Sustainability Transitions Research Network | STRN

Newsletter 2, November, 2011

This is the second newsletter from the steering group of the Sustainability Transitions Research Network. The newsletter is divided into the following sections:

- Words from the Chairman
- Network news
- Calls
- Research projects
- Event reviews
- Jobs & training
- Publications

For the next newsletter we welcome all members to submit news items in any of the above categories either using the website www.transitionsnetwork.org (submit projects, output or news), or sending a message to sustainabilitytransitions@gmail.com. The advantage of using the website for submission is that the information also becomes available online.

The STRN steering group

Words from the Chairman

Dear transition research colleagues,

The field of sustainability transitions is growing rapidly and developing institutions that anchor and sustain the emerging research community. Among the salient structures are:

- STRN, which now has more than 400 members.
- The new journal Environmental Innovation and Societal Transitions (EIST), which has launched the second issue.
- A dedicated series of conferences on sustainability transitions research; the Lund conference (June 2011) was a great success and the Copenhagen conference (August 2012) is in preparation.

The rapid development of these institutional pillars suggests that transition research is gaining momentum, something that is also indicated by the increasing numbers of articles, special issues and citations to our work (see the update by Jochen Markard on this topic). Transition research is entering a new phase and increasingly engaging with policy debates on 'green growth', low-carbon transitions and transformative innovation.

While this expansion and institutionalization are great, there are perhaps also risks. My personal opinion is that fragmentation along disciplinary lines is one possible risk, with scholars looking at the role of business in transitions, the role of civil society, the role of power and politics, etc. Such disciplinary specialization may provide further depth to transition research and facilitate engagement with mainstream disciplines. But we should not forget that transitions are multi-dimensional phenomena that cannot be fully understood by single disciplines. A special characteristic of transition research is the focus on (socio-technical) systems and co-evolutionary dynamics. Integrative research that mobilizes

insights from multiple disciplines therefore remains very important. Another personal observation (from conference presentations and papers) is that many scholars focus on particular green innovations. While this remains important, I would like to suggest that our field also needs more comprehensive studies that look at interactions between *multiple* green innovations (both symbiotic and competitive interactions) and at interactions with the existing system/regime. Another important but under-addressed topic is the interaction between multiple systems/regimes, e.g. transport and electricity, agriculture and transport, etc.

The general point is that much work remains to be done in this exciting and rapidly developing area of research and policy. STRN aims to coordinate scientific capacity within the network. The liveliness and appeal of the network depends, however, on its members. Hence, I invite you to make active contributions, which could be along the following lines:

- You can upload your articles to our database (see website), which helps dissemination and keeping each other informed.
- You can send items for the newsletter (e.g. new publications, research projects, workshop announcements, conference reports).
- You can use the newsletter or website to engage in substantive debates, which contribute to the evolving research agenda.
- You can also assist our community by citing articles from EIST in your papers (when relevant, of course). Such citations would help the new journal get an official citation index, which would make it more attractive to publish in the journal, something that would benefit us all.

This newsletter informs you about past, ongoing and future activities. It contains an analysis of network members, information about EIST's second issue, a report on the Lund conference, an announcement of the Copenhagen conference, a bibliometric analysis of the field, a report on the smart CSO initiative that is oriented towards the Great Transition, and the regular newsletter items. As an example of active contributions, it also contains a report from transition researchers in Iran, who send us an interesting piece. Last, but not least, the newsletter contains an item from our prize winner Prof. Joyashree Roy from Jadavpur University (India). She won the prize that was announced during the Lund conference for the 400th member of STRN: the 6-part book series on Sustainability Transitions, which Routledge is currently publishing. Many congratulations!

Frank Geels, Chairman of STRN (f.w.geels@sussex.ac.uk)

Network News

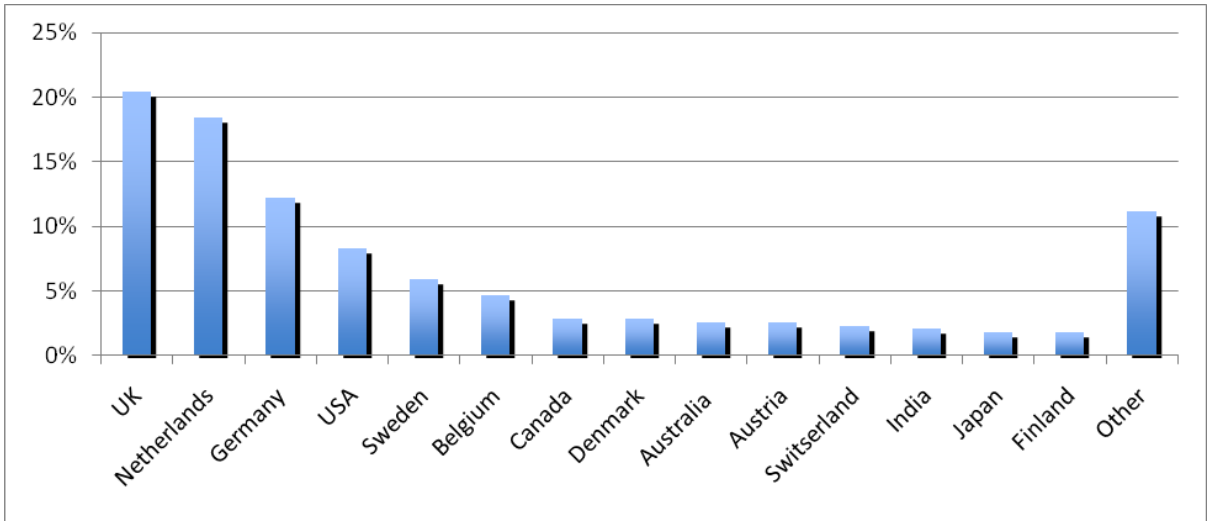
Any news related to ongoing activities of the STRN steering group

STRN now has more than 400 members!

Since the launch of the Sustainability Transitions Research Network in the summer of 2010 the number of members has been increasing rapidly. In October STRN had accepted its 200th member, in March its 300th member, and now the number has passed 400. Here is a breakdown in numbers:

- About three quarter of the members originate from the Europe. More than half of the members originate from the UK (20%), the Netherlands (18%) and Germany (12%), and another quarter from the USA (8%), Sweden (6%), Belgium (5%), Canada (3%) and Denmark (3%);
- Other countries outside Europe and Northern America include Australia, India and Japan;

- The energy domain is ranked highest with 302 members indicating an interest in this area. This is followed by the build environment (174), mobility (147), agriculture (131) and water (109). Another 139 members indicated interest in domains not listed here.
- The most popular theme is 'Governance, power & politics' with 302 members indicating an interest. This is followed by 'Implementation strategies' (223), 'Civil Society, culture and social movements' (214), 'Synthesizing perspectives and approaches to transitions' (185), 'Firms and industries' (165), Geograhpy of transitions' (127) and 'Modeling of transitions' (126).



Rob Raven (R.P.J.M.Raven@tue.nl)

Bibliometric analysis of the field

Many of us in the field of sustainability transitions have the feeling that this is a rapidly expanding topic that receives increasing attention. For an upcoming special section in Research Policy, we wanted to validate this impression. Following a proposition of how to delineate the field, we identified almost 450 papers that have addressed sustainability transitions in one way or the other (Scopus database, cut-off date: August 4th, 2011). The graph below shows how the number of papers and the citations of these papers have developed since 1998, when Kemp, Schot and Hoogma published their Strategic Niche Management article, which is still the most highly cited paper in our field. It was around 2005 when publications started to take off. 2010 witnessed even more than 100 new papers and we expect a similar or slightly lower level for 2011.

Our analysis also shows that Energy Policy, Technological Forecasting & Social Change, Technology Analysis & Strategic Management and Research Policy have emerged as the most important journals in the field, covering more than a third of the articles and 56% of the citations. In terms of citations, articles in Research Policy are by far leading with an average of 40 cites per article.

Further details of the analysis such as key topics and most important conceptual frameworks will become available in the introductory paper to the aforementioned special section. This special section does not only take stock of the development of the field but also brings together a small set of selected contributions, which link sustainability transitions research to established scholarly communities in economic geography, management studies, sociology, policy studies and modeling.

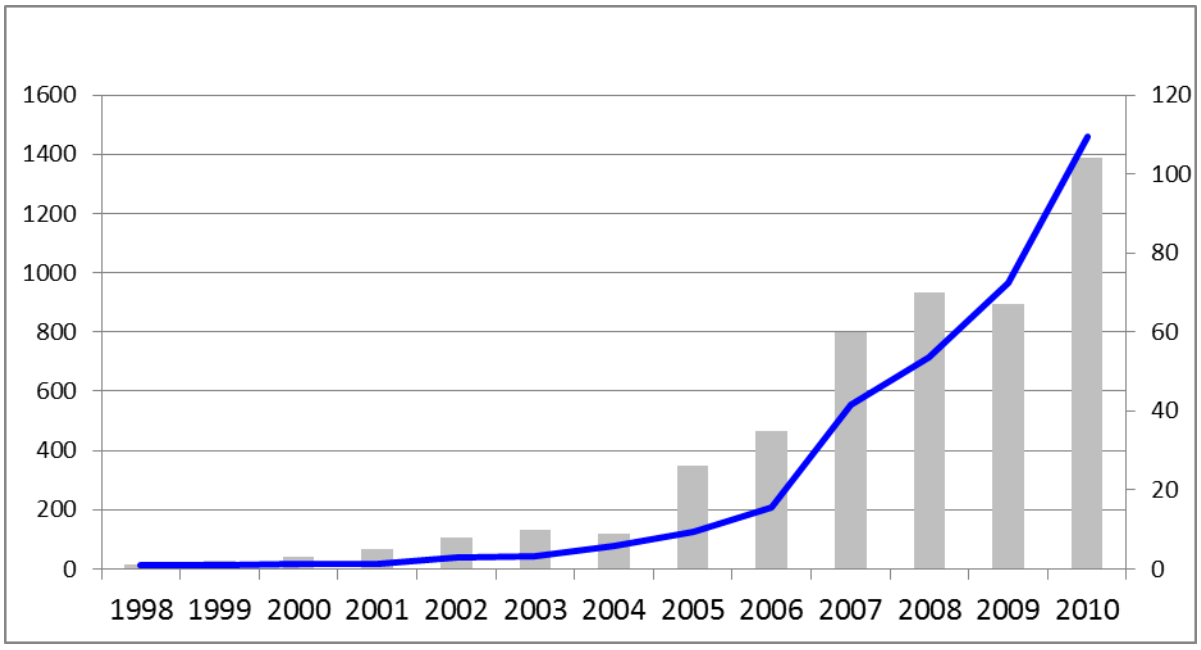


Figure: Number of journal articles on sustainability transitions (grey, right scale) and citations (blue, left scale) per year, Scopus database, Aug-4, 2011

Jochen Markard, Rob Raven, Bernhard Truffer

Transition research in Iran

As one of the greatest producers of oil and gas in the world, Iran has a plan to release from fossil fuels-dependency and to develop renewable energies. Iran has worked on various types renewable energies, but among them, wind energy, solar energy, hydrogen and fuel cell technology have received more attention both in government research institutes and in industry. Bringing such a complex change needs an organized plan to manage the transition process. Therefore, a group of researchers in the government organizations and private consulting firms, such as Renewable Energy Organization of Iran (SUNA) and Amin Management Consulting Group (AMCG), has focused from 10 years ago on strategy formulation of RE technologies in Iran. In this respect, Dr. N. Bagheri Moghaddam, the head of the team, along with other team members, S.M. Mousavi, E.A. Moallemi, M. Nasiri, H. Yousefdehi and A.Shafiei have developed a comprehensive methodology, which can facilitate the transition process. They have developed a systemic model to analyze the performance of Iran RE development and to draw policy initiatives through Systems of Innovation approach. They have applied their model in the two momentous projects of "National Plan of Wind Energy Industry Development" and the revision of "National Strategy for Fuel Cell Technology Development." They have published the results of their studies in various International journals, such as Sustainable and Renewable Energy Reviews and Renewable Energy, and have written a reference book in Farsi to spread the concept of Innovation Systems among other Iranian practitioners.

Enayat Moallemi <emoallemi@aut.ac.ir>

The 400th member of STRN (and prize winner): Joyashree Roy from Jadavpur University (India)

I am happily surprised to have won the 400th-member prize. Not only for me but also for all my students I could not have wished for a better gift than the Routledge book series on

transitions. So, thank you very much! I will briefly say something about my research so that you can see why I appreciate transition research, STRN, and the book series.

I am Professor of Economics at Jadavpur University, Kolkata in India. My research interests have broadened from energy economics to resource and environmental economics to issues of sustainable development. I direct the Ryoichi Sasakawa Young Leaders Fellowship Fund (http://www.jusylffprogram.org), which stimulates young students to engage with research on "Tradition, Social Change, and Sustainable Development: A Holistic Approach". My contributions to the IPCC (Inter-Governmental Panel on Climate Change), Stern Review Report, Global Energy Assessment, SNADEE and other (national and global) research and capacity building efforts have convinced me of the value of multidisciplinary research, new framework, tools and language. Unless understandings are inclusive, solutions cannot be systemic. Development economics, environmental economics, ecological economics have been helping to answer what the human society need to focus on to sustain human wellbeing on an inter-temporal scale. A parallel question is how to redirect/reconfigure existing systems to make a transition from business as usual to desired sustainable development pathway? Can it be preplanned to make this transition through incremental or transformational change? My current research interest investigates how various subsystems in India can undergo transitions towards sustainable development pathway. All these research questions have drawn me towards literature on sustainability transition and to STRN. I wish that our interactions will be mutually beneficial.

Dr. Joyashree Roy (joyashreeju@gmail.com)

Transition research used in Smart CSO initiative

Leaders of Civil Society Organizations (CSOs) increasingly recognize that many of the current civil society strategies are not commensurate to make any significant difference to the magnitude of the global environmental and social crises. Many current strategies fail to acknowledge and tackle the cultural and systemic root causes.

We have therefore started the Smart CSOs Initiative (www.smart-csos.org), a global partnership between civil society leaders, funders and researchers aiming to develop more radical transformative change strategies. We call the initiative 'Smart', because we aim to develop smarter, more effective strategies by drawing on cutting edge thinking from theory and practice across multiple disciplines.

The Smart CSOs report summarises the conclusions of a yearlong dialogue in the initiative. It suggests that CSOs should adopt the framework of the Great Transition (www.gtinitiative.org) with a vision for deep structural changes in the economic system alongside a shift in our cultural values and worldviews. This challenge is of similar magnitude as the Industrial Revolution, which spawned many of the current institutions.

The body of *transition research* has been very useful to help us understand and illustrate how CSOs can identify new roles to become effective change agents for the Great Transition. In particular the *Multi-Level-Perspective* has been of great usage to improve our understanding of innovation processes, existing path dependencies of technologies and the self-stabilising nature of dominant institutions. For the Smart CSO Initiative it is especially relevant to focus the attention on the conditions required for radical systemic innovations (on the niche level) to tip the system. The more recent attention transition research is putting on processes of systemic innovation is extremely relevant in this context.

The Smart CSOs Initiative and the dialogue among its CSO leaders will particularly focus on identifying (and start experimenting with) strategic opportunities for CSOs to institutionalise systemic innovations towards an economic, political and cultural system that changes the rules of the game from a focus on economic growth and consumerism towards a system that

incentivises sustainability and wellbeing. For more information or possible collaboration you can visit the websites or contact me.

Michael Narberhaus, Leader Smart CSOs Initiative (michael@smart-csos.org)

Calls

Calls for upcoming relevant events such as workshops and conferences

Conference announcement: The third International Conference on Sustainability Transitions (Copenhagen, 29-31 August, 2012)
The third International conference on Sustainability Transitions will take place from 29-31 August in Copenhagen. It will be organized by the Technical University Denmark. The ambition of the IST 2012 conference is to offer an opportunity to identify and critically elaborate the emerging conceptual and theoretical assumptions of the transition community - some time taken for granted - and offer space for the exchange of experiences with a broad range of empirical investigations and interventions. Core themes of the conference will be:

- Socio-technical Regimes and the Dynamics of Transitions
- Transition Governance and Strategic Navigation
- Transitions and the Unfolding Controversies over Sustainability
- Learning from Historic Transitions and their Dynamics
- Case Studies and Reflections on their Boundaries

More information can be found on the conference site www.sustrans.dk. A more elaborate conference call will be available and circulated by Mid-November.

Ulrik Jørgensen [uj@man.dtu.dk]

ESRC seminar series on sustainability transitions
The ESRC is funding a seminar series that explores sustainability transitions (projected processes of social change to sustainable patterns of production and consumption) from explicitly social, political and economic perspectives. There are three seminars remaining, and which will take place in Manchester, Nottingham and Machynlleth in the UK in 2012. More information at: http://sustainabilitytransitions.info/

Subversive niches: Tracking mobility studies and transitions in India and Bangladesh
Call for Papers to a Conference in Kolkata, December 28-29, 2011
This is a Call for Papers for a conference on history, politics and economics of transitions of mobility in India and Bangladesh. Co-organized by Global Change Programme, Jadavpur University, Kolkata and Eindhoven University of Technology in the Netherlands as well as *Transfers: Interdisciplinary Journal of Mobility Studies*, the call is meant to bring together historians and social scientists interested in contributing to both long-term historical accounts of transitions in modes of mobility in India and detailed micro-histories of all forms of mobilities in India, of any modality, in any epoque.
The aim of the conference is twofold: to find partners of a future cooperative research project on challenging themes to be identified at the conference, and to discuss a common publication in the form of one or two peer-reviewed special issues of *Transfers*.
For more info see: http://www.transitionsnetwork.org/events

Conference Announcement and Call for Papers on Sustainable Innovation for Enhancing Global Competitiveness in Asian Countries
International Conference on Sustainable Innovation (ICoSi 2012) and 3rd International Joint- Seminar, 19-21 March 2012, Universitas Muhammadiyah Yogyakarta, Indonesia

Asian countries can take productive roles as they have shifted from just a home of cheap labor and programming skills to a powerhouse of economic growth generated by innovation in technology. The venture is how Asian countries wisely gear those opportunities to the design and implementation of more sound and sustainable innovation to elevate the Asian countries' competitive advantages.
For more info see: http://www.transitionsnetwork.org/events

THE BUSINESS OF SOCIAL AND ENVIRONMENTAL INNOVATION
UCT Graduate School of Business, Cape Town, South Africa, 15-16 November 2011
Trying to gain a better understanding of the role of business in developing innovative responses to complex social and environmental problems is becoming more urgent and more popular. In the context of limited progress by national and multilateral efforts in meeting some of the Millennium Development Goals or in establishing a fairer climate change regime, there are manifold initiatives that seek to harness the entrepreneurial, innovative, managerial and financial capacities of business, at various scales, to contribute to improved social and environmental outcomes. In this conference we will seek to connect and cross-fertilize various narratives on the business of social and environmental innovation, and to share and distil lessons from across academic disciplines and from successful initiatives in different parts of the world.
More info: http://gsbblogs.uct.ac.za/seec/files/2010/10/Call-for-Papers.pdf

PhD Academy: Technical Change towards a Low-Carbon Society – The Role of Institutions and Actors, Lausanne, Switzerland, 29 January – 3February 2012
The academy provides a unique platform for PhD students with a background in innovation studies, management, economics or political sciences to present their research on technical change in the context of climate change and energy to an audience of like-minded students and four international faculty. The 2012 faculty consists of: • Dr. Anna Bergek, Professor at the Department of Management and Economics, Linköping University • Dr. Margaret Taylor, Professor of Public Policy, University of California, Berkeley • Dr. Jim Watson, Professor of Energy Policy, SPRU - Science and Technology Policy Research, University of Sussex • Dr. Volker Hoffmann, Professor for Sustainability and Technology, ETH Zurich
For more info see: http://www.transitionsnetwork.org/events

Research projects

Information about ongoing research activities such as the start of new research projects

Civil society in sustainability transitions (SPRU)
SPRU research on transitions includes the roles that civil society plays in pathways to sustainability, and how these roles might develop in the future. A number of ongoing projects explore various aspects of civil society
1) A large, multi-partner 3 year project led jointly by Adrian Smith (SPRU) and Gill Seyfang (UEA) (Community Innovation in Sustainable Energy) is exploring the development of community energy in the UK, France and Finland. We are using ideas in the transitions literature about niche spaces to help us understand the kaleidoscope of grassroots innovation activity in sustainable energy. A new doctoral research project by Jacob Barnes is also looking at civil society and energy in the UK.
2) Bex White and Rachael Durrant, who are part of the Sustainable Lifestyles Research Group, are leading projects that look at civil society in sustainable food. Bex is considering the resilience of a number of community-based food initiatives in the UK. She will be using multi-criteria mapping techniques to explore how key actors in civil society and food view the resilience of these kinds of food initiative. Rachael's doctoral research is analysing four different kinds of strategies, and their interaction, pursued by different civil society actors:

niche creation (establishing food alternatives), niche translations (networking and intermediating between alternatives and conventional food), regime disrupting strategies (protest campaigns), and regime reforming strategies (certification schemes).
3) A new project under the STEPS Centre (www.steps-centre.org) at SPRU will provide historical and comparative analysis of grassroots innovation movements in India and South America. The project involves Adrian Smith at SPRU working with Dinesh Abrol at NISTADS in Delhi and Hernán Thomas and Mariano Fressoli at the Universidad Nacional de Quilmes in Buenos Aires.
For more information, you can contact the researchers or check out our website www.grassrootsinnovations.org).

Adrian Smith (A.G.Smith@sussex.ac.uk)

TOP-NEST: Technology Opportunities in Nordic Energy System Transitions
The main objective of TOP-NEST, a 4 year Nordic collaborative research project funded by Nordic Energy Research, is to guide industrial strategies and government in (i) making the transition to sustainable Nordic energy and transport systems 2050 and (ii) enhancing the competitive position of Nordic industries in the international market for clean technologies. In order to achieve these objectives the research will focus on obtaining data and doing analyses of:
1. Prospective sustainable energy systems 2050: identify viable combinations of technological configurations, stakeholder constellations and institutional set-ups. These will be based on existing future energy and road transport scenarios (both global and Nordic) for each technology platform (i.e., electricity systems, liquid and gaseous biofuels, and hydrogen systems). This research builds on a combination of quantitative (energy modelling, social network analysis, bibliometric and patent analysis) and qualitative methods (interviewing and focus groups).
2. Viable transition pathways: identify options for change in organizational and institutional conditions. This will encompass governance implications in terms of industrial strategies, public policy and public-private cooperation that are needed to realize the viable transition pathways that follow from the first objective. In doing this, we will focus on the potential need for coherence and integration across different policy domains (most notably energy and transport) and countries (both across the Nordic countries and vis-a-vis the EU).
The project is coordinated by Antje Klitkou (antje.klitkou@nifu.no) at NIFU: Nordic Institute for Studies in Innovation, Research and Education, Norway. Other partners are CIRCLE (Lars Coenen) and Environmental and Energy Systems Studies at LTH in Lund, VTT Technical Research Centre of Finland and Risø DTU, National Laboratory for Sustainable Energy, Denmark.

Lars Coenen (Lars.Coenen@circle.lu.se)

Self-regulation of Infrastructure and the Role of Civil Society: Towards developing a civic business model for flexible and robust self-regulation of infrastructures (DRIFT)
DRIFT has a new research project (2011-2013) on the self-regulation of infrastructure by civil society, financed by the program *Next Generation Infrastructure*. The objective of this research is to explore how civil society can be actively involved in the operation of infrastructures so as to promote flexibility of infrastructure governance at local and/or regional level. Research questions that will be addressed include; What are the different types of self-regulation that have been effective and successful in infrastructure projects? What is the role of civil society in the self-regulation of infrastructures? What are the institutional barriers and opportunities for self-regulation of infrastructures in the current governance structures? Which governance structures enable self-regulation and how can existing governance structures be adapted or altered so as to better enable self-regulation of

infrastructures at local and regional levels? How does self-regulation of infrastructure relate to sustainable design in urban and regional planning?

The research approach is based on a literature reviews and comparative case-study analysis, including document reviews and interviews, as well as participatory tools to inform the research and to translate research finding in to practical knowledge. At least 6 case-studies of self-regulation (e.g. energy cooperatives) will be studied in the Netherlands, the UK, Germany and Belgium.

Flor Avelino (avelino@fsw.eur.nl)

Event Reviews

Review of events interesting to the STRN community

Reflections on the 2nd International Conference on Sustainability Transitions (Lund, June 2011)

The thematic focus of the second International Conference on Sustainability Transitions (IST) was: "Diversity, plurality and change: breaking new grounds in sustainability transition research". The conference was organized through a joint effort by Lund University Centre for Sustainability Studies (LUCSUS), the Centre for Innovation, Research and Competence in the Learning Economy (CIRCLE) at Lund University and the Sustainability Transitions Research Network. The conference was attended by 226 participants from all across the world, resulting in 60 thematic (parallel) sessions with 206 paper presentations. The majority of authors came from Europe, while the Dutch legacy in transition research was illustrated by the fact that Dutch scholars represented the largest group in terms of country affiliations, with about 50 participants, followed in number by scholars from the UK, Germany and Sweden (between 20-30 participants each). An increased interest in sustainability transitions could be observed for countries like Japan and Australia.

In terms of conceptual foundations, the three 'usual suspects' prevailed, namely: (1) the Multi-Level Perspective (MLP) on socio-technical systems – including Strategic Niche Management (SNM); (2) Transition Management (TM); and (3) Systems approaches to innovation, in particular Technological Innovation Systems (TIS) and Sectoral Innovation Systems (SIS). However, it appears to become increasingly common to combine these conceptual building blocks with other theoretical frameworks to specify particular aspects of transitions. Examples of such complementary frameworks are theories of power and conflict, institutional theory, the resource-based view of the firm, human geography and theories of entrepreneurship.

On the one hand, the second IST has been successful in consolidating and expanding its core multi-dimensional and multi-disciplinary research agenda concerned with the conditions under which sustainable innovation and long-term transitions of socio-technical systems come about. On the other hand, it mirrored a trend to venture this research agenda into new empirical, methodological and, perhaps most importantly, theoretical grounds. The latter is probably to a large extent driven by the presence of a relatively large community of young and promising researchers in sustainability transitions eager to question, scrutinize and constructively criticize the state-of-the-art in transitions research. This heterogeneity is a potentially valuable resource to avoid a premature lock-in around a research regime dealing with this emerging topic. At the same time, it is probably crucial for sustainability transitions to maintain and nurture some kind of core to avoid turning into a so-called 'donut community' where the field has ventured so far along separate research strands that it inhibits intra-community dialogue and interaction around its core agenda. To this avail, an additional strategy alongside deepening and widening the research agenda based on abovementioned usual suspects and novel inroads respectively is needed. This strategy would engage with a

stronger integration or at least a more pronounced dialogue between the different constituents of sustainability transitions (i.e. the usual suspects MLP, TM and T&SIS) which goes beyond mere co-existence. In reflection, this aspect featured least prominently at the second IST but given the promising future prospective that IST conferences have been planned for the next three years it is hopefully something that can and will be addressed at future events.

Lars Coenen (Lars.Coenen@circle.lu.se)

Conference report: Sustainability transitions is the way forward for studying sustainable food'

Last week I presented at AESOP's 3rd Sustainable Food Planning meeting at the University of Cardiff in the UK. The conference – which set out to identify new planning paradigms that are fit for a sustainable food system – was fantastic. Attended by a mix of academics and planners, the meeting created fertile ground for unearthing new and interesting pathways in the study of sustainable food systems, both urban and rural. The great surprise for me came during the afternoon keynote address on the first day of the meeting. Let me explain. Sitting back down after lunch, I was distracted and nervous about the task that lay ahead of me, i.e. to present the MLP and broader sustainability transitions approach to an academic audience from an outside field. But alas, my ears instantly pricked up when, a mere five minutes into his address, Gianluca Brunori (professor of Agro-food Management at the University of Pisa), introduced the audience to niches, regimes and landscapes. After summarising the past three decades of research in his field, he positioned the transitions approach as the way forward for the study of sustainable and alternative food networks. Much excitement and critical engagement from the audience ensued during Q&A, with the themes of niche-creation, scaling up and translation from niche to regime receiving particular attention. Criticism of the approach focused around the 'missing' roles of space and place in the MLP and the complexities of power-play implicit in the notion of translation. All-in-all the presentation from Gianluca was music to my ears though, as it made my job much easier the following day. Thankfully my presentation on the contribution of civil society to sustainability transitions in the food system was a real success!

Rachael Durrant, doctoral student, SPRU (University of Sussex) r.durrant@sussex.ac.uk

PhD Summer School, 'Technological Innovation Systems: Conceptual, methodological and empirical frontiers', Gothenburg, August 15-19 2011

The Technological Innovation System (TIS) framework has gained considerable attention in recent years for the study of emerging technologies and innovation policy analysis. Numerous cases have been investigated, including many radical and potentially sustainable innovations in areas such as energy supply, transportation and food production. In parallel, a conceptual and methodological development has taken place and several research groups throughout Europe now apply a common set of tools and frameworks. The PhD summer school has brought together leading senior scientists and almost 30 PhD students from many different countries. In an inspiring atmosphere, PhD projects were presented and emerging research topics such as i) system, boundaries and context, ii) institutional analysis, iii) TIS in a spatial context, iv) actor strategies and system resources, v) TIS and sustainability transitions, and vii) TIS based policy making were discussed.

Senior researchers involved: Anna Bergek (Linköping University), Lars Coenen (Lund University), Marko Hekkert (Utrecht University), Staffan Jacobsson (Chalmers University), Jochen Markard (Eawag), Björn Sandén (Chalmers University), Bernhard Truffer (Eawag), Matthias Weber (AIT)

Jochen Markard and Björn Sandén

Jobs and Training

Job and training announcements of positions relevant for the STRN community

Postdoc position "Sustainability transitions, economic crisis and renewable energy"
Europe is currently faced with a relatively poor economic perspective, characterized by low growth, a high rate of unemployment and growing public budget deficits. On top of this, peak oil and climate change are posing threats to future well-being. This study aims to examine the conditions under which a smooth transition is possible to a sustainable economy with a reasonable level of social welfare and employment. The research will pay attention to undesirable impacts of transition strategies and policies, through two focal points: (1) behaviour of individuals and groups beyond rationality and self-regarding approaches; and (2) various types of leakages of energy policies, such as rebound, green paradox and carbon leakage. A policy model will be developed to include these factors and examine transition pathways. The project is part of the WWWforEurope EU project, which combines expertise from various disciplines to address these questions. A position is available at the pos tdoc level, either halftime for 3 years or fulltime for 1.5 years. Knowledge of macroeconomics or formal modeling is desirable. The project also includes a PhD student (already hired) with whom the postdoc will work. Contact: Prof. dr. Jeroen van den Bergh (jeroen.bergh@uab.es). Interested candidates should send a CV including graduate and undergraduate degree qualifications, a description of research interests (300 words), and names of two referees before the 1st of December 2011. Interviews with short-listed candidates will be conducted in mid-December.

Publications

Announcement of new publications such as research papers, PhD theses and books

Second issue of "Environmental Innovation and Societal Transitions"
After the publication of the opening issue in June 2011, we are happy to announce the completion of the second issue of the Elsevier journal "Environmental Innovation and Societal Transitions" (EIST). It will appear in December and will contain ten contributions, dealing with the following topics:

- a survey of formal models of transitions,
- the use of frame analysis to break out of sustainability impasses,
- an empirical-statistical study of the effects of third-party information on sustainable consumption,
- a system dynamics model of the multi-level perspective on regime transitions,
- evaluation of transition policy in a developing country,
- three book reviews,
- an account of the recent transitions conference in Lund, and
- a note from the STRN chairman.

Elsevier is introducing a new concept of "Article Based Publishing", which means that papers will be made available online with full references (including page numbers) immediately after

acceptance. In other words, you will not have to wait any longer until an issue is complete. This should considerably speed up the publication process.

For next year we have promised to publish four issues. Nevertheless, we are still short of a sufficient number of suitable papers. Continuation of the journal by Elsevier will depend on whether or not we are able to show that there is enough potential and interest within our community to submit good articles.

We therefore invite you to actively contribute to make the journal a success in all respects. Please send us your best articles, cite from the first issues in your forthcoming and future articles (if relevant of course), and stimulate others - including your students and direct colleagues - to submit good-quality manuscripts to EIST. Evidently, minimal quality is a requirement to assure that the journal obtains a high reputation in the near future (which requires many citations as well as an official citation index).

We as editors (including Bernhard Truffer and Giorgos Kallis) are doing our utmost best to handle manuscripts swiftly. We can promise that after submission in the coming months you are very likely to be published within three months to half a year later - few journals can match this. A further advantage of EIST is that papers published in it will immediately be referenced in Scopus, which will contribute to rapid and wide diffusion.

Please don't hesitate to contact us with proposals for particular paper themes.

With kind regards,
Jeroen van den Bergh, Editor-in-chief of EIS (jeroen.bergh@uab.es)
www.elsevier.com/locate/eist

Book series on transitions
In December 2011 or January 2012, Routledge will be publishing three new books, which deal with transitions in transport, energy and agri-food. The books are part of a book series on sustainability transitions, which reports findings from the KSI-network and international researchers. The three books will be presented and discussed at a dedicated workshop in late February or early March (at Eindhoven University). More information on this workshop will become available on the STRN-website. The three books are briefly described below.

1) Geels, F.W., Kemp, R., Dudley, G. and Lyons, G. (eds.), 2012, *Automobility in Transition? A Socio-Technical Analysis of Sustainable Transport*, New York: Routledge
The book investigates if the contemporary automobility system is in transition to sustainability or not. It makes a co-evolutionary analysis of the relevant dimensions: technology, markets, industry, governance, culture, infrastructure and transport planning. The book addresses stability and change in automobility through an actor-based analysis of the strategies and beliefs of car manufacturers, policy makers, car drivers, transport planners and civil society actors.

2) Verbong, G.P.J. and Loorbach, D. (eds.), 2012, *Governing the Energy Transition: Reality, Illusion or Necessity?*, New York: Routledge
This book explores emerging energy transitions and their governance. It discusses current crises and lock-ins, identifies multiple transition pathways, and studies interactions between industries, policymakers, consumers, and civil society. As a guiding question the book asks if the governance of energy transitions is already reality, just an illusion or a bare necessity.

3) Spaargaren, G., P. Oosterveer and A. Loeber (eds), 2012, *Food Practices in Transition; Changing Food Consumption, Retail and Production in the Age of Reflexive Modernity*, New York: Routledge

This edited volume addresses the transformation processes occurring in the food chain from fork-to-farm. In 13 different chapters, it reflects upon 'sustainability' in transitions in the different food practices with a focus on dynamics as interactions between (changes in) consumption, retail and production and the roles of different actors. While the book's focus is on developments in Europe – with a particular attention to dynamics in the Netherlands – it seeks to address globalizing food chains and networks in some detail.

Special issue on 'Places and spaces of sustainability transitions'

Forthcoming in: *European Planning Studies*. Contains 6 papers.

Guest editors Lars Coenen (Lund University, Sweden and NIFU, Norway) & Bernhard Truffer (EAWAG, Switzerland & University of Bern)

Sustainability transitions have until recently remained at the periphery of economic geography and regional studies. The question where sustainability transitions take place, and why, has remained largely off the radar in the otherwise burgeoning field of sustainability transitions. This special issue takes stock with this gap by looking particularly into the spaces and scales of sustainability transitions. More generally, it aims to extend an invitation to geographers and scholars of regional studies to engage more actively with this topic in order to better understand and explain the different spatial forms of sustainability transitions and its interplay with uneven regional development. Taken together, the collection of papers provide a richer understanding of the different ways by which spatial contexts actively and substantially shape transition processes, and, as a consequence, emphasizes the multiplicity and heterogeneity of transition pathways. Moreover, the papers illustrate the need to take the trans-local character of global sustainability transitions more serious. On a more critical perspective, some of the papers also outline how a spatial engagement with sustainability transitions invites to ask questions that have so far found little attention in the incumbent literature and/or to embrace alternative concepts –beyond that of MLP and TIS – to better conceptualize the spatiality of transitions. The papers in this special issue have been selected from a session stream organized at the AAG (American Association of Geographers) conference 2010 in Washington DC dealing with the "geography of sustainability transitions". The special issue is scheduled for publication March 2012.

Geels, F.W. and Verhees, B., 2011, 'Cultural legitimacy and framing struggles in innovation journeys: A cultural-performative perspective and a case study of Dutch nuclear energy (1945-1986)', *Technological Forecasting & Social Change*, 78(6), 910-930

This article contributes to the field of innovation studies by addressing the role of cultural legitimacy in technical innovation journeys. The article develops a new perspective that connects insights from discourse theory, interpretive approaches to culture, cultural sociology and social movement theory. In contrast to functionalist and structuralist approaches (which tend to conceptualize culture in a top-down deterministic manner), our cultural-performative perspective emphasizes agency, collective sensemaking and framing struggles. Cultural change is a contested process, in which various groups perform on public stages to influence the attitudes and opinions of relevant audiences who provide financial resources, protection or support relevant for innovation journeys. We demonstrate the usefulness of this perspective with a longitudinal case study of nuclear energy in the Netherlands (1945-1986), which encompasses both the creation of legitimacy in the 1950s and 1960s, and its contestation by an anti-nuclear movement in the 1970s, which halted the innovation journey.

Raven, R.P.J.M., Verbong, G.P.J., Schilpzand, W.F., Witkamp, M.J. (2011), Translation mechanisms in socio-technical niches. A case study of Dutch river management, *Technology Analysis & Strategic Management* 23(10), 1063-1078

This paper makes three contributions to the field of transition research. First, it sheds light on how the concept of translation can contribute to a better understanding of agency in niche development. Second, it articulates how the local–global distinction in the strategic niche management (SNM) approach relates to the levels in the multi-level perspective. Third, the article is empirically novel by presenting a radical sustainable innovation in Dutch water management ('New Rivers')

Berkhout, F., Wieczorek, A.J., Raven, R.P.J.M., 2011. Avoiding environmental convergence: a possible role for sustainability experiments in latecomer countries?, *International Journal of Institutions and Economics* 3(2), 367-385
Global sustainability is increasingly influenced by economic growth and social change in non-OECD countries, especially in Asia. Growth models suggest that industrializing economies will become first relatively more resource- and pollution-intensive, before becoming more resource-efficient and less polluting, following the pattern of higher-income economies. This 'environmental convergence' is assumed to parallel economic convergence during processes of catching-up by latecomer countries. To accelerate environmental convergence, or to achieve pathways of 'green growth', greater emphasis needs to be placed on sustainable innovation and capability-building in latecomer countries. Drawing on insights from system innovation research on long-run change in socio-technical systems, we discuss the potential role of 'sustainability experiments' to generate innovations that will constitute new 'greener' growth models. We observe a great number of sustainability-oriented innovation initiatives in latecomer countries. We set out a conceptual framework for assessing the role of experiments, and for evaluating how they link with and become anchored in alternative more sustainable regimes. We argue that sustainability experiments represent a potentially significant new source of innovation and capability-formation, linked to global knowledge and technology flows, which could influence emergent socio-technical regimes and thereby contribute to alternative development pathways.

Markard, J., 2011, 'Transformation of Infrastructures: Sector Characteristics and Implications for Fundamental Change'. Journal of Infrastructure Systems (ASCE), September 2011, 107-117
Infrastructure sectors such as energy or water supply, sanitation or telecommunication provide us with services that are essential for modern life and for industrialized societies. This article explores some of the sectors' key characteristics in order to better understand the conditions that stimulate or hinder far-reaching transformation processes in infrastructures. It is argued that conceptual frameworks for studying infrastructures and making policy recommendations have to take into account these particularities and the close interplay of techno-economic, organizational and institutional characteristics.

Wirth, S., Markard, J. (2011). Context matters: How existing sectors and competing technologies affect the prospects of the Swiss Bio-SNG innovation system. *Technological Forecasting and Social Change* 78, 635–649.
Emerging technologies are affected by developments in existing sectors and competing innovation systems. This article shows that a thorough context analysis is essential for understanding the prospects of an emerging technological innovation system. Empirical insights are provided for Bio-SNG, a clean energy innovation. It is shown that Bio-SNG is likely to become a victim of the recent boom in wood-to-energy technologies that has favored investments in more mature but technologically inferior alternatives. The lesson for policy making is that effective market stimulation for green energy technologies might foster a lock-in into those technologies that are readily available, at the expense of others in an earlier stage of development.

Musiolik, J., Markard, J. (2011). Creating and shaping innovation systems: Formal networks in the innovation system for stationary fuel cells in Germany. *Energy Policy* 39, 1909–1922.

The development and diffusion of novel technologies, e.g. for decentralized energy generation, crucially depends on supportive institutional structures such as R&D programs, specific regulations, technical standards, or positive expectations. Such structures are not given but are often strategically developed through the interplay of different kinds of actors. In this paper, we study the role of formal networks in creating supportive structures in the technological innovation system for stationary fuel cells in Germany.

Dewald, U., Truffer, B., 2011, 'Market Formation in Technological Innovation Systems - Diffusion of Photovoltaic Applications in Germany', Industry and Innovation 18(3), 285-300.
This article shows that the development of end-user markets is a crucial process for industry formation. Especially in maturing innovation systems, such market related structures play a decisive role for the long term success of innovations. We propose a conceptual framework for analyzing TIS substructures oriented at specific end user markets and apply it to the PV sector in Germany. The paper concludes by outlining implications of a more differentiated conceptualization of market processes in TIS research.

Safarzynska, K. and Van den Bergh, J.C.J.M., 2011, Industry evolution, rational agents and the transition to sustainable electricity production. *Energy Policy* 39(10): 6440-6452.

J.C.J.M. van den Bergh (2011). Environment versus growth – A criticism of "degrowth" and a plea for "a-growth". *Ecological Economics* 70(5): 881-890.

Zeppini, P., and J.C.J.M. van den Bergh (2011). Competing recombinant technologies for environmental innovation. *Industry and Innovation* 18 (3): 317–334.

Avelino, F. and Rotmans, J. (2011), "A dynamic conceptualization of power for sustainability research", *Journal of Cleaner Production*, 19(8):796-804.

Kemp, R., Bressers, N. and Avelino, F. (2011) "Transition management as a model for sustainable mobility", *European Transport \ Trasporti Europei*, 47: 25-46

Frances Westley, Per Olsson, Carl Folke, Thomas Homer-Dixon, Harrie Vredenburg, Derk Loorbach, John Thompson, Måns Nilsson, Eric Lambin and Jan Sendzimir, et al. (2011), "Tipping Toward Sustainability: Emerging Pathways of Transformation", *AMBIO: A JOURNAL OF THE HUMAN ENVIRONMENT*, Volume 40, Number 7, 762-780

Geerlings, H., Shiftan, Y. and Stead, D. (eds.) (2011) Transition towards Sustainable Mobility: the Role of Instruments, Individuals and Institutions, Ashgate (in press)