

# International workshop on System Innovation towards Sustainable Agriculture

## SISA-3



To be held in Riga  
(Latvia)  
6-8 November 2018  
at the  
Baltic Studies Centre

## CALL FOR PAPERS

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Baltic Studies Centre is a leading research institute in Latvia in the implementation of EU research and innovation projects on food systems, food security, agricultural knowledge and innovation, and rural development.

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The aim of the third SISA workshop is to bring together research insights and practical experiences in making agriculture more sustainable. The workshop will discuss these in-depth, seeking to contribute to more robust knowledge on how to stimulate transitions towards sustainable agro-food systems.

The workshop will address a range of analytical methods, experiences and scientific insights of the main issues at stake in sustainability research and projects. Doing so, the meeting seeks to realize three main objectives, notably:

- Compare and contrast the issues and analysis of multi-actor innovation process, R&D practices, governance and transformative policies in various European countries;
- Provide input to rethinking government policies, socio-professional strategies and civic concerns to contribute to sustainability transitions in the agro-food systems on the basis of existing research and experiences;
- Define the content and the agenda of the on-going SISA open consortium for further research and mission-oriented policy support.

### Organization committee:

Marc Barbier - INRA & IFRIS, France

Marianne Cerf - INRA SAD, IDEAS, France

Boelie Elzen - Wageningen University and Research, The Netherlands

Talis Tisenkopfs - Baltic Studies Centre, Latvia

### Abstract Submission Web Page:

<https://marcbarbier1.wixsite.com/sisa3riga2018>

### SISA CoP Web Page:

<https://sisacop.wixsite.com/mysite>

## The workshop and its follow up will provide

- An international meeting supporting the development of a research network;
- 15 to 20 papers;
- Contributions by discussants and proceedings from two harvesting sessions;
- An edited volume (two have been published after the earlier SISA workshops) and/or a special issue of a scientific journal of the papers and discussions;
- A policy report with recommendations based on the findings of the workshop;
- Interaction with participants in the ESRS Autumn School on "Social Innovation in and for Sustainable Food Provision" that is held in parallel at the same location.

## Main Dates

### Deadlines

Submission of abstract:  
**1 July 2018**

Notification of acceptance:  
**31 July 2018**

Full paper due:  
**20 October 2018**

## Participation

### Invited participants

Participation is by invitation only as participants will be selected on the basis of submitted abstracts. The format emphasizes in-depth discussion and therefore only 15 to 20 papers will be selected. Participants without a paper will act as discussant at the workshop for one or two selected papers. Researchers, whose paper is not accepted, may still be invited as discussant. PhD students are invited to present their research in the form of a poster during a poster session.

Participants will have a variety of disciplinary backgrounds such as Innovation Studies, Economics, Rural Sociology, Science & Technology Studies (including constructive and interactive technology assessment studies), Policy Studies (including studies of network governance, learning and the impact of regulation), Organization Studies (including studies focusing on management of structural change and leadership) and Practice based Studies.

To stimulate 'fresh input' in the discussions a number of junior scientists (PhD Students) participating to the Autumn School of the European Society for Rural Sociology will also be invited in addition to senior researchers (<http://www.ruralsociology.eu/>).

We also seek participation from policy-makers and representative of cooperative and professional networks to bring in their experiences and ways of framing insights.

### Format of the Meeting

The format of the meeting seeks to stimulate in-depth discussion of various issues rather than having many presentations and only brief discussions. To achieve this, the key features of the workshop are:

- Plenary sessions only.
- Intensive interactions among a limited number of participants (30-35). All participants will have an active role, either as paper authors or discussants, or both.
- Participation is by invitation only on the basis of submitted abstracts (for researchers) or known expertise (for selected policy makers).
- All papers are written and distributed prior to the meeting.
- Papers are not presented at the meeting but expected to be read beforehand.
- Invited discussants will present comments on papers to kick off the discussions. Two discussants are invited for each paper.
- The meeting consists of two kinds of sessions: 1) paper sessions, clustering papers around a number of themes; 2) 'harvesting' sessions without a paper submission. These sessions aim at teasing out lessons for governance and to define a further research agenda. They will summarise progress made at the conference and develop a clearer view on issues to discuss further. To kick off the discussion in the harvesting sessions, two persons will present their conclusions from the preceding sessions.
- Poster session for PhD students.

Our aim is that local costs (hotel, subsistence) will be borne by the organizers. However, funding applications are still pending so it is still uncertain whether this is feasible.

Check the Conference website for progress on this issue.  
<https://marcbarbier1.wixsite.com/sisa3riga2018>

## Background

### *Pathways towards sustainability*

Over the past decade, the transition towards sustainable agriculture has been a central theme in the work of many organizations, including government bodies, NGOs, professional organizations and research institutions. Various publications define future targets and objectives to improve sustainability in various subsectors like animal production, arable farming, or glasshouse horticulture. There are also growing concerns about the sustainable use of biomass for fuel, feed and fibers, which also became public issues in terms of ethical or economic relations regarding the multi-functionality of agriculture and the climate change challenge for agricultural activities. The sustainability transition challenge thus appears to be far more than a sectorial adaptation to sustainability standards. Critiques have spurred to target 'greenwashing' discourses and adaptive marketing in food provision. Pathways toward sustainability entail profound decompositions if not retreat of established technological systems and value chains, but also big challenges of reconnecting societal issues that have been delineated through divisions between tradition and modernity, rural and urban, natural and artificial or even between sectors.


It has become clear that the development of our industrial societies has had serious negative effects on health, biodiversity and climate. This is true for a variety of sectors including the agro-food system. Despite the adoption of the notion of sustainable development by most governments as a basic policy principle, it is becoming increasingly clear that the achievement of a 'post-industrial' society will not be delivered through the implementation of green standards. Deep structural changes and therefore transitions are at stake. Ensuring that any change or innovation, that might be taking place, does lead to more sustainability is a major challenge for societies in general and for agro-food systems in particular. In this context the relations between agronomic sciences, agricultural technologies, social and community based initiatives and public or private expectations are at stake. Like in other sectors, this leads to claims for "responsible innovation" concerning the purposes and ways of designing new technologies and practices or new practices in relation to existing techniques. In fact, these claims indicate a need for a shift in the governance of research and innovation to achieve a sustainable future (e.g. Elzen et al. 2012; Stilgoe et al., 2013) meaning to transform innovation for sustainable achievements (Leach et al., 2012) and to anchor them (Elzen et al., 2012).

Nevertheless, the transition to sustainable agro-food systems will not be an easy or straightforward one. One of the reasons for this is the extremely complicated nature of the required long term societal changes. Such a transition will require to adjust in various ways the design, the development and the expansion of new socio-technical arrangement to be embedded in new economic, social, institutional and cultural relations. This will not be realizable in a linear way under any type of techno-centric groundings or policy-relevant justification, but rather through hybrid and path-dependent processes of change. The two volumes published after the previous SISA workshops have attempted to enlighten the content and questions of a research agenda on transition and system innovation sustainable agro-food systems (Barbier et al., 2012; Elzen et al., 2017)

### *Dynamics of Innovation as a scientific issue*

Innovation is a crucial component of transitions, which is typically taken to mean technological change. Indeed, a variety of new technologies will be needed to meet the sustainability challenges in the various agricultural subsectors. Technological change, however, will not be enough, as many scholars of Innovation Studies and Science and technology Studies have demonstrated over the past decades.

The enormous challenges ahead will also require new regulations, new behaviour (e.g. of consumers, farmers, many other stakeholders), cultural change, and institutional 'hybridity' (Allaire and Wolf, 2004) as well as new forms of planning, monitoring and evaluation (van Mierlo et al. 2010). Some authors have proposed the notion of innovative design (Lemasson, et al., 2006) in socio-economic orders or agro-food systems (Aggeri et Hatchuel, 2003) and the issue of participatory design and mediation activities has also been pushed forward (Beguin & Cerf, 2009; Steyeart et al., 2017). The sustainability challenge in agriculture also needs to account for the pioneering movement of organic farming and ways of consuming (Lamine, 2009) in relation to short circuit, rural development or community based agriculture but also facing its conventionalization. More recently agroecology (Wezel et al., 2011) appeared at the FAO as a formative template to operate and articulate knowledge production, social movement and agricultural practices, with the legitimacy of "nourishing the world".



Some authors use the term 'system innovation' to denote such broad change processes (e.g. Elzen et al. 2004; Geels 2005; Klerxx et al. 2012). System innovations are multi-factor, multi-actor and multi-level (multi-scaled) and can only be understood in terms of historical co-evolutionary processes which link up these actors, factors and various levels of collective action. These historical processes are shot through with uncertainty and are open-ended learning processes (Tisenkopfs et al 2015). Influencing such processes has proved to be difficult, but not impossible. To stimulate sustainable development, the challenge is to influence developments at an early stage, when they are still reversible and one can hope to sway the balance between desirable and undesirable developments.

The focus of the SISA research community on system innovation, knowledge regimes and design practices in the agro-food sector can be considered as pivotal example of what Gibbons et al. (1994) used to call a mode 2 type of knowledge production. In fact, it transcends traditional disciplinary science in two ways, viz. (1) it combines insights from various disciplines and (2) knowledge is generated in a combined effort between scientists and stakeholders from the domain under investigation. But, after the debates about the Mode 1 – Mode 2 model (Pestre, 2003), researchers and practitioners are aware that more knowledge about those dynamics is needed and more participatory and reflexive settings are required to get further in intermediating transformative changes. This is why a joint effort between European researchers, policy makers, strategic actors and innovation brokers of the agro-food systems is of crucial importance to reflect, compare and design elements of the roadmap towards sustainable agriculture. But this effort would be misleading if one would not take the transformative diversity of practicing transitions (Stirling, 2011) as a resource for major or minor shifts in system innovations. The on-going recognition of mission-oriented innovation policies (Mazzucato, 2011) certainly brings a new context to govern transformative policies on problem-specific societal challenges and thus to interwoven problem-driven sectorial policy.

### ***Rationale of the international workshop***

The key starting point for the meeting is that technical change and societal change are highly related, forming a seamless web (Hughes 1986). Any transition to sustainability will imply a high level of social-cultural change coupled with a similar high level of technological change and, correlatively, many global or local social debates about the ways of designing the future and the realization of system innovation. In a general sense, system innovations are defined as major changes in the way societal functions such as food production and consumption, energy use and supply, transportation, etc., are fulfilled. Such changes typically involve a co-evolution of a number of related elements, including technology, infrastructures, symbolic meanings, governance structures, scientific knowledge, industry and related institutions, etc.

The need for system innovations that lead to more sustainable development paths has been recognized in various policy networks and research programs. Over the past decade, this has rendered a host of insights in innovation processes as well as practical experiences on attempts to stimulate system innovation towards sustainability (Poppe et al. 2009; Spaargaren et al. 2012).

It appears, however, that there is a considerable mismatch between general insights developed in research and the more detailed practical issues that are at stake in concrete projects and programs. As a result, it is far from clear how to set up projects and programs (local initiatives) to contribute to system innovation towards sustainability. One reason, sourced by historical studies, is that system innovations can take a long time (of the order of decades) and rarely result from a single new development but from a long process of combination and re-combination of novelties from different sources. This calls for a comprehensive and reflexive understanding of shifts in knowledge regimes and design practices. This workshop seeks to lay the foundations for such an endeavor, in terms of analysis as well as in terms of governance (Barbier and Elzen, 2012).



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## Issues

The Scientific meeting will address *three main issues* and cover *several agricultural subsectors and rural-urban dynamics of reconnection* for emerging system innovations in the agro-food systems. These are:

- The issue of *analysis*: Analysing the relation between concrete projects and programmes and dynamics in agro-food systems, including system innovations, knowledge regimes and design practices that are currently on-going in transitions.
- The issue of *acting*: reporting and assessing collaborative action in system innovations, knowledge regimes and organizational design aiming at sustainable transition.
- The issue of *governance*: Understanding how government agencies and other actors organize themselves and what they do to encourage and influence to make the agro-food systems more sustainable and resilient.

## Key themes

Contributions should address one or more of the following themes

*Understanding system innovations in the agro-food sector, a.o..*

- How can system innovations in the agro-food sector be characterised?
- What is the role of various actors in different phases?
- How are barriers associated with system innovations overcome and what is the role of learning in this process?
- How do local initiatives challenge existing structures?
- What is the role of changes in consumption preferences in system innovations?

*Knowledge regimes in transition, a.o.*

- What is the resilience of scientific knowledge production?
- How do the 'matters of concern' about sustainability redefine the relation between scientific production and innovation?
- What are the types of problems that researchers, engineers and extensionists have to face to address sustainability?
- What are the characteristic and effects of learning in boundary settings and projects?

*Influencing transitions in the agro-food systems, a.o.*

- What role do science and research play in influencing transitions?
- What kinds of interventions of governmental agencies most effectively seem to 'manage' system innovations?
- What is the role of the public versus the private sector, and how diverse are the positions of public and private actors?
- What is the specific role of intermediaries and how do innovation brokers operate?

*Design practices in transitions, a.o.*

- What is the role of 'system builders' in different phases?
- How are participatory design and *settings* of collective experiments shaped and implemented?
- How do design practices stimulate learning towards system innovation?
- What are the frames and politics of reflective practitioners in situations of change?
- How do agency, discourses, frames and interferences contribute to perform R&D agenda for sustainability transition?



## Abstract Submission

### Deadlines

Submission of abstract:

**1 July 2018**

Notification of acceptance:

**31 July 2018**

Full paper due:

**20 October 2018**

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