

SPECIAL PANEL:

Green economy under trial: lessons from alternative collective practices towards sustainable production and consumption

Coordinator: Stefanie Baasch (*Helmholtz-Centre for Environmental Research – UFZ Leipzig, Department of Environmental Politics*) - stefanie.baasch@ufz.de

Panel Abstract:

This panel aims at deciphering the realities of the “green economy” by questioning its various forms of concretization. We propose to focus panel interventions on alternative collective practices towards more sustainable consumption and production, considering the fact that these practices – also described as “niches” – may challenge mainstream economy, and thus the mainstream understanding of “green economy”. Our purpose is thus to understand the extent to which these practices put on trial the enactment of a “green economy”: How do these practices impact the greening of economy? What sort of influence do they exert through time and space? What are the limits of this influence and the possibilities to overcome these limits? And reciprocally: how is such a niche of sustainable practices countered/received by dominant economy? What are the consequences on economics, if we assume the idea that economics and economy are indetachable or, more, if economics perform economy (Callon, 1998)? In other words, are sustainable consumption and production practices able to reframe significantly both our understanding of “economics” and of “economy” in order to adjust them to environmental requirements?

To deal with these general interrogations, this session invites various approaches from social sciences and different theoretical and methodological frameworks, from sociology to political science to ecological economics or psychology and behavioural economics. Grounded on empirical explorations, contributions should provide original insights on the green economy “in the making” or, in other words on the actual greening of economy that results from alternative collective practices towards sustainability. Additionally to these empirical papers, a limited number of more conceptual, discussion papers are welcomed which propose to critically discuss the challenges posed to the “green economy” when confronted with alternative consumption and production patterns.

The main strand of papers should report specific empirical case(s) from various domains and highlight the sort of innovative practices in which actors are engaged and, eventually, the actors’ claims for an alternative economic model within the resulting “niche”. Hence, the descriptions of the empirical cases should explain the process of setting up alternative practices and also underline the controversies, confrontations as well as the negotiations, compromises and/or coordination with economy (conceived as a set of principles, rationality and forms of actions) that such sustainable initiatives may require for their launching, progressive development and potential institutionalization.

Alternative sustainable modes of consumption and production are of critical importance to understand the pathways towards more sustainable lifestyles, that is, a transition which requires a concomitant greening of economy to broaden and become efficient. Indeed, such niches of alternatives practices need to be diffused and spread, and/or translated in various contexts to be become able to challenge both the mainstream practices and economy. Additional questions which could be addressed by the papers encompass: is such a diffusion of niches a necessary step for enacting the “green economy”? how can the “configurations that work” confront and reframe the sociotechnical regime, and especially its economic aspects? What kind of governance – within the niche and by public authorities as well –

does this call for? How can regulations, policies and public authorities' involvement contribute to the greening of economy considering the lessons learned from alternative niches? How does, should or could the mainstream economy be reframed to achieve its greening in a relevant way?

“Grassroots innovation movements and green economies: dilemmas, framings, possibilities”

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Abstract:

Throughout its recent history, sustainability has involved a significant undercurrent of grassroots innovation. Developed through networks of activists and organisations, these movements have generating novel bottom-up solutions that respond to the local situation and the knowledge, interests and values of the communities involved. Often developed in the social economy, grassroots experimentation continues to generate ‘user-led’ ideas of potential for green economic development. Indeed, current debates for the green economy cite technological and social innovations that originated in civil society settings, with policy-makers and businesses appropriating and translating them into wider markets at scale. Such processes present dilemmas for grassroots innovators.

Our paper will review the modern history of grassroots innovation movements and associated research literature in order to suggest potential roles in emerging green economies. Whether it is community food and energy initiatives, local (re-)manufacturing and tool swapping, complementary currencies, community sanitation and water projects, housing co-operatives, participatory rural development, harnessing ICTs for marketing, and so on, there remains a ferment of grassroots activity in sustainable production and consumption. This diversity generates resilience by ensuring options are kept open in the face of uncertainty about how to proceed. It also provides flexibility, preventing us from being locked into a course inappropriate to changing circumstances.

However, our analysis suggests these strengths also generate dilemmas for grassroots innovation movements when confronting the mainstreaming of green economic ideas:

- attending to local specificities whilst simultaneously seeking wide-scale relevance and diffusion,
- being appropriate to existing situations that one ultimately seeks to transform, and
- relying upon project-based solutions when the principles of social justice really require wider systemic changes.

Historical perspective reveals these dilemmas to be enduring features, but also suggests they can be quite productive for dialogues about inclusive forms of future green economies. Each dilemma respectively emphasises a particular framing of grassroots innovation – as a coping strategy, as a visionary vanguard, and as R&D lab for utopia – which in turn foreground different forms of knowledge production. These are summarised in the table below, and will be elaborated in our paper. Each framing has validity. Viewing grassroots innovation movements as experimental spaces for socio-technical systems of sustainable production and consumption, in a reflexive relationship with other spaces of sustainable innovation, provides a further framing (our final row in the table) in to consider this activity in inclusive green economies.

Table: grassroots innovation dilemmas, framings and knowledge production

Grassroots innovation dilemma	Framing of grassroots innovation	Forms of knowledge emphasised
Locally-specific yet widely-applicable	<u>Coping strategies:</u> Grassroots coping for absence of provision through existing market and state processes (Amin, 2009; Kaplinsky, 2010; Gupta et al, 2003; Bhadurai and Kumar, 2010)	<u>Ethnographic:</u> <ul style="list-style-type: none"> - Needs unmet by markets and states - Livelihood conditions and responses - Pragmatic sustainability improvements - Augmentation opportunities for bottom-up solutions
Appropriate to transformed situations	<u>Visionary vanguard:</u> Pioneering socially just and environmentally sustainable economies and societies (Seyfang, 2009; Dagnino, 2009; Abrol, 2005)	<u>Instrumental:</u> <ul style="list-style-type: none"> - Socio-technical practices under different value systems - Capabilities and resources required - Economic, social and environmental performance and feasibility under different contexts - Production and maintenance requirements - Advocate and participant perspectives – materiality of radical sustainability discourses
Project-based solutions seeking structural change	<u>R&D lab for utopia:</u> Naive R&D lab for utopia – flawed without a political programme targeting structural change (Dickson, 1974; Rybczynski, 1980)	<u>Critical:</u> <ul style="list-style-type: none"> - Institutional misfit (and their reform) - Lack of infrastructure (and provision - material and social) - Economic (re-)structures, lack of capital and markets - Political context (opposing powers, targets and allies)
Experimental spaces relevant to socio-technical foresight	<u>Reflexive pluralities:</u> Source of experimental plurality in debates and practices in innovation policy (Irwin et al, 1994; Smith, 2007; Gibson-Graham, 2008)	<u>Reflexive:</u> <ul style="list-style-type: none"> - Spaces for socio-technical experimentation and social learning - Replicable, adaptable and scalable innovations - Manifestation of alternate agendas for innovation policy - Indicators of institutional challenges for sustainability - Empowering by linking to broader social movements

“Reaching 100% renewable energy goal - the case of the renewable energy community Wolfhagen (Germany)”

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Abstract:

The paper describes the case study of the middle-town Wolfhagen which can be seen as a frontrunner renewable energy community in Germany. It is based on analytical results which have been created in the context of the EU FP7 Research Project InContext (<http://incontext-fp7.eu/>).

The case study focuses on analyzing the process towards fulfilling the 100% renewable energy aim and its development. This is mentioned to give fruitful insights about drivers and barriers and also is supposed to deliver information about the contents for a designed process towards becoming a REC.

The city of Wolfhagen aims to cover its entire communal energy need (households, commercial and industrial business) from 2015 exclusively with locally generated renewable power plants. Beside the positive effects on the communal climate footprint, positive effects on the local economy and an increase in local value should be realized.

It is also remarkable that Wolfhagen was the first community which started to remunicipalise its power grids in 2006. Locally owned power grids are one essential aspect for local self-sufficient renewable energy politics because it enables or at least facilitates the feeding of the produced power into the grid.

In 2008 the municipality services started to deliver exclusively 100% renewable energy to their customers. Currently, the energy requirements are covered by hydro power which is bought in Austria. From 2015 the whole energy requirements should be covered by locally produced energy from wind power, biomass and photovoltaic. The major part of energy should be produced by a citizen's owned wind park. The location of the planned wind park has led to severe conflicts in Wolfhagen. The majority of political actors support the project, but a local protest group opposes against the location with nature conservation arguments.

In October 2010, the Federal Ministry of Education and Research awarded Wolfhagen as one of the top five German towns in energy efficiency (Energy Efficient City). In summary, Wolfhagen is called to be one of the leading communities regarding renewable energies.

The paper will focus on the interplays of legal changes (like the Renewable Energy Sources Act in 2000), framework conditions (economic developments, demographic change), conflicts and motivation aspects to analyze the process with regard to its potential for being a transferable to other communities and regions.

TUESDAY, JUNE 19TH

Tuesday, June 19
Salvador Dali Room
9:00 – 10:30

SPECIAL PANEL:

Economic valuation of benefits from reduced forest loss in the Amazon

Chair: Jon Strand (*Development Research Group, Environment and Energy Team, World Bank*) - jstrand@worldbank.org

“Valuing Global Benefits from Avoiding Forest Loss in the Amazon Rainforest; A Delphi Contingent Valuation Approach”

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Abstract:

The Amazon is the world’s largest rainforest, representing 40 percent of the global total, and also the biologically most diverse. The Amazon rain forest is a global public good, which households all around the world could potentially be willing to pay to preserve. Without further measures to stop deforestation in the region, a substantial fraction of the biomass in the standing Amazon rainforest could disappear over time, and the rainforest transformed into less dense forest or savannah.

Many impacts of forest loss in the Amazon area are local and regional. But a large fraction of the related global losses are likely to fall on populations outside of the region. Global losses are of two main types: 1) release of carbon that lead to increased climate change, a global “bad”; and 2) losses sustained by populations outside of the region due to their preference for preserving the rainforest. The study reported here contributes toward valuing item 2). Such values are important but challenging to document; they largely represent “passive use” values that are hard to measure, and require direct preference elicitation (surveys) for their measurement, including contingent valuation (CV) and choice experiments (CE).

In this paper we report on a “Delphi” survey of European environmental valuation experts, whereby these experts indicate their best assessment of the average and median willingness to pay (WTP) per household per year for policy measures implemented to avoid specific forest losses in the Amazon region by 2050, at two different levels. This method implies utilizing expert opinion. The experts’ valuation builds on a specific CV study design assumed, at the outset, to be common for all OECD countries. Underlying the method is the belief that experts have considerable knowledge that is not embodied in existing studies, likely to be useful in making informed judgments about the question under investigation. In our case, we will use a sample of globally prominent environmental economists acquainted with CV studies, and ask them to predict the outcome of our particular CV survey in terms of mean and median WTP per household for specified changes in a global public good (the forested area of the Amazon Rainforest), among households in their own country, and among all households from their respective continents. Delphi studies differ more generally in terms of either asking for the experts’ recommended course of action, or predicting an outcome if some action was taken. Our study falls into the latter category, consistent with the Oracle at Delphi in that we ask experts for their best guess about what average preferences for a public good would be if a CV survey were to be carried out among that population. The method yields rough value estimates, useful mainly as a support to parallel CV studies, and to provide information for countries that will not be surveyed directly.

The survey is currently ongoing. Preliminary results indicate that the average of experts’ evaluation of average WTP in their own populations, and in Europe generally, are about 35 and 32.5 euros per household per year respectively, for preventive measures that avoid forest losses equivalent to 25 percent of the original forest area, that would otherwise be lost by 2050. Similar figures are about 28.5 and 26 euros for less extensive measures that avoid forest losses of only 15 percent. Note that a second round of this valuation procedure will soon be carried out. More complete results will be ready for the ISEE conference.

“Public Health Impacts of Deforestation and Policy in the Amazon”

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Abstract:

Recent claims that ecosystem conservation generates health benefits rest on a thin empirical base. There are few rigorous analysis of how the loss of forest cover affects human health and the implications in terms of human welfare. We build a comprehensive dataset that allows us to investigate the joint effects of different covariates on malaria, using innovative methods to address potential confounding by omitted variables. We focus on the Brazilian Amazon because the region suffers from endemic malaria, high deforestation, and persistent poverty, even as the government actively pursues a sustainable development agenda including planned expansion of protected areas and road infrastructure. We combine municipal-level panel data on malaria, deforestation, and key time-varying covariates (e.g. public health services) with detailed cross-sectional data on protected areas and roads, along with covariates that are time invariant (e.g. altitude) or measured infrequently (e.g. migration). To fully exploit this dataset, we apply panel data models, including the fixed effect vector decomposition approach. We find that malaria is influenced both by deforestation itself and by conservation and development policies designed to affect deforestation. There may be “double-(health)-dividends” from widely recommended conservation policies such as control of unofficial roads and establishment of indigenous reserves and strict protected areas.

Keywords: environmental health, deforestation, protected areas, migration, roads

“Reconciling agriculture expansion with forest conservation and restoration in Brazil”

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Abstract:

Even though Brazil has become the third largest exporter of agricultural commodities, recent governance efforts have reduced Amazon deforestation in 2010 by 67% below the historical baseline of 19,600 km²year⁻¹. The dilemma between the conservation of Brazil's large forests and the need to develop its agriculture to meet increasing domestic and global demands is, therefore, driving a national contention on whether is feasible to match those goals. With this respect, intensification of cattle ranching from 1.1 to 1.5 head/ha has been suggested as one way to reduce pressure on forests and

spare land for agricultural production and is the cornerstone of Brazil's plan for mitigation of greenhouse gas emissions. Nevertheless, this strategy is not straightforward and will require large investments in pasture productivity, integrated livestock/forage/crop systems, and semi-confinement together with the best science at hand in order to meet the principles of a low-carbon rural development. To this end, we have developed SimBrasil-2 – a nationwide, spatially-explicit model that simulates land use, land use change, forestry, deforestation, and regrowth under various scenarios of agricultural land demand and deforestation policies for Brazil, together with the resulting carbon emissions. SimBrasil-2 thus provides integrated (economic, carbon, land-use) assessments of plausible national scenarios for achieving the goals of the National Climate Change Plan, for providing an objective source of information for the debate on the Forest Code, and for supporting the Brazil's cropland expansion planning, as well as for pointing out potential conflicts. By comparing a combination scenarios in SimBrasil-2, we show that Brazil could meet its goals of agricultural expansion by 2030 at the same time it undertakes a large forest restoration program that would recuperate $\approx 57 \pm 10$ M ha of forests and potentially sequester $\approx 6.1 \pm 1.3$ Pg of carbon. International financial mechanisms, such as REDD, will be crucial to help Brazil achieve this goal. We estimate that a market paying as low as USD 10 per ton of CO₂ would provide USD 3-4 thousand per hectare to fund countrywide forest restoration, hence triggering multiple socioeconomic and environmental co-benefits.

“The economic value of protected natural areas in the Brazilian Amazon”

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Abstract:

This study examines the contribution of protected natural areas (excluding indigenous territories) to the economy of the Brazilian Amazon, based on the potential of five of goods and services: forest products, public use, carbon, water and sharing of tax revenue. Therefore, this provides a detailed regional analysis for the results obtained by Medeiros and Young (2011), which are only expressed in national terms. In summary, this analysis shows that the set of ecosystem services evaluated in this study generates economic contributions, when monetized, significantly exceed the amount that has been assigned by the public administration for the maintenance of the protected areas in the Brazilian Amazon Region, and even the new investment needed for further consolidation and improvement of these units.

More specifically, the study examines:

- The potential production of timber in the Amazon's national and state forests, if managed according to the model forest concession established by the Brazilian Forest Service;
- The potential production of rubber and Brazil nuts in Extractive Reserves, and its impact on local household income;
- The economic contribution of visitors in Amazonian National and State Parks in Brazil, including the multiplier effects on local economies;
- The prevention of emissions from avoided deforestation;
- The contribution of hydroelectricity generation;
- Fiscal transfers to municipal governments due to the presence of protected areas.

Other important environmental services, such as the protection of human settlements against landslides, floods and other accidents, the conservation of fishery resources and biodiversity conservation per se - the major goal of conservation units - could not have their values estimated due to the lack of information and appropriate methodologies. For this reason, the figures presented in this document constitute an underestimation of the total environmental services provided by conservation units.