



Sustainable production, consumption, and livelihoods: global and regional research perspectives



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ABSTRACT

In June 2012 at the UN Conference on Sustainable Development (“Rio + 20”), the Global Research Forum on Sustainable Production and Consumption (GRF-SPaC) was launched, bringing together organizations and individuals from various regions of the world engaged in research and its applications in the transition to sustainable production and consumption (SPaC) systems. Conceptualizing and researching transitions to a sustainable production and consumption system is a very challenging task; the research field is not yet very well structured, its boundaries are still fluid; it is often not clear where research ends and social practices and policies begin.

This introduction to a Journal of Cleaner Production Special Volume maps the emerging field of SPaC research and illustrates the multiple perspectives on how to analyze the present production and consumption system and how to conceptualize (systemic) change. We discuss how research over the last 20 years has revealed a lot of the mechanisms and lock-ins of unsustainable consumerist lifestyles and production patterns, and the barriers to systemic change. But many questions – trans-scientific in nature – remain unanswered. What is clear is that we need not only much more research into all the details of SPaC research arena but we also need bold thinking that addresses these trans-scientific questions.

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1. Introduction¹

This special issue is based on papers and discussions at the first global workshop “Global and Regional Research on Sustainable Production and Consumption Systems: Achievements, Challenges, and Dialogues”, organized in Rio de Janeiro by the Global Research Forum on Sustainable Production and Consumption, GRF-SPaC, June 13–15, 2012 (Lorek et al., 2013). The year 2012 was the 20th anniversary of the UN Conference on Environment and Development, more familiarly known as the “Earth Summit.” In June of that year world leaders from governments, business and civil society met once again in Rio de Janeiro (the UN Conference on Sustainable Development or “Rio + 20”) to reflect on progress with regard to past and current commitments to the aims of sustainable development articulated in 1992. Given the general acknowledgment of an “implementation gap” amid “worsening trends”, despite

increase in public awareness and improvements in eco-efficiency, the need to better understand and promote sustainable production and consumption systems as well as the obstacles to this transition has become increasingly urgent.

The **Global Research Forum on Sustainable Production and Consumption (GRF-SPaC)** is a new initiative bringing together organizations and individuals from various regions of the world engaged in research and its applications in the transition to sustainable production/consumption (SPaC) systems. During the Rio + 20 conference, June 2012, research organizations, universities, practitioners and think tanks, supported by the Brazilian Ministry of the Environment and other partner organizations, helped mount the official launch of GRF-SPaC in Rio de Janeiro. The launch involved several events, most notably a three-day workshop featuring about 90 researchers and practitioners from various regions of the world. The workshop, held at the Escola Superior de Propaganda e Marketing (ESPM), had a focus on sustainable consumption and production research as well as its applications in practice.

This GRF-SPaC initiative builds on a 20 + year research tradition involving numerous researchers, institutes, and networks around the world, and on the many efforts and experiences applying research findings to policy, civil society activities, and business. The three-day

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¹ This section is based on the Introduction of Lorek et al. (2013).

workshop in Rio represented the official launch of the GRF initiative. The workshop aimed to achieve the following seven objectives:

- To identify some of the most critical research questions to be investigated in the next five to ten years, from the perspective of researchers as well as practitioners, educators, and policy makers.
- To review and assess the current state of knowledge on SCP around the globe, particularly in different regions.
- To create a bridge between researchers and practitioners from different regions around the world in a creative process of exchange of information, knowledge, and perspectives on sustainable production and consumption.
- To review the state-of-the-art concerning how change is achieved and what mechanisms are effective to achieve a switch to sustainable consumption and production patterns.
- To explore how to effectively communicate SCP research and findings to users and the general public, especially in different global regions.
- To formulate and send a clear message on the role of SCP research and practice as it applies to the global policy debate at the UN Rio + 20 conference.
- To examine and encourage research and efforts addressing well-being, inequality and alternative concepts and measures of prosperity, such as the Millennium Consumption Goals.

Workshop outcomes and plans were also discussed in a number of public panels in conjunction with Rio + 20 activities, including the Forum on Science, Technology and Innovation for Sustainable Development (International Council for Science), and the Brazilian Ministry Dialogue on Sustainable Consumption and Production.

At the time of writing (Sept 2013) GRF-SPaC has established itself as the global network of researchers and practitioners in the field of SPaC. It has organized a number of follow-up workshops and conference sessions in various places around the world (Beijing in 2012, Wuppertal, Stellenbosch, Davos, and [Montreal in 2013](#)). It has established a listserve and a website; conducted surveys among participants, reviewed existing SPaC literature, and is presently in the process of organizing its next global conference from June 8–11, 2014, in Shanghai. It has also started a research and policy project to develop frameworks for achieving absolute REDUCTIONS (Reducing Environmental Degradation & Unsustainable Consumption Trends & Impacts On Nature & Society). It closely collaborates with networks and institutions around the globe, like SCORAI in North America and Europe, and IGES in Japan.

2. Brief overview of SPaC and adjacent research areas

2.1. On the scope of SCP research

No full agreement exists among scholars about what constitutes the SPaC research field. A distinction needs to be made between research on *present* (often unsustainable) production and consumption patterns and practices, and studies reflecting the *aspiration* of SPaC. Another distinction is between *individual* production and consumption practices and the *collective* act of production and consumption; which is associated with the cultural notion of a consumer society and consumerist lifestyles. A further distinction can be made between *material* aspects of SPaC (as often expressed in Life Cycle Assessments and Materials Flow analyses); *economic* aspects such as transactions between buyers and sellers as well as investments and the economy as a whole; and *cultural* notions at the individual level (norms and habits) and the collective level (fashion, consumerist lifestyles). Next to static analyses (such as the LCA of a product), dynamic analyses of change processes exist, such as the

frameworks of socio-technical transitions; grassroots innovations; and social movements. Change process can be analyzed through the lens of power relationships between elements of the incumbent system and actors who want to change the system. Finally scholars conceptualize production and consumption as a complex system; and analyze the complexities of changing such systems.

It is often helpful to visualize these challenges. The most common approach is to start from the life cycle of a product, from mining or growing its raw materials to its recycling or waste disposal. [Barber \(2010\)](#) expanded this life cycle view with other elements like investments and distribution; and placed values or needs in the center of the diagram:

In [Fig. 1](#) one can distinguish the life cycle of a product or service, beginning from extraction of its raw materials, to waste. It also includes economic/financial transactions like investments, and activities like distribution and trade, which are part of the production/consumption system, but do not qualify as production or consumption themselves. It is interesting that Barber places values/needs in the center of the diagram: the main drivers of the production/consumption system are our (perceived) needs or wants, driven by our values. Although the visualization in [Fig. 1](#) is useful to roughly position production and consumption, it needs further detailing in order to understand better the production and consumption as a system. A further step is depicted in [Fig. 2](#), where some of the elements of [Fig. 1](#) are specified:

In [Fig. 2](#) one sees an overview of sustainable practices that roughly covers the production–consumption system. Another way of further detailing that system can be achieved by subdividing the activities of [Fig. 2](#) along various sectors, regions, and issues (see the cube in [Fig. 3](#)).

The advantages of [Figs. 1–3](#) are that they allow detailed analysis of SPaC activities, for instance: research on the climate change aspects of food production in Africa, using life cycle assessment and investment decisions; and including transportation and trade. However, this approach leads also to a rather fragmented view of the field; and it is not very helpful to formulate broader research questions and agendas. A more cross-cutting and unifying approach is necessary to characterize (un)sustainable production and consumption, and to develop a research agenda focusing on systemic change.

In its draft GRF-SPaC ten-year research agenda the main research questions are framed as “..... *how to understand the present lock-in in unsustainable consumerist lifestyles and production patterns, and to understand how a possible transition to more sustainable production and consumption patterns and lifestyles could be accomplished. For quickly developing countries like China, India, and Brazil this question has an even higher degree of urgency, given the rapid emerging of new middle classes with consumerist lifestyles, next to the persistence of deep poverty and growing inequality.*” This framing has two aspects to it: a rather static question (how to understand the persistence of current unsustainabilities); and a dynamic (how to transition towards a more sustainable system).

The present **lock-in aspects** could be analyzed through a variety of lenses:

- A *financial and investment* lens (sunk costs in the present unsustainable infrastructures); current subsidies on unsustainable practices like fossil fuels for electricity generation; current prices that do not reflect the true ecological costs; and the current GDP calculations that do not reflect well-being and societal costs.
- A *cultural* lens: the persistence of dominant consumerist cultures, and the persistence of values that support this culture like respect for property; competition, excellence, and achieving, without counting the ecological costs.

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