclusive development and possible strategies to reduce negative and improve positive environmental and human wellbeing impacts

This SI focuses on material flows and present data and indicators for direct (territorial) material flows and material footprints to cover a production, consumption and infrastructure perspective. These perspectives satisfy different policy approaches and need to be seen as complementary to present a full picture of a countries domestic and global responsibility, and provide best-practices and recommendations for planning in various infrastructure sectors – such as energy systems and transportation systems. Subsequent reports will extend the regular monitoring to cover additional aspects of natural resource use systems that are materials and waste, energy and emissions, water and land. Direct territorial natural resource accounts will be accompanied by the four footprints (materials, energy, water and emissions).

In terms of added value as compared to existing and ongoing products by other organizations, This SI is differentiated by the (1) integrated and whole-systems

approach used to cover all natural resources and the three dimensions of sustainability; (2) unique focus on natural resource use related requirements for delivering on sustainable development, including considering the impact of the extraction, use and disposal of those resources on natural, social and economic systems; (3) the use of forward looking scenarios as well as practice-based examples that support development of policy-relevant recommendations for the sustainable management of natural resources; (4) the ongoing development of a strong and responsive science-policy interface; and (5) the regular tracking of data aligned across scale, for multiple natural resources and multiple impacts. The contributors may reach these contribution points

- To understand the current global and regional status and trends of natural resource use.
- To manage the research implications of increasing global resource consumption on environment, society, and economy, and to the achievement of the SDGs.
- To achieve (and have been achieved) the co-benefits through improving resource efficiency and sustainable natural resource management.
- To analyze the SCP policy options and innovative technical approaches that have thus far been successfully employed to achieve the benefits of sustainable natural resource management.
- To recommend and drawn for transitioning to the sustainable management of natural resources.

This SI makes a contribution to being more specific about the footprint SCP implications of different indicators and the different kinds of materials used. Besides above themes and ideas, this SI welcomes authors to contact us to discuss other possible footprint sub-topics. The SI Editors have intentionally kept the above list of suggested topics short so as to stimulate effective methods and thereby encourage prospective authors to adopt a variety of footprint on sustainable consumption and production perspectives in approaching this subject. All submissions must fit within the domain statement of the journal.

Manuscript Preparation and Submission

In preparing manuscripts, authors are asked to closely follow the “Guide for Authors” of *Sustainability*. Manuscripts will be refereed according to the standards of the Journal. The “*literature review*” is necessary in the content and the outline of the paper can also be included. Submitted papers should not have been previously published nor be currently under consideration for publication elsewhere.

Publication Schedule

- Manuscript submission deadline: October 31st, 2020
- Deadline for final decision notification: February 29th, 2021
- Tentative date for publication: April 01st , 2021

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