













# Exploring Transition Research as Transformative Science

7th International Sustainability Transitions Conference 6th – 9th September 2016, Wuppertal, Germany

For more information please see IST Conference 2016 website: **ist2016.org** STRN website: **transitionsnetwork.org** 

Please join the conversation about the conference on TWITTER: **#IST 2016**For live tweets at plenary sessions and general updates, follow: @ist\_2016\_



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Uwe Schneidewind
President of the Wuppertal Institute

It is our pleasure to welcome all of you to the 7th International Sustainability Transitions (IST) Conference in Wuppertal.

The conference is hosted by the Wuppertal Institute in cooperation with the Center for Transformation Research and Sustainability (TransZent) at the University of Wuppertal, which has invited us to meet at the newly built auditorium of the University as our conference venue.

We are happy to host this annual meeting of the Sustainability Transitions Research Network (STRN), where we share theoretical, empirical and practical advances in the field of sustainability transitions. We are also very happy to welcome many participants from neighbouring fields and communities as well as non-academic partners working towards sustainability transitions in practice. Hopefully, the IST2016 conference will be another milestone in broadening the field, including new perspectives in the STRN research agenda and increasing the impact of our work.

This year's conference seeks to place sustainability transitions research in a broader perspective on the role of science in the quest for sustainability. This is an issue that is debated more and more intensely at national and global levels, especially in the context of recent developments, such as the launch of the SDGs, climate policy after the Paris agreement and in the context of the Future Earth Programme. Civil society, politicians and scientists are searching for ways in which research can contribute to solving the great environmental and societal challenges of our time. As a part of this greater debate, which lies also at the heart of the STRN community, we chose as the theme for the IST 2016 conference "Exploring Transition Research as Transformative Science". We want to discuss what the conceptual and methodological challenges are of transformative science, i.e. research that is actively involved in societal transformation processes. We

want to reflect on the challenges and lessons learned in concrete research projects, on theoretical contributions advancing our understanding of transitions, and on the role of science and scientists involved in transitions to sustainability. We have received an overwhelming number of contributions to this conference and we are very much looking forward to interesting presentations and lively debates on the broad range of topics in our field.

We are also thankful for the opportunity to cooperate with the German Federal Ministry of Education and Research, which hosts a number of special sessions during the conference. There will also be some exciting side events, ranging from workshops, project presentations and especially an excursion to the city of Wuppertal and our real-world lab "Arrenberg" as an opportunity to experience urban transformations of various kinds in practice. Another highlight will certainly be the Wuppertal Institute's 25 years anniversary party on Thursday night where we invite all of you to celebrate with us!

We are looking forward to an exciting IST 2016 conference! Welcome to Wuppertal!



Maria Behrens Scientific Director of the Center for Transformation Research and Sustainability



Lambert T. Koch Rector of the University of Wuppertal

Uwe Schneidewind, Maria Behrens & Lambert T. Koch

# **Keynote Speakers**

Carrie Exton
Policy Analyst at the OECD



Carrie Exton is a policy analyst at the Organisation for Economic Cooperation and Development (OECD). Based in the Statistics Directorate, her work is focused on measuring, reporting and analysing data about people's well-being. Carrie co-authored the OECD Guidelines on Measuring Subjective Well-Being and she is currently the lead author and co-ordinator for the OECD's flagship well-being publication "How's Life?". Prior to joining the OECD, Carrie worked as a policy advisor in the UK Civil Service. She holds a DPhil (PhD) in Psychology from Oxford University.

Cathy Maguire European Environment Agency



Cathy Maguire works in the Integrated Environmental Assessment programme at the EEA focusing on environmental accounting, indicators and integrated assessment. She was a lead author of the SOER 2015 Synthesis report and part of the SOER 2015 coordination team. Prior to joining the EEA in 2011, she was Director of Research and Senior Policy Analyst at Comhar Sustainable Development Council, Research Fellow at Queens University Belfast and Principal Researcher at EnviroCentre Ltd.. She trained as an ecologist with a BSc (Hons), MSc and PhD from Queens University Belfast. She specialised in multidisciplinary applied research that provides an evidence base for policy and decision making. Her work has focused on invasive species; resource accounting; indicator development and assessment; stakeholder engagement and policy analysis in the areas of biodiversity, climate change, invasive species, waste and resource management and sustainable development.

Roland W. Scholz Danube University, Krems



Roland W. Scholz (Prof. Dr. em. ETH) is currently chief senior scientist of sustainable digital environments and professor at Danube University, Krems, Austria, and senior advisor for phosphorus cycle management at Fraunhofer Institute for Interfacial Engineering and Biotechnology (IGB), Germany. Scholz held the Chair of Environmental Sciences: Natural and Social Science Interface at the Department of Environmental System Sciences, Swiss Federal Institute of Technology (ETH Zurich, Switzerland; 1993-2013). Scholz dedicated his research to challenging and large-scale societal questions. He has been one of the pioneers and promoters of transdisciplinarity. He was run-

ning more than 25 large-scale regional,

international, and, and global transdisci-

plinary case studies on sustainable transi-

tioning of urban and regional systems,

organizations, policy processes, and glo-

bal biogeochemical cycle management.

Derk Loorbach
Director of DRIFT and Professor
of Socio-economic Transitions at Erasmus
University Rotterdam



Derk Loorbach is one of the founders of the transition management approach as new form of governance for sustainable development. He has over one hundred publications in this area and has been involved as an action researcher in numerous transition processes with government, business, civil society and science. He is a frequently invited keynote speaker in and outside Europe.

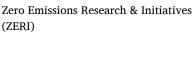
Rob Hopkins
Co-founder of Transition Town Totnes
and the Transition Network

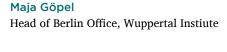


Rob Hopkins is a serial blogger, author of 21 Stories of Transition (2015), The Power of Just Doing Stuff (2013) and tweets as robintransition. He previously wrote The Transition Handbook (2008) and The Transition Companion (2011) and was recently awarded a PhD by the University of Plymouth and an Honorary Doctorate by the University of the West of England. In 2012 he was voted one of the Independent's top 100 environmentalists and one of "Britain's 50 New Radicals". He is an Ashoka Fellow, a keen gardener and one of the founders of New Lion Brewery in Totnes and a Director of Atmos Totnes, a very ambitious community-led development project.

Peter Hennicke Former President of the Wuppertal Insitute

**Gunter Pauli** Zero Emissions Research & Initiatives







Maja heads the Berlin Office of the Wuppertal Institute. Her research, engagement and publications focus on system transformations for sustainable development, new prosperity models and future justice with an emphasis on the role of paradigm shifts as strategic leverage points. Maja studied in Siegen, Fribourg, Seville, Hamburg, Kassel and Toronto to complete a PhD in political economy and a university diploma in media/communication. She has a long track record in international civil society work on sustainable development, trade, and climate change, lectures at 2 universities and enjoys working in transdisciplinary teams. Her book "The Great Mindshift: Why we Need a New Economic Paradigm for Sustainability Transitions" is being published in 2016.



Gunter Pauli is author of 15 books including "The Blue Economy: A Report to the Club of Rome - 100 innovations 10 years 100 million jobs". In 1994 he was invited to advise the United Nations University to design new competitive business models that have no waste or emissions. By 2015, \$4 billion of investments and 200 projects demonstrate that this is viable. Every successful project is translated into a fables of which the Chinese Government has published 108 to inspire children (and their parents) to steer business and society towards sustainability. He is father of 6 children and resides in Kamakura, Japan.

Further information: www.zeri.org and www.TheBlueEconomy.org



Peter Hennicke was for many years president of the Wuppertal Institute and member of several Enquete Commissions of the German Parliament such as "Protecting the Earth's Atmosphere" and "Sustainable energy supply under the conditions of globalization and liberalization" and the Scientific and Technical Committee (STAP) of the Global Environment Facility (GEF). He has published over 230 articles, reports, project reports and numerous books mainly on energy and climate policy and is one of the most important opinion leaders of ecologically oriented energy research in Germany. In January 2012 he became a member of the Management Board of the European Environment Agency and in April full member of the "Club of Rome". Peter Hennicke is currently a visiting professor at the "International Institute for Industrial Environmental Economics (IIIEE)" at Lund University. For his dedication and scientific research in the field of energy policy and efficiency Peter Hennicke was awarded the German Environmental Award by the German Federal Environment Foundation in 2014. In 2015, he was awarded the Gothenburg Award for Sustainable Development.

# Keymote Speakers

#### Hironori Hamanaka Chair of IGES Board of Directors

Thomas B. Johansson Professor of energy systems analysis at Lund University



Thomas B. Johansson is Professor em. of energy systems analysis at Lund University, with a focus on energy for sustainable development. He led the International Institute for Industrial Environmental Economics (IIIEE) at Lund University as Director from 2001 - 2009 and he was a member of the Swedish Commission on fossil fuel independence in transport from 2012 - 2013. He has also held numerous international memberships, for instance as Co-Chair of the Global Energy Assessment from 2006 - 2012 and Director of the Energy and Atmosphere Programme of the United Nations Development Programme from 1994 - 2001. From 2001 - 2014 he has been Co-Chair of the Global Network on Energy for Sustainable Development (GNESD) and he was a member of the Senior Policy Advisory Board of the Energy Foundation China from 1998 - 2014.



Professor Hironori Hamanaka is the chair of the Institute for Global Environmental Strategies (IGES) Board of Directors. When he took up his current position at IGES in 2007, he was teaching at the Faculty of Environment and Information Studies, Keio University as a Professor, and continued to teach at the University until 2015. Previously, he served as the Vice-Minister for Global Environmental Affairs from 2001 to 2004, as well as other important positions at the Ministry of the Environment. While serving with the Government of Japan, he devoted his administrative career to intergovernmental negotiations in areas including: the Kyoto Protocol and its implementing rules; major agreements in the field of sustainable development, such as the Johannesburg Plan of Implementation agreed at the World Summit on Sustainable Development in 2002; and the development of national policies to implement international agreements, most notably the Kyoto Protocol. Based on his professional career, he served as a Co-chair of the Compliance Committee under the Kyoto Protocol and the Chair of its Facilitative Branch from 2006 to 2008.



### Tuesday, 06 September

17.00 Welcome Reception at the Wuppertal Institute

## Wednesday, 07 September

08.30 - 09.00	Opening Plenary
09.00 - 10.30	Parallel Session A
10.30 - 10.45	Coffee Break
10.45 - 12.15	Parallel Session B
10.45 - 12.15	Side Event: EnerTransRuhr
12.15 - 13.00	Lunch Break
13.00 - 14.30	Plenary Session: "The Good Life": Research Perspectives on
	Well-Being Indicators.
14.45 - 16.15	Plenary Session: The Role of Science in the Context of the SDGs
	and Climate Policy after Paris
14.30 - 16.15	SpeedTalk Session C & D
16.15 - 16.45	Coffee Break
16.45 - 18.15	Parallel Session E
16.45 - 18.15	Side Event: EnerTransRuhr
19.30	Conference Dinner

# Thursday, 08 September

08.30 - 09.00	Plenary Session: The Great Mindshift: Mapping similarities across
	research & practice for sustainable economies
09.00 - 10.30	Parallel Session F
10.30 - 11.00	Coffee Break
11.00 - 12.30	Parallel Session G
12.30 - 13.30	Lunch Break
13.30 - 14.00	Poster Session
14.00 - 15.00	Plenary Session: Research and Practice Perspectives on the Gover-
	nance of Urban Transitions
15.00 - 15.15	Coffee Break
15.15 — 16.45	Parallel Session H
15.00 - 18.00	Side Event: Visiting the Real-World Labs at the urban district
	"Arrenberg"
17.00 - 18.30	Parallel Session I
18.00 - 21.00	Restaurant Day at the urban district "Arrenberg"
21.00	Wuppertal Institute Anniversary Party at the VillaMedia

#### Friday, 09 September

09.00 - 10.00	Plenary Session: The Zero Emission Goal as an Enabler of a New
	Competitiveness: 200 Examples
10.00 - 10.30	Coffee Break
10.30 - 12.00	Parallel Session J
10.30 - 12.00	Side Event: Book launch
10.30 - 16.00	Side Event: Trafo 3.0 project sessions
12.00 - 13.00	Lunch Break
13.00 - 14.00	Plenary Session: Can International Cooperation Drive the Energy
	Transition? The German-Japanese Energy Transition Council
	(funded by the German Federal Environment Foundation)
14.00 - 14.30	Coffee Break
14.30 - 16.00	Parallel Session K
16.00 - 17.30	Parallel Session L
17.30	Closing of the Conference

#### Conference Tracks & Sessions

Across the different thematic tracks, the conference will be structured using different session formats:

Paper Sessions: 90 minute sessions with full paper presentations

and a joint discussion.

Speedtalk Sessions: 45 minute sessions with up to 4 short presentations, where an idea

or a central research finding is presented in 4 minutes. The rest of the session is dedicated to direct interaction between the presenters and the other session participants in small group discussions.

Dialogue Sessions: 90 minute sessions featuring paper presentations with a specific

thematic focus, project presentations, panels, discussions or work-

shops related to the conference theme.

#### Conference venue and locations

The main conference venue is the lecture hall complex ("Hörsaalzentrum K") at the University of Wuppertal:

University of Wuppertal, Campus Grifflenberg Hörsaalzentrum, Building K Gaußstr. 20 42119 Wuppertal

The Welcome Reception on Tuesday, 07 September will be held at the Wuppertal Institute

Wuppertal Institute Döppersberg 19 42103 Wuppertal

The Anniversary Party on Thursday, 08 September will take place at the "VillaMedia", in the city district Arrenberg in Wuppertal.

VillaMedia Viehhofstr. 125 42117 Wuppertal





#### 09.00 - 10.30 Parallel Session A

# A1 Dialogue Session: Evaluation of sustainability transition experiments (Part I)

Convenors: Niko Schäpke, Christopher Luederitz, Arnim Wiek, Daniel Lang

Room: K8

Room: K4

Reflections on evaluating Challenge Lab by applying a proposed scheme for Sustainability Transition Experiments. *David Andersson, John Holmberg, Johan Larsson, Daniella Mendoza, Örjan Söderberg* 

A Transdisciplinary Project Course on Repair and Reuse in the Light of the Tentative Evaluation Scheme. *Richard Beecroft, Kaidi Tamm, Oliver Parodi, Colette Waitz* 

Evaluating the transformative potential of sustainability entrepreneurship: the dynamics of small business participation in urban experiments. *Sarah Burch* 

Applying the tentative evaluation scheme to an Australian urban water sustainability experiment. *Megan Farrelly, Annette Bos* 

Assessing two Swedish transition experiments using the (tentative) evaluation scheme. *Barry Ness, Kes McCormick* 

Campus as Laboratory: Learning from a Transdisciplinary Sustainability Transition Experiment at Leuphana University. *Christopher Luederitz, Niko Schäpke, Daniel Lang, Philip Luthardt, Annika Weiser* 

Preventing soil erosion in agriculture: assessing the "From Farmer-To Farmer" experiment. *Flurina Schneider* 

Learning from Sustainability Transition Experiments in Phoenix, Arizona. *Arnim Wiek, Nigel Forrest, Braden Kay* 

Evaluating transitions in cities: reflecting a transdisciplinary research project on sustainable urban development in Switzerland. *Timo von Wirth, B. Meyer, Michael Stauffacher* 

# A2 Dialogue Session: Conceptualizing and measuring social learning: challenges and ways forward

Convenors: Joanne Vinke-de Kruijf, Geeske Scholz, Claudia Pahl-Wostl

Where do we stand? Progress made and a way forward for conceptualizing and reporting on social learning. *Geeske Scholz, Joanne Vinke-de Kruijf, Johannes Halbe, Hannes Thomsen, Claudia Pahl-Wostl* 

Social Learning in R4D institutions and partnerships: Learning from the ground up. *Blane Harvey* 

Beyond the comfort zone: making social learning work. Merel van der Wal

Dynamic Transformation of Tidal River Management: Learning from the Water Management Practices in Bangladesh Delta. *Mahmuda Mutahara, Jeroen Warner, Arjen Wals*, M. Shah Alam Khan, Philippus Wester

Learning in support of social-ecological change: A review of 52 case studies in natural resources management. *Monika Suškevičs, Thomas Hahn, Romina Rodela, Biljana Macura, Claudia Pahl-Wostl.* 

A question of method: tools for data collection and analysis across social learning scholarship. *Romina Rodela*.

On the conceptualization and assessment of social learning and its wider impacts. Joanne Vinke-de Kruijf, Claudia Pahl-Wostl.

# A3 Dialogue Session: Using models in participatory processes Experiences from transition case studies Room: K3

Convenor: Georg Holtz

Role and impact of models and stakeholder-based scenarios during the development of the Climate Protection Plan for North-Rhine Westphalia. *Clemens Schneider; Stefan Lechtenböhmer; Christoph Zeiss* 

Understanding acceleration transition dynamics supported by the use of models within a participative learning environment. *Ernst Gebetsroither-Geringer; Karin Markvica; Pieter Valkering; Gonenc Yucel; Dorukhan Sergin* 

Participative modelling of decentralisation dynamics in energy system: Why and how should we look beyond the case specific modelling challenge? Silvia Ulli-Beer, Merla Kubli, Juliana Zapata, Jörg Musiolik, Michael Wurzinger, Bettina Furrer

#### A4 Dialogue Session: Real-World Laboratories as a transdisciplinary method for change

Chair: Hans Haake

Real-World Laboratories as a transdisciplinary method for change: A comprehensive understanding of criteria and central processes in Real-World Laboratories. *Matthias Wanner, Annaliesa Hilger, Janina Westerkowski* 

Room: K7

Room: K2

Transforming Well-Being in Wuppertal – the Chances for Change. *Katharina Schleicher, Katrin Maibaum, Michael Rose* 

Typologies of Stakeholder Involvement in Science: Evidence from Sustainability Research. Jahel Mielke, Hannah Vermaßen, Blanca Fernandez, Milan Saskia, Ellenbeck, Carlo Jaeger

Innovative housing and mobility services – a report from and reflections on living labs. *Jutta Deffner, Peter Kasten, Frieder Rubik* 

#### A5 Paper Session: Urban Transitions

Chair: Markus Egermann

Path dependence of urban form across world regions. Peter Agoston, Felix Creutzig

Urban Mobility Transitions System in Delhi from Diesel and Petrol to CNG (1980-2012å). *Mukesh Lakum* 

Implementing Innovation for a Transition towards Urban Sustainability: A Case Study of Smart Cities in Japan and the United States. *Masaru Yarime* 

# A6 Paper Session: Theoretical and Methodological Advances Room: K1 in Transition Research

Chair: Verena Hermelingmeier

Shifting the Paradigm in Southern West Virginia. Pamela Free

Transformation, contestation and normativity. Learning from actors and socio-political engagements in transformative science. *Rosa Sierra* 

Roles in Transition: Insights from roles theories for understanding sustainability transitions. Julia Wittmayer, Flor Avelino, Frank Van Steenbergen, Derk Loorbach

# A7 Social-Ecological Research Session: Transformations towards a sustainable economy (Part I) – funded by the German Federal Ministry of Education and Research (BMBF) Senate Hall

Chair: Martin Hirschnitz-Garbers

Sticky Transformation - How path dependencies in socio-technical regimes are impeding the transformation to a Green Economy. *Jens Clausen, Edgar Goell, Valentin Tappeser* 

The humanization of the economy through social innovation. René Kemp, Tim Strasser, Marc Davidson, Flor Avelino, Bonno Pel, Adina Dumitru, Iris Kunze, Julia Backhaus, Tim O'Riordan, Alex Haxeltine and Paul Weaver

The Economy for the Common Good: A social innovation with transformative potential towards a sustainable economy? *Klara Stumpf, Josefa Kny, Bernd Sommer* 

Room: K8

#### 10.45 - 12.15 Parallel Session B

# B1 Dialogue Session: Evaluation of sustainability transition experiments (Part II)

Convenors: Niko Schäpke, Christopher Luederitz, Arnim Wiek, Daniel Lang

#### B2 Dialogue Session: Real-World-Laboratories Room: K4

Convenor: Oscar Reutter

Utopia City at Station Mirke (Utopiastadt Mirker Bahnhof) - impulses for a participatory and creative bottom-up quarter development.

Matthias Wanner (scientist), Christian Hampe (practitioner)

Climate neutral and Edible Arrenberg. Janina Westerkowski (scientist), Jörg Heynkes, Arrenberg Starts Out Association – Aufbruch am Arrenberg e.V. (practitioner)

House caring ("Haushüten") – Transformation of a disadvanteged district by revitalisation of disused flats in Wichlinghausen/Oberbarmen.

Annaliesa Hilger (scientist) and Nikolai Spies, Agency for district development - Büro für Quartierentwicklung (practitioner)

B3 Dialogue Session: "All the world's a stage": Negotiating transitions
How forum theatre explores local sustainability transitions and
co-produces knowledge with multiple stakeholders
Room: K7

Convenors: Louisa Kistemaker, Uta Atzpodien

#### B4 Paper Session: Geography of Transitions Room: K3

Chair: Pia Laborgne

Transition in rural areas – Structural changes as opportunities for the development of green rural labs. Felicia Becker, Nora Schecke, Oliver Wagner, Anja Bierwirth

Vision development towards a Sustainable North Rhine-Westphalia 2030 in science-practice-dialogue. Approach, results and lessons learnt from the sustainable strategy formulation process in the federal state of NRW. *Miriam Müller, Oscar Reutter, Dorothea Schostok, Mona Treude* 

Discursive Conceptions of Spatiality: Global Transitions and Niche Alignment in the Information Age. *Angie Silva, Laura Stocker* 

Social science inputs and action research in socio-technical experimentation and spatial transfer of innovations. *Kirsten Ulsrud* 

#### B5 Paper Session: Energy Transitions

Chair: Ville Lauttamäki

Economic co-benefits as catalysts to reconfigure socio-technical regimes: the case of the Energiewende. *Anna Pegels* 

Room: K2

Do actors in the German heat sector identify with the overall goal to accelerate the heat transition? – Analysing obstacles for coalition building and policy change. *Julius P. Wesche, Elisabeth Dütschke, Simona Negro, Marko Hekkert, Rob Raven* 

Exploring the temporal politics of energy policy in Finland. Kamilla Karhunmaa

#### B6 Paper Session: Governance of Transitions Room: K1

Chair: Chris Riedy

Escaping the trap of the oil era. Possibilities for a sustainable transition in the Mexican auto industry by spurring synergies between EVs and clean energies.

\*Alex Covarrubias\*\*

Towards a stronger integration of institutional dynamics into technology assessment: "decentring" technology in the case of electric mobility in Germany. *Bernhard Truffer, Jens Schippl, Torsten Fleischer* 

A comparative analysis of current socio-technical systems and their potential transition to electric mobility. *Thorsten Koska, Hanna Hüging* 

Can carsharing push mobility regime change? An empirical study about acceptance drivers of electric vehicle technology. *Jan Schlüter, Johannes Weyer* 

#### B7 Social-Ecological Research Session: Transformations towards a sustainable economy (Part II) – funded by the German Federal Ministry of Education and Research Senate Hall

Chair: Martin Hirschnitz-Garbers

Institutionalization dialectics in Transformative Social Innovation; a comparative case study. Bonno Pel, Paul Weaver, Flor Avelino, Iris Kunze, Tom Bauler, Michael Soegaard Joergensen, Julia Backhaus, Carla Cipolla, Adina Dumitru, Morten Elle, Isabel Lema Blanco, Rita Afonso, Valentine Van Gameren

Resilience and Sustainability as Drivers for a Conceptual Transformation in Logistics - Shared Options for Green Economy Research and Practice. *Klaus Krumme*, *Thomas Hanke, Ani Melkonyan* 

How governments should deal with incumbents when governing societal transition processes. *Marko Hekkert, Joeri Wesseling* 

#### 10.45 — 12.15 Side Event: "EnerTransRuhr"

Presentation of Project Results/Panel Discussion

Lecture Hall 33

#### 13.00 — 14.30 Plenary Session:

"The Good Life": Research Perspectives on Well-Being Indicators

Lecture Hall 33

Room: K7

Room: K4

Speakers: Carrie Exton, Cathy Maguire, Uwe Schneidewind

Chair: Philipp Schepelmann

# 14.45 — 16.15 Joint Plenary Session with LCS-Rnet Conference:

The Role of Science in the Context of the SDGs and Climate
Policy after Paris

Lecture Hall 33

Speakers of introductory talks and roundtable: *Uwe Schneidewind, Roland Scholz,* P. R. Shukla, Jim Skea, Hironori Hamanaka, Volkmar Dietz

Chair: Sergio La Motta, Maja Göpel

#### 14.30 - 15.15 SpeedTalk Session C

# C1 SpeedTalk: Transformative Science, Transition Labs and Experiments

Chair: Lukas Hermwille

Societal Transition and Development due to Advancement in Scientific Technologies – From the First Industrial Revolution to the Internet of Things. *Aki Nagano* 

Opening the toolbox of sustainability transformations. The concept of Transformation Instruments and its potential for reflecting Transformative Science. Britta Acksel

Action labs, essential to transform the agri-food system towards sustainability. Marianne Hubeau, Fleur Marchand, Guido Van Huylenbroeck

Pressure Points - from Intuitive Practice to Strategy. Katleen De Flander, Jeb Brugmann

#### C2 SpeedTalk: Urban Transitions

Chair: Thorsten Koska

How do visions of the future shape sociotechnical transitions? An analytical framework to study and design interventions for transition. *Sarah Lumbroso, Sébastien Treyer, Xavier Poux, Philippe Martin* 

The socio-spatial politics of sustainable transitions: Linking sustainability initiatives to urban regeneration and gentrification. *Irene Håkansson* 

Urban transition narratives: a comparison of two German cities. Boris Bachmann

Moving beyond local experiments - accelerating urban sustainability transitions in Stockholm, Sweden. Sara Borgström, Nikolina Oreskovic, My Svensdotter, Maria Schewenius

#### C3 SpeedTalk: Geography of Transitions

Chair: Philipp Schepelmann

Guiding an island's sociometabolic system towards a sustainability transition: The case of Samothraki. Dominik Noll, Marina Fischer-Kowalski

The Sustainability of Local Living Economies. Exploratory evaluative transition research using Rough Set Analysis. Philip Bernert

Insights from participatory backcasting for a sustainable heating sector in Niš, Serbia. Kateryna Pereverza, David Lazarevic, Oleksii Pasichny, Marija Zivkovic, Dejan Ivezic, Olga Kordas

Planning transport futures: backcasting versus forecasting. Varvara Nikulina, Henrikke Baumann, David Simon, Frances Sprei

#### C4 SpeedTalk: Transitions to a Sustainable Economy

Chair: Verena Streitferdt

Insights into a sustainable transition of the traditional manufacturing sector. Katrina Skellern, Raymond Markey, Louise Thornthwaite

The difficulty of climate change adaptation in manufacturing industries: A theoretical contribution on rationales of inaction. Ulrike Meinel

Green startups as indicator for sector transformation. Ralf Weiss

The Economy for the Common Good: a model for transforming large enterprise activities towards sustainability? A research design presentation. Josefa Kny

#### C5 SpeedTalk: Energy Transitions

Chair: Florin Vondung

Transition to a distributed energy system in Switzerland? Investigating the role of local actors, co-ownership, and neighbourhood effects. Roman Seidl, Timo von Wirth

Critical Appraisal of Socio-Technical Transition Process: A Case of Community Renewable Energy in Off-Grid Rural Areas Electrification in Nigeria. Ahmed I. Butu, Peter Strachan, Abhishek Agarwal

Indicators for measuring the resilience of energy transitions. Claudia R. Binder, Romano Wyss, Susan Mühlemeier

Sustainable regimes and role of politics in mobility transitions in cities of developing countries: Case of Kolkata, India. Bipashyee Ghosh

#### C6 SpeedTalk: Practice Approaches, Social Learning, Social Innovation

Chair: Marie-Christine Gröne

GHG mitigation potential of community-based initiatives across Europe. David Landholm, Anne Holsten, Federico Martellozzo, Jürgen Kropp

Fostering sustainability transition by diffusing biogas technology through community-led initiatives. The case of ASPROINCA in Colombia. Julia Wäger, Willington Ortiz, Johannes Hamhaber

Knowing and Growing -Alternative Food Networks as Collaborative and Innovative Learning Spaces. Sven Stinner

Room: K3

Room: K2

Room: K1

Room: K8

#### 15.30 - 16.15 SpeedTalk Session D

# D1 SpeedTalk: Transformative Science, Transition Labs and Experiments

Chair: Lukas Hermwille

The transformative potential of research projects. *Thorsten Schilling, Romano Wyss, Claudia R. Binder* 

Universities in transition towards sustainability. Katriina Soini, Kaisa Korhonen-Kurki, Janna Pietikainen, Alexandra Jurgilevich

Establishing real-life laboratories: a transdisciplinary approach. Philip Bernert, Angelika Haaser, Lena Kühl, Tamara Schaal

Room: K7

Room: K2

Room: K1

Room: K3

Raising environmental awareness and changing behaviors through innovative pedagogical methods within the frames a real-life circular economy. *Christine Hvitsand* 

#### D2 SpeedTalk: Transitions to a Sustainable Economy

Chair: Verena Streitferdt

Tracing the origins and articulation of power in the on-going transition of Swiss Waste Management. *Mert Duygan, Gregoire Meylan, Michael Stauffacher* 

Towards a better understanding of drivers and barriers to collaboration in circular business models. *Denise Reike, Simona Negro, Marko Hekkert* 

Informal Sector Of Waste Management: The Invisible Niche Of A Circular Economy. *Ana Pilar, Pi Puig* 

Innovative business models for low carbon community groups. Theodorus Harmsen, Stefan Kuhlmann, Kornelia Konrad

#### D3 SpeedTalk: Energy Transitions

Chair: Florin Vondung

How to analyse energy systems as socio-ecological-technical systems in transition? *Susan Mühlemeier, Claudia R. Binder* 

Optimizing Solar Energy Use in Urban Energy Systems – A Transdisciplinary Perspective. Christiane Reischl, Stefanie Hatzl, Eva Fleiss, Thomas Brudermann, Alfred Posch

Applicability of the functions approach of technological innovation systems in the context of technology diffusion. *Michael Kriechbaum* 

#### D4 SpeedTalk: Energy Transitions

Chair: Kilian Topp

Understanding Socio-Technical Transition Pressures and Barriers: Empirical Perspectives on Community Renewable Energy for Off-Grid Rural Electrification in Nigeria. *Ahmed I. Butu, Peter Strachan, Abhishek Agarwal* 

Analysing energy transitions in the Maghreb - The need for a multidimensional energy frameworks. Sarah Kilpeläinen

The Urban Harvesting Niche: A digitally-enabled grassroots innovation. *Adrien Labaeye* 

#### D5 SpeedTalk: Governance of Transitions

Chair: Thorsten Koska

Socio-technical histories in water management: tracing the memory of urban drought. Sara Finley

Sanitation regimes in urban Africa: identifying the regime structures in the informal settlements of Nairobi. *Pauline Cherunya, Mara J.van Welie, Bernhard Truffer* 

Transition to climate resilient and resource-efficient infrastructures. Transition management to support on-going processes towards coupled infrastructures. Susanne Langsdorf

Resource Use in Transitions: Lessons from three frameworks translated into practice. Jessica Breadsell, Greg Morrison, Peter Newman

# D6 SpeedTalk: Practice Approaches, Social Learning, Social Innovations

Chair: Katja Pietzner

Why do they care? Consumer's means-ends chains behind (non-)sustainable consumption patterns. *Alexandra Klemm, Florence Ziesemer, Mathias Peyer, Ingo Balderjahn* 

Urban Change Agents: Drivers for low-carbon urban transition processes. *Nadine Kuhla von Bergmann* 

Contrasting transformative habitats for diversified learning and sustainability transitions. *Harm Van den Heiligenberg, Jifke Sol* 

#### D7 SpeedTalk: Theoretical and Methodological Advances in Transition Research

Senate Hall

Room: K8

Room: K4

Chair: Miriam Müller

A Complex Theory of Change and Action: Exploring Alternative Drivers of Change for Social-Organisational Transformative Praxis. *Deon Cloete* 

Theories of change in political economy: the role of counterpolitics for systems transition. *Claus Seibt* 

How do we make the shift to a Sustainable Mindset? Jessica Böhme

Homo Technologicus – The machinization of life as a key driver of continued economic growth. *Tilman Santarius* 

#### 16.45 - 18.15 Parallel Session E

#### E1 Dialogue Session: Transition and social practice Room: K8

Convenors: Marco Hasselkuß, Melanie Speck

The MLP applied to Social Innovations? Rick Hölsgens, Stephanie Lübke, Marco Hasselkuß

Investigating the success of grassroot initiatives for sustainable consumption. *Nina Langen* 

Sustainable intentional communities: Niche sites transforming everyday household consumption practices. *Matthew Daly* 

Social innovation in practice: Attributes and added value of social innovation initiativess in sustainability transitions. *Anna Butzin, Merel Ooms, Doris Schartinger* 

# E2 Dialogue Session: Transformational research in a changing climate

Convenors: Ioan Fazey, James Patterson, Niko Schäpke

What kinds of knowledge production and use are needed for transformation and a transformed world? *Ioan Fazey* 

Room: K7

Room: K2

Dimensions of Transformational Research. James Patterson, Niko Schäpke

Developing pathways for transformational knowledge production systems using Three Horizons practice. *Ioan Fazey* 

# E3 Dialogue Session: Doing Transformative Research: Characteristics and Challenges of Different Approaches Room: K4

Convenor: Andreas Kläy, Flurina Schneider

Panelists: Laurens Klerkx, Barbara van Mierlo, Felix Wagner, Sylvia Tobias, Tobias Buser

# E4 Paper Session: Transformative Science, Transition Labs and Experiments Room: K3

Chair: Josefa Kny

Living Labs as part of a transformative research infrastructure: Classifying and mapping Living Labs in Germany. *Justus von Geibler, Carolin Baedeker, Lorenz Erdmann, Christa Liedtke, Johanna Meurer* 

The "Target" for System Innovation. Bridging the gap between systems thinking and the individual change initiative. *Verena Hermelingmeier* 

On Transitions, Labs and Transformative Science: The Finance Innovation Lab and Beyond. *Tuukka Toivonen* 

Transition experiments in sustainable building in Norway: The cases of Valdres and Hurdal. *Lillian Strand, Stig Larssæther* 

#### E5 Paper Session: Governance of Transitions

Chair: Jorrit Gosens

Understanding accelerating transition dynamics supported by the use of models within a participative learning environment. Ernst Gebetsroither-Geringer, Karin Markvica, Pieter Valkering, Gönenç Yücel, Dorukhan Sergin

Driving social innovation? Insights from science-society interactions in four research projects. *Julia Wittmayer*, *Flor Avelino*, *Antonia Proka*, *Giorgia Silvestri*, *Niki Frantzeskaki* 

The anchoring dynamics and niche-regime linking of technological and social innovations. Barbara van Mierlo, Bram Bos, Bart Bremmer, Boelie Elzen

How to decarbonise energy-intensive processing industries? Systemic drivers and barriers to low-carbon innovation. *Joeri Wesseling, Max Ahman, Lars Coenen, Lars Nilsson, Daniel Vallentin, Ernst Worrell, Stefan Lechtenboehmer* 

#### E6 Paper Session: Urban Transitions

Chair: Mats Lundqvist

Transitions and the City: Exploring the Prospects for Urban Regime Change. *Noel Keough, Geoff Ghitter* 

The municipality, the cooperative, or the market? The institutionalization of the logics vying for the Berlin, Titisee-Neustedt, and Lübeck energy grids. Stefanie Becker

Energy-efficient Urbanization for Better Public Health in India. Sohail Ahmad, Shonali Pachauri, Felix Creutzig

On the societal embeddedness of commons. Johannes Euler

E7 Dialogue Session: Implementing the Sustainable Development
Goals - How can research contribute to sustainable consumption
and production partterns (SDG No. 12)? funded by the German
Federal Ministry of Education and Research
Senate Hall

Speakers: Volkmar Dietz, Derk Loorbach, Uwe Schneidewind, Jens Clausen, Ingmar Jürgens (tbc), Cathy Maguire

Chair: Martin Hirschnitz-Garbers

#### 16.45 — 18.15 Side Event: "EnerTransRuhr"

Interactive Event Foyer

#### 19.30 Conference Dinner

Dining Hall, University of Wuppertal

Room: K1



#### 08.30 - 09.00 Plenary Session:

The Great Mindshift: Mapping similarities across research & practice for sustainable economies Lecture Hall 33

Speaker: Maja Göpel

#### 09.00 - 10.30 Parallel Session F

F1 Dialogue Session: Real-world laboratories for transformational change: Exploring transdisciplinary collaborations, epistemological challenges and institutional implications in case studies from Baden-Württemberg (Part I)

Room: K8

Convenors: Niko Schäpke, Franziska Stelzer Matthias Bergmann, Daniel Lang

EnSign real-world lab and its influence to the sustainability transformation of HFT Stuttgart and its neighbourhood. *Michael Bossert* 

Towards a Culture of Dialogue, Exchange and Co-production. Re-thinking (Urban) Sustainability in the Context of Decentralised Living and Housing of Asylumseekers in German Cities. *Havva Engin, Christina West, Svenja Kück* 

Sustainable Urban Development in the Knowledge Society. Urban Office/ Real Lab Heidelberg. *Ulrike Gerhard, Editha Marquardt, Christina West* 

Real-Science' Challenges in a Real-World Laboratory: Exploring scientists' perspectives on co-design in the real-world laboratory "Knowledge Dialogue Northern Black Forest" (WiNo), Germany. Regina Rhodius, Michael Pregernig, Georg Winkel

Conceptualizing real-world experiments – Insights from the Future City\_Lab Stuttgart. Marco Sonnberger, Sophia Alcantara, Rainer Kuhn, Eric Puttrowait, Antje Stokman, Marius Gantert

Communication, trust and time at Urban Transition Lab 131. Colette Waitz, Andreas Seebacher, Oliver Parodi, Marius Albiez

Die Schule der Querdenker: Sustainability Transition in a Transversal Society. *Christina West* 

F2 Dialogue Session: Sustainable Lifestyle, Social Innovation &
Transitions: A Dialogie On The Role Of Bottom-Up Initiative
And Their Economic context
R

Room: K6

Convenors: Jaco Quist, Ines Omann, Adina Dumitru, Marcelline Bonneau, Wouter Spekkink, Udo Pesch

Sustainability Transitions, Consumption Practices, Lifestyle Changes and the influence of economic contexts. *Jaco Quist, Udo Pesch* 

Can action research support sustainability initiatives in consolidating their transformative processes? Insights from "Mühlviertel" in Upper Austria – a region on its way to sustainability. *Ines Omann, Paul Lauer* 

Windows of opportunity for sustainable lifestyle change: the role of aspirations, desired lifestyle changes and wellbeing. Adina Dumitru, Ricardo García Mira, Alberto Diaz, Irina Macsinga, Vlad Pandur

Citizen initiatives as seeds for sustainability transitions? Wouter Spekkink, Jaco Quist, Udo Pesch

# F3 Dialogue Session: Social-Ecological-Technological Systems (SETS) - A framework for supporting sustainable urban transitions

Room: K5

Convenors: Klaus Krumme, Claudia R. Binder

Panelists: Marcus Zepf, Dagmar Haase, Pierre Laconte, Thomas Kufen

# F4 Dialogue Session: Complex Urban Dynamics towards Acceleration of Sustainability Transitions

Room: K4

Convenor: Holger Berg, Anne Holsten

Conceptual Framework to Study Urban Acceleration Dynamics. Niki Frantzeskaki, Markus Egermann, Florian Kern

A Tale of Four Cities: A Comparative Analysis of Accelerating Local Sustainability Transitions in Brighton, Dresden, Genk and Stockholm. *Markus Egermann, Sara Borgström, Leen Gorissen, Florian Kern, Niki Frantzeskaki* 

The Embeddedness of Local Sustainability Transitions in Multi-level Governance Contexts: Opportunities and Obstacles. Franziska Ehnert, Steffen Maschmeyer, Sara Borgström, Leen Gorissen, Florian Kern

#### F5 Paper Session: Governance of Transitions

Room: K7

Chair: Sarah Burch

Cities as transition hubs for accelerating environmental innovation: A multiple case study of electric city buses in Europe. *Benny Behbood Borghei* 

Exploring pathways for a transition towards electrification of public urban transport – the case of Stockholm. *Semida Silveira, Maria Xylia* 

Carsharing adoption across cities in Western Europe. Karla Münzel, Wouter Boon, Koen Frenken, Dennis van der Linden, Jan Blomme

Understanding the role of ICT initiatives in the Dutch (auto)mobility system: Experiments and Expectations. *Tanja Manders, Anna J. Wieczorek, Geert Verbong* 

# F6 Paper Session: Transformative Science, Transition Labs and Experiments

Room: K3

Chair: Harm Van den Heiligenberg

Living labs for socio-technical transitions in South Korea: Initial experiences and future issues. *Kyu-young Han, Kyung A. Kim, Marc Wolfram* 

The impact of cultural aspects on transition experiments in Ghana. *Linda Kamp, Otto Kroesen* 

The status and the issue of the Living Lab in Korea. Jieun Seong, Kyu-young Han

Living Labs for Transformative Science: Applying the INNOLAB approach to demonstrate the potential of Living Labs for user integration and sustainability. Justus von Geibler, Johannes Buhl, Lorenz Erdmann, Levent Gözüyasli, Marco Hasselkuß, Gerrit Kahl, Hartmut Koch, Christa Liedtke, Johanna Meurer, Stefan Schridde, Günter Rudigier, Monika Wirges, Andreas Zillgitt

#### F7 Paper Session: Geography of Transitions Track

Chair: Kirsten Ulsrud

Sustainability Principles in Regional Climate Policy – a case study from a participative backcasting process in West Sweden. *Johan Larsson, John Holmberg* 

From participatory processes to transdisciplinary research for regional sociotechnical sustainability transitions: The case of the Climate Protection Plan of the German state of North-Rhine Westphalia.

Stefan Lechtenboehmer, Katharina Knoop, Valentin Espert, Ulli Vilsmaier

Management of transition processes by municipalities: Neighborhood energy concepts as experimental spaces? *Robert Riechel* 

Niche-regime interaction in localised production networks: conceptual considerations. *Arne Buenger, Daniel Schiller* 

# F8 Paper Session: Transformative Science, Transition Labs and Experiments

Chair: Lillian Strand

The "School for Sustainable Mobility" as a practical example for the challenges and opportunities of transformative science. *Annika Arnold, Sophia Alcàntara* 

Creating a Real World Laboratory for Transformative Sustainability Research at Universities – a Case from Austria. *Lisa Bohunovsky, Jill Jäger, Thomas Lindenthal, Helga Kromp-Kolb* 

Action Research in Higher Education Fostering Transitions Towards A Sustainable Economy. Training For Ecopreneurship At Three Bulgarian Universities.

Martin Ivanov, Anna Varbanova

Ways of becoming: exploring how a relational theory of change could inform transitions research. *Rika Preiser* 

#### F9 Paper Session: Theoretical and Methodological Advances in Transition Research

Senate Hall

Room: K2

Room: K1

Chair: James Patterson

Transformation research – A methodological exploration of an emerging research field. *Julia Wittmayer, Katharina Hölscher* 

Challenges to advancements in transition research on paradigmatic grounds. Cleber Dutra, Terry Tudor

Exnovation – the missing 'something' in current debates on sustainability transitions. *Martin David, Annika Arnold, Marco Sonnberger, Gerolf Hanke* 

Conceptualizing the lifecycle of technological innovation systems. Jochen Markard

#### 11.00 - 12.30 Parallel Session G

G1 Dialogue Session: Real-world laboratories for transformational change: Exploring transdisciplinary collaborations, epistemological challenges and institutional implications in case studies from Baden-Württemberg (Part II)

Room: K8

Convenors: Niko Schäpke, Franziska Stelzer, Matthias Bergmann, Daniel Lang

#### G2 Dialogue Session: Knowledge Co-Production for Initiativebased Sustainability Transitions: Emerging patterns and pathways for governing sustainability transitions'

Room: K5

Convenors: Holger Berg, Niki Frantzeskaki, Adina Dumitru, Liz Dinnie, Julia Koch

# G3 Dialogue Session: Researching Urban Transformations towards Sustainability: A practical experience report

Senate Hall

Convenors: Kerstin Krellenberg, Florian Koch, Annegret Haase, Dieter Rink, Manuel Wolff, Norman Bedtke, Erik Gawel, Christian Kuhlicke, Juliane Welz

Introduction: Approaching Urban Transformations. Kerstin Krellenberg, Florian Koch

From shrinkage to regrowth: the nexus between urban dynamics, land use and ecosystem service provision. *Annegret Haase, Manuel Wolff, Dieter Rink* 

Linking transition theories with theories of institutions – implications for sustainable urban water infrastructures between flexibility and stability. *Erik Gawel, Norman Bedtke* 

Resilience, transformation and the experience of repeated flood events in urban areas in Germany and Chile. *Christian Kuhlicke, Juliane Welz* 

#### G4 Paper Session: Theoretical and Methodological Advances in Transition Research

Room: K7

Chair: Georg Holtz

Mind the goal: the impact of technology-push and demand-pull technologies on socio-technical transitions.. *Christof Knoeri, Joern Hoppmann, Volker Hoffmann* 

Agent-based modelling of the governance of energy transitions.

Sebastian Hoffmann, Diego I. Hidalgo Rodríguez, Fabian Adelt, Johanna Myrzik,

Johannes Weyer

Socio-technical modelling of policy support for rapid transitions. Jonathan Busch

Challenges in Modelling Sustainability Transitions. Jonathan Koehler, Fjalar De Haan, Georg Holtz, Klaus Kubeczko, Enayat Moallemi, George Papachristos, Emile Chappin

# G5 Paper Session: Practice Approaches, Social Learning, Social Innovation

Room: K4

Chair: Katleen de Flander

Looking at community initiatives for sustainable development and green lifestyles: self-organization, innovation and environmental action. *Udo Pesch, Jaco Quist, Wouter Spekkink* 

Space matters – Evidence from a case study on urban transition initiatives.

Andreas Blum, Markus Egermann, Franziska Ehnert, Kristin Reiß

Translocal grassroots movements and the geography of transitions: the Case of the Transition Towns Network.  $Giuseppe\ Feola$ 

#### **G6** Paper Session: Energy Transitions

Chair: Babette Never

Energy Transitions as local projects: situative governance in Germany. Gerhard Fuchs

Sectors in question: understanding the construction, historical shifts and possible linkages of gas, heat and electricity systems in Hamburg.

Sören Becker, Ronan Bolton, Janette Webb

Room: K3

Room: K2

Room: K1

Urban Energy Transformation; Perspectives for Integrated Energy Efficient Urban Planning in Practice (the case of Iran). *Peyman Khodabakhsh, Samira Mashayekhi* 

#### G7 Paper Session: Governance of Transitions

Chair: Johannes Weyer

Evidence-based narratives (EBN) in European research programming. Philipp Schepelmann, Susanne Fischer, Martin Drews, Jorrit Gosens

The Economics behind Transformation: A transdisciplinary theory of economic development in the light of the SDGs. *Josue Manuel, Quintana Diaz* 

What does transition research offer to air quality policy in the EU? Paul Szabo-Müller

A macro-behavioral assessment of climate policies. Karolina Safarzynska

#### G8 Paper Session: Governance of Transitions

Chair: Ulrike Solmecke

Explaining regime stability. Why has the forest industry's transformation not followed the assumed track? *Jakob Donner-Amnell, Mikael Ottosson* 

How to tackle societal change in the transition to low-carbon societies? Tiina Koljonen, Patxi Iñarra Hernandez, Klaus Kubeczko, Erik Laes, Yolanda Lechon, Asgeir Tomasgard, Daniela Velte, Maria Rosa Virdis

A heuristic to analyse transition pathways of alternatives applied to the case of meat. Barbara van Mierlo, Peter Feindt, Tiny Van Boekel, Atze-jan Van Der Goot, Cor Van Der Weele

Trajectories, sequences, and patterns of change: Exploring the conceptual character of 'pathway' in the low-carbon transition. *Daniel Rosenbloom* 

#### 13.30 - 14.00 Poster Session at the Foyer

The influence of social networks in an artificial common pool resource dilemma. Hannes Thomsen

Production, transmission and storage: Renewable energy and transition-periphery dynamics in Scotland. *Fiona Munroe* 

Transformation through Participation? A critical inquiry into participatory research practices in the field of sustainability. *Livia Fritz, Claudia R. Binder* 

Energy transition in the urban context – a transdisciplinary analysis of the political participation in energy transition strategies in the InnovationCity Bottrop. *Ben Best* 

Transformative Social Innovation and the Global Ecovillage Network (GEN). Empirical results in the process of transdisciplinary theory building. *Iris Kunze* 

Dynamics of renewable energy niche building processes in Argentina. Philipp Schaube, Willington Ortiz, Claudio Passalía

Urban beekeeping - A case study at the example of Berlin. Stephan Lorenz

Energy sufficiency in sustainable urban transitions: a transition scenario for the district of Wuppertal-Vohwinkel. *Marie-Christine Gröne* 

Sustainability transitions and leapfrogging in developing cities: comparing the diffusion of solar thermal energy in Dezhou and Beijing. *Zhen Yu* 

Potential economic impacts and challenges of an enhanced use of photovoltaics in Togo – An estimation by transferring experiences of other sub-Saharan countries. *Marisa Heenen, Oliver Wagner* 

The German National Top Runner Initiative – A contribution to market transition towards energy efficient appliances. *Claus Barthel, Lena Tholen, Thomas Götz, Justus von Geibler* 

#### Poster Area: Real-World Laboratories in the federal state "Baden-Württemberg"

Structure of the "Real-World Laboratory 131: KIT findet Stadt". Oliver Parodi, Colette Waitz, Richard Beecroft

Real-world lab ASYLUM, Marion Schramm

Participation on the way to the Real-World Laboratory 131. Colette Waitz, Andreas Seebacher, Sarah Meyer-Soylu

Reallabor 131 – Overview of the real-world experiments. Colette Waitz, Oliver Parodi, Marius Albiez

Co-Design and Co-production in the Real-world Laboratory Knowledge Dialogue Northern Black Forest. *Regina Rhodius, Michael Pregernig, Monika Bachinger, Hannes Rau, Barbara Koch* 

SPACESHARING LABORATORY. Matthias Rudolph, Mark Blaschitz, Ines-Ulrike Rudolph

Future City Lab – "Realworld Laboratory for a Sustainable Mobility Culture". *Marco Sonneberger, Antje Stokmann, Marius Gantert, Sophia Alcantara.* 

With public participation to a stopless and timetableless urban quarter bus in the Reality Lab Schorndorf. *Matthias Klötzke, Eva-Maria Fraedrich* 

Rethinking schools in the context of demographic and pedagogic shift: The research agenda of Reallabor STADT-RAUM-BILDUNG. Marc Kirschbaum, Mandana Alimardani

#### 14.00 — 15.00 Plenary Session:

Lecture Hall 33

Research and Practice Perspectives on the Governance of Urban Transitions

Speakers: Derk Loorbach, Rob Hopkins

Chair: Maja Göpel



### 15.00 — 18.00 Side Event: "Arrenberg"

Visiting the Real-World Labs at the urban district "Arrenberg"

#### 15.15 — 16.45 Parallel Session H

H1 Dialogue Session: Methodological challenges and sociocultural dynamics in transition studies with a special focus on the regions of Latin America and the Caribbean, Asia and Africa (TRANSLACASAF)

Room: K8

Convenors: Louisa Kistemaker, Monica Ramos Mejia, Verena Streitferdt, Giorgia Silvestri

H2 Dialogue Session: Inner Transitions: The Role of Religion, Spirituality, Consciousness and the Self in Urban Sustainable Pathways

Room: K6

Convenors: Christoph Woiwode, Eva Dick, Olivia Bina

H3 Dialogue Session: Sustainable LivingLabs: an approach for transforming production and consumption systems

Room: K5

Convenors: Carolin Baedeker, Christa Liedtke, Justus von Geibler

Panelists: Carolin Baedeker, Justus von Geibler, Viktor Grinewitschus, Harm van den Heiligenberg, Natalia Romero Herrera, David V. Keyson, Christa Liedtke, Torsten Massek, Johanna Meurer

H4 Dialogue Session: The food domain as key to accelerate sustainability transitions? Insights into urban dynamics from three European cases

Senate Hall

Convenor: Markus Egermann, Gesa Maschkowski

Seeds for a local food transition? The complexity of sustainable practices, cultures and structures and change dynamics in the food domain of the city-region of Dresden, Germany. Kristin Reiß, Franziska Ehnert, Andreas Blum, Markus Egermann

Innovative short food supply chains in Budapest: Analysis of three unique citizen driven conscious food consumption initiatives their greater implications on the urban agro-food sector in Hungary. *Logan Strenchock, Laszlo Pinter* 

The role of local and national governance contexts in urban sustainability transitions: supporting or hampering local transition initiatives in the city of Genk?. *Leen Gorissen, Erika Meynaerts, Pieter Valkering* 

H5 Paper Session: Transitions to a Sustainable Economy

Room: K7

Chair: Katrin Bienge

Value network dynamics in sustainability transitions: The role of industry incumbents in the Swedish heat pump transition. *Petter Johansson* 

Social learning about Sustainability: the Ecover Case. Lotte Asveld, Dirk Stemerding

Integrating a business model perspective into sustainability transitions: A research agenda based on servitised mobility. *Steven Sarasini, Marcus Linder, Ove Langeland, Tom-Erik Julsrud* 

#### H6 Paper Session: Governance of Transitions Room: K4

Chair: Jonathan Busch

The Danish Energy Innovation System in transition: a patent-based analysis of the dynamics of selected energy technologies. *Lourenço Faria* 

System Weaknesses in Technological Innovation Systems: A Knowledge-based Reconceptualization. *Johan Frishammar, Patrik Söderholm, Hans Hellsmark, Johanna Mossberg* 

A multi-method approach for analyzing new technological trajectories in the development of Technological Innovation Systems: The case of Smart Grid in Europe. *Amin Dehdarian* 

#### H7 Paper Session: Governance of Transitions Room: K3

Chair: Jens Schippl

China's Role in Global Transition Processes to Sustainability – a Role Theoretical Approach. *Ulrike Solmecke* 

Liaising econometric and system dynamic modeling for simulation of macroeconomic transitions towards resource conservation. *Mark Meyer, Martin Distelkamp, Deniz Koca, Ullrich Lorenz* 

Differences and similarities of energy innovation systems – comparison of five technology areas in Denmark.  $Mads\ Borup$ 

#### H8 Paper Session: Governance of Transitions Room: K2

Chair: Paul Szabo-Müller

Climate-savior or job-killer: a discourse analysis of the 2015 coal levy debate in Germany. *Anna Leipprand, Christian Flachsland* 

A Discourse on Socio-Technical Regime Formation in the Transition to Renewable and Sustainable Energy Systems. *Kwok Shum* 

Analyzing the discourse in policy change: implications for the governance of transitions in Swiss Municipal Solid Waste Management.

Mert Duygan, Michael Stauffacher, Gerrit Fuss, Gregoire Meylan

#### H9 Paper Session: Governance of Transitions Room: K1

Chair: Barbara van Mierlo

Barriers and strategies for introduction of innovations in developing countries – from a company perspective. *Linda Kamp, Roland Ortt* 

Analysing the role of visions and paradigms in purposive transitions in water management: a conceptual framework applied to the historical case of watershed management in Mississippi River. *Tom van der Voorn, Jaco Quist, Claudia Pahl-Wostl* 

Berlin's pathways towards sustainable rainwater management: from niche to mainstream? *Natàlia García Soler, Timothy Moss* 



#### 17.00 — 18.30 Parallel Session I

11 Dialogue Session: Large Systems Change: Comprehensive Approach to Transformation Challenges

Convenors: Maja Göpel, Petra Künkel, Steve Waddell, Domenico Dentoni

12 Dialogue Session: Dynamics in Innovation Systems: new directions for the Technological Innovation Systems framework

Room: K6

Room: K8

Convenor: Jonathan Koehler

Introduction: Why dynamics is important in TIS, what the limitations of dynamics in TIS are, case-based methods, models and indicators. *Jonathan Köhler, Rob Raven, Bob Walgrave* 

Typical modes of system building: how key entrepreneurs created and shaped supportive technological innovation systems. *Jörg Musiolik, Jochen Markard, Marko Hekkert* 

Toward a ranking of interventions in TIS: Leverage Points in the empirical domain of energy-efficient houses. *Alco Kieft* 

System functions and Agency in TIS. Marko Hekkert

SI on TIS Dynamics: Conceptualizing the lifecycle of technological innovation systems. *Jochen Markard* 

The dynamic simulation of TIS functions in transitions pathways.

Jonathan Köhler, Sibylle Braungardt, Tim Hettesheimer, Christian Lerch, Lisa Nabitz,
Christian Sartorius, Rainer Walz

Towards modelling of innovation systems: an integrated TIS-MLP approach for wind turbines. *Rainer Walz, Jonathan Köhler, Christian Lerch* 

Measuring policy-driven innovation in energy efficiency based on TIS functions. *P. Plötz, L. Nabitz, S. Braungardt* 

How do systemic instruments shape technologic innovation system dynamics? *Rob Raven, Bob Walrave* 

13 Dialogue Session: Transition or transformation: Does it matter?

Room: K5

Room: K7

Convenors: Chris Riedy, Sarah Burch, Oluf Langhelle, James Patterson

I4 Paper Session: Theoretical and Methodological Advances in Transition Research

Chair: Marco Sonnberger

Qualitative but systematic envisioning of socio-technical transitions: Using cross-impact balance method to construct future scenarios of transitions. *Arash Shojachaikar* 

How an anticipated future impacts the transition to a sustainable future – "Futures Wheel" and energy policy.

Antonietta Di Giulio, Rico Defila, Corinne Ruesch Schweizer

Visions in transitions and niches: a literature synthesis and cases from circular buildings and a backcasting experiment on sustainable lifestyles. *Jaco Quist* 

Participative Scenario Development for Regional Sustainability Transitions: Opportunities for Combining Systematic Formative Techniques and In-depth Qualitative Analysis. *Annika-Kathrin Musch, Anne von Streit, Claudia R. Binder* 

# 15 Paper Session: Theoretical and Methodological Advances in Transition Research

Room: K4

Chair: Christof Knoeri

Beyond Technology: Towards Sustainability through Behavioral Transitions.  $\it Miriam Bodenheimer$ 

Sufficiency, Economic Growth, Technology, and Happiness. Felix Ekardt, Jutta Wieding

Different Models of Economic Change to Sustainable Pathways in Brazil. James Ryan Hogarth

Emerging through crisis? A larger-N inquiry into crisis-induced transformative social innovation. *Tom Bauler, Bonno Pel, Alex Haxeltine, Gyorgy Pataki* 

#### 16 Paper Session: Transitions to a Sustainable Economy

Room: K3

Chair: Laurenço Faria

Lighting transition: Overcoming barriers to eco-innovation in the LED sector.  $C\acute{e}dric\ Gossart$ 

Source Separation: How Ready is the Swedish Wastewater Sector for Technology Transition? *Jennifer McConville, Elisabeth Kvarnström, Håkan Jönsson, Erik Kärrman* 

A Framework for Systematic Analysis of Sustainability Transitions Pathways – With Applications to Urban Water Management and the Millennium Drought in Melbourne, Australia. *Fjalar de Haan, Briony Rogers* 

#### 17 Paper Session: Governance of Transitions

Room: K2

Chair: Enza Lissandrello

The politics of sustainability transitions: learning from industrial policy. *Anna Pegels* 

A green transition policy for developing countries. Babette Never, Rene Kemp

The Transition from Trade Protection to Trade Liberalization: Lessons for Sustainability Transitions.  $Mark\ Elder$ 

#### 18 Paper Session: Transitions to a Sustainable Economy

Room: K1

Chair: Steven Sarasini

What makes the circular economy? Expectations and visions for a European circular economy. *David Lazarevic, Helena Valve, Petrus Kautto* 

Transition toward a Sound-Material Cycle Society: Case Study of the Sustainability Transition of Kitakyushu, Japan.

Kyungsun Lee, Premakumara Jagath Dickella Gamaralalage, David Sonnenfeld

What drives and hampers the implementation of circular business models? – A conceptual typology. *Dorith Vermunt, Simona Negro, Pita Verweij, Marko Hekkert* 



How Active Publics Shape And Are Shaped By Sustainablity Transitions: Emergence of active publics in the circular Economy. *Mattijs Taanman, Eefje Cuppen* 

18.00 — 21.00 Restaurant Day at the urban district "Arrenberg"

21.00 Wuppertal Institute Anniversary Party at the VillaMedia

#### 09.00 - 10.00 Plenary Session:

The Zero Emission Goal as an Enabler of a New Competitiveness: 200 Examples

Lecture Hall 33

Speaker: Gunter Pauli

#### 10.30 — 12.00 Side Event: Trafo 3.0

Sustainable meat production & consumption

Room: K6

#### 10.30 — 12.00 Side Event: Book launch

Lecture Hall 33

**Maja Göpel**: The Great Mindshift: Why We Need a New Economic Paradigm for Sustainability Transformations (The Anthropocene: Politik – Economics – Society – Science; Vol. 2).

Hans Günter Brauch, Úrsula Oswald Spring, John Grin, Jürgen Scheffran (Eds.): Handbook on Sustainability Transitions and Sustainable Peace (Hexagon Series on Human and Environmental Security and Peace, Vol. 10).

Speakers: Uwe Schneidewind, Maja Göpel, Jürgen Scheffran, Ernst-Ulrich von Weizsäcker, Hans Günter Brauch



J1 Dialogue Session: The role of learning in understanding and governing sustainability transitions (Part I): Presentations Room: K8

Convenors: Johannes Halbe, Claudia Pahl-Wostl

Learning in sustainability transitions (Introductory talk). Johannes Halbe, Claudia Pahl-Wostl

Conceptualising learning in sustainability transitions. Barbara van Mierlo, Pieter Beers, Esin Gültekin

Learning and participation in transitions and niches. Jaco Quist

Learning and conflict in sustainability transitions. Eefje Cuppen, Mattijs Taanman

Social learning for sustainable urban energy systems. Vanesa Castán Broto

Social learning through science-industry collaborations. Megan Farrelly, Annette Bos

J2 Dialogue Session: Studying sustainability transitions in developing contexts

Room: K5

Convenors: Anna J. Wieczorek, Verena Streitferdt, Jens Marquardt, Laurens Klerkx

Overview of literature. Anna J. Wieczorek

Revisit: 'Instability is a sign for a window of opportunity'. Verena Streitferdt

Integrating power into transitions studies: What do we learn from developing country contexts? *Jens Marquardt* 





Sustainability transitions in developing countries: what is being transitioned, and how does this fit within the broader body of sustainability transitions literature? *Laurens Klerkx* 

Experiment-niche dynamics in developing country contexts: A practice theories perspective.  $M\'onica\ Ramos-Mej\'ia$ 

#### J3 Paper Session: Energy Transitions

Room: K1

Chair: Timo von Wirth

Transformative Change - Sociological Perspectives on the Emergence of New Structures and the German Electricity Transition. *Gerhard Fuchs* 

Catalysing the Irish Energy Transition: Capacities and Challenges. Therese Hume, Geraint Ellis, John Barry, Robin Curry

The Dutch energy transition – a decade of discursive struggles. *Rick Bosman, Pieter J. Beers, Derk Loorbach* 

Energy transition: How major changes in the HVDC industry inform novel perspectives on transitions. *Allan Dahl, Jochen Markard* 

#### J4 Paper Session: Governance of Transitions

Room: K7

Room: K4

Chair: Mads Borup

The destabilisation of the German electricity industry (1998-2015): Application and extension of a multi-dimensional framework. *Gregor Kungl, Frank W. Geels* 

Accelerated Diffusion of Socio-Technical Systems: Evidence from two Historical Case Studies. Cameron Roberts, Frank W. Geels

Impact of long-term Energy Efficiency Implementation projects in Energy intensive Micro, Small and Medium Enterprises (MSME) sector. *Nilesh Shedge* 

#### J5 Paper Session: Transitions to a Sustainable Economy

Chair: Jennifer McConville

How different actor groups can contribute to transitions towards a more sustainable economy: A case-study on the German egg industry. *Jacob Hörisch* 

Action Alliance on Sustainable Bananas. Alexandra Kessler

What goes on in the biorefinery valley of death? – Towards a role-based typology for understanding actors and actor networks in a demonstration project context. Johanna Mossberg, Sofia Nordqvist, Hans Hellsmark, Patrik Söderholm

The Sustainability Revolution or On the Fallacies of Ethical Consumption and Reformism.  $Jan\ Zoellick$ 

#### J6 Paper Session: Governance of Transitions

Room: K3

Chair: Klaus Jakob

Application of a transition cycle approach in the context of sustainable product policy: International programme evaluation case study for the South African Standards and Labelling Programme for Residential Appliances.

Thomas Götz, Lena Tholen

A governance perspective on NZEB niche development in India: a comparative case study. *Mansi Jain, Thomas Hoppe, Hans Bressers* 

A Comparative Analysis of Governance of Sustainability Transitions: The Case of Water in Brazil and South Africa. *Amrita Lamba* 

#### J7 Paper Session: Governance of Transitions

Room: K2

Chair: Anna Pegels

The diffusion of sustainable family farming practices in Colombia – An emerging sociotechnical niche? Willington Ortiz, Ulli Vilsmaier, Álvaro Acevedo-Osorio, Ulli Vilsmaier

Cooperation as a key element for sustainable food production and consumption – Potentials and limitations. *Benjamin Nölting, Martina Schaefer* 

Pathways of transformation in global food and agricultural systems: Implications from a large systems change theory perspective. *Domenico Dentoni, Steve Waddell, Sandra Waddock* 

#### 12.45 - 14.15 Side Event: Trafo 3.0

Paperless book publishing & reading

Room: K6

#### 13.00 — 14.00 Plenary Session:

Can International Cooperation Drive the Energy Transition? The German-Japanese Energy Transition Council - funded by the German Federal Environment Foundation (DBU)

Speakers: Peter Hennicke, Thomas Johansson, Hironori Hamanaka Lecture Hall 33

#### 14.30 - 16.00 Side Event: Trafo 3.0

Light electric mobility

Room: K6

#### 14.30 — 16.00 Parallel Session K

 K1 Dialogue Session: The role of learning in understanding and governing sustainability transitions (Part II):
 Panel Discussion

Room: K8

Convenors: Johannes Halbe, Claudia Pahl-Wostl

Panelists: Pieter Beers, Annette Bos, Vanesa Castan Broto, Eefje Cuppen, Megan Farrelly, Nigel Forrest, Johannes Halbe, Claudia Pahl-Wostl, Jaco Quist, Barbara van Mierlo



# K2 Dialogue Session: International Cooperation for Sustainable Urban Transitions: linkages and learning between India and Germany

Room: K5

Convenor: Kilian Topp

Panelists: Sumedha Basu, Mansi Jain, Christoph Woiwode

K3 Dialogue Session: On political, infrastructural and sociodemographic challenges of the energy transition in Germany, using the example of North Rhine-Westphalia Senate Hall

Convenors: Ben Best, Steven Engler, Esther Trost, Klaus Görner, Stephanie Luebke, Anne Nora Freier, Manfred Fischedick, Katja Pietzner

General Presentation. Manfred Fischedick

Flexibilisation of the Energy System by Means of Power-to-X as a Cross-Sectoral Use in North Rhine-Westphalia. *Klaus Görner* 

Social innovation as driver of the energy transition, the role of participatory governance settings, social narratives and Reallabore. *Stephanie Lübke, Nora Freier* 

Social-cultural perspectives on the energy transition. Steven Engler, Esther Trost

#### K4 Paper Session: Energy Transitions

Room: K7

Chair: Kamilla Karhunmaa

Political ecology as perspective in analyses of crises in sustainable transition: on-shore wind power in a front runner country.

Michael Soegaard Joergensen, Kristian Borch, Sophie Nyborg, Laura Tolnov Clausen

Dynamics of scientific knowledge production and technology diffusion: Insights from the emergence of wind energy. *Cristina Sousa, Nuno Bento, Margarida Fontes* 

The societal implications of Sustainable Energy Action Plans. Giovanni Bernardo

Ground-source heat in Finland: success by stealth. Ville Lauttamäki

#### K5 Paper Session: Geography of Transitions

Amin Dehdarian, Jochen Markard

Room: K4

Chair: Peter Agoston

Aligning innovation policy with the spatial nature of socioeconomic benefits: An analysis of the tidal kite technology innovation system from a Swedish policy perspective. *Johnn Andersson, Hans Hellsmark, Björn Sandén* 

Local Energy Transition Strategies: Case Studies in Germany. Pia Laborgne

Sustainable rural-urban transitions in energy landscapes of Germany and China. *Juergen Scheffran* 

Analyzing the Spatial Dynamics of Technological Innovation Systems: A Social Network Approach to Smart Grid Development in Europe.

#### K6 Paper Session: Governance of Transitions

Chair: Daniel Rosenbloom

Elements and Options for Transformative Environmental Policy. Klaus Jacob, Franziska Wolff, Lisa Graaf, Dirk Arne Heyen

Bursting the carbon bubble: The case of the divestment movement in the Netherlands. *Rick Bosman, Adriaan van der Tang* 

# K7 Paper Session: Practice Approaches, Social Learning, Social Innovation

Room: K2

Room: K3

Chair: Giuseppe Feola

Exploring the Interaction among Transition Initiatives and its Impact on Accelerating Regional Transition. *Dorukhan Sergin, Gönenç Yücel, Pieter Valkering, Ernst Gebetsroither-Geringer, Karin Markvica* 

Accelerating transition dynamics in city-regions: a qualitative modelling perspective. *Pieter Valkering, Gonenc Yücel , Ernst Gebetsroither-Geringer, Karin Markvica, Dorukhan Sergin, Leen Gorissen, Erika Meynaerts*The social practice of commoning as core determinant for commons. *Johannes Euler* 

A field trial investigation into the changes in energy practice arising from demand response initiatives in an eco-community.

Andrew Peacock, Kristen Goldbach, Edward Owens

# K 8 Paper Session: Energy Transitions

Room: K1

Chair: Jakob Donner-Amnell

Established sectors expediting clean technology industries? The Norwegian oil and gas sector's engagement with the emerging offshore wind power. *Tuukka Mäkitie, Allan D. Andersen, Jens Hanson, Håkon E. Normann, Taran M. Thune* 

To be or not to be connected – monitoring accumulation at the niche level in the electricity transition. *Kristina Hojckova, Björn Sandén* 

Energy transitions in Nigeria: the role of institutions in the governance of energy infrastructure provision (1800 - 2015). *Norbert Edomah* 

# 16.00 - 17.30 Parallel Session L

# L1 Dialogue Session: Creating and disrupting sociotechnical pathways

Room: K8

Convenor: Anna Pegels

Panelists: Tilman Altenburg, Michael Hayne, Babette Never

# L2 Dialogue Session: Management and governance of transformations to sustainable food systems

Room: K5

Convenors: Caroline van Bers, Johannes Halbe, Claudia Pahl-Wostl

Introductory presentation: Transformations in governance towards resilient food systems. Hallie Eakin, Polly Ericksen, Wiebke Förch, Lutgart Lenaerts, Nadine Methner, Claudia Pahl- Wostl, Caroline van Bers



Normativity in and of transformative science. Katriina Soini, Kaisa Korhonen-Kurki

Navigation and governance in transition processes towards more sustainable food production and consumption in Denmark. *Michael Søgaard Jørgensen* 

Governing the transition towards sustainable food systems: a plea for coordinated fragmentation. *Jeroen Candel, Laura Pereira, Katrien Termeer* 

### L3 Paper Session: Energy Transitions

Room: K4

Chair: Sören Becker

China's race in solar PV use - A sustainability transition success story? Doris Fischer

The Emergence of Solar Photovoltaic Energy in Brazil: Challenges and Opportunities for Growth. *Danielle Carstens, Linda Kamp, Sieglinde Cunha* 

Emerging Technologies: Drivers for Geothermal Heat Pumps in China. Julia Aristova

A strong structuration approach to agency-structure dynamics in socio-technical change: the case of gasification for energy from waste (EfW). *Paul Upham, Les Levidow* 

#### L4 Paper Session: Transitions to a Sustainable Economy Room: K3

Chair: Jacob Hoerisch

The Value of Sustainability – Insights into Consumer Attitudes towards Sustainable Products through Pricing Experiments.

Holger Berg, Jola Welfens, Christa Liedtke, Julia Nordmann, Johannes Buhl

Identifying signs of potential regime destabilization – transition towards low-consumption economy in Finland. *Sanna Ahvenharju* 

Socio-Technical Assessment of Collaborative Consumption: Resource Efficiency and Diffusion Potentials. *Katrin Bienge, Jens Clausen, Martina Schmitt, Jaya Bowry, Holger Rohn, Carolin Baedeker* 

Policy mixing for reconfiguring consumption and production – a concept fit for supporting transition management?

Martin Hirschnitz-Garbers, Susanne Langsdorf, Ullrich Lorenz

# L5 Paper Session: Energy Transitions

Room: K7

Chair: Nuno Bento

The role of ECREEE in mainstreaming renewable energy and energy efficiency in the ECOWAS region. Dominique Diouf

Mainstreaming smart grids in India: Exploring the potential of "Indian smart grid forum" as a field configuring event for development of smart grid niche. Suyash Jolly

Transition pathways for Smart Grid Initiatives: A strategic choice within Iran's Economy of Resistance. Hami Yousefdehi, Govind Gopakumar, Raymond Paquin, Peter Stoett, Catherine Mulligan

#### L6 Paper Session: Urban Transitions

Chair: Enza Lissandrello

Exploring the decarbonisation of everyday life practices – field tests as a methodological approach for transdisciplinary sustainability research.

Immanuel Stiess, Michael Kunkis

The role of local and national governance contexts in urban sustainability transitions: supporting or hampering local transition initiatives in the city of Genk? *Leen Gorissen, Erika Meynaerts, Pieter Valkering* 

Supporting transitions to green growth from the urban level – a conceptual framework. Georg Holtz, Chun Xia, Daniel Vallentin, Ralf Schüle, Rainer Lucas

Innovation in urban transitions – Don't ask for it, if that is what you want! Niklas Fernqvist, Mats Lundqvist

#### L7 Paper Session: Governance of Transitions

Chair: Amrita Lamba

Exploring the governance and politics of 'transformations towards sustainability'. *James Patterson* 

The search for transformative environmental governance. Key learnings for environmental administrations from transformation research.

Daniel Constein, Anne Klatt, Alexandra Lindenthal

Designing the Public Sector to Promote Sustainability Transitions: Institutional Principles and a Case Study of ARPA-E. *Brendan Haley* 

# L8 Paper Session: Transformative Science, Transition Labs and Experiments

Senate Hall

Room: K1

Room: K2

Chair: Matthias Wanner

A theory-driven impact evaluation of prospective practices used in transition contexts: results from an evaluation of the CSIRO "future forum" process. *Stephen McGrail* 

Creating a Multi-Scale Evaluation and Development System with Impact Hubs. Steve Waddell, Gerald Midgley, Martin Reynolds

Transformative Indicators for Urban Transitions: Measuring the Regime while supporting niche movements? *Katharina Schleicher, Hans Haake* 

Process Indicators to Measure Intermediate Progress of Social Impacts of an Individual Organization's Transition-Related Research.

Mark Elder, Robert Didham, Daisuke Sano

# 17.30 Closing of the IST 2016 Conference

Lecture Hall 33



# Social-Ecological Research & Dialogue Sessions

Joint sessions hosted by the Sustainability Transitions Research Network (STRN) and the German Federal Ministry of Education and Research (BMBF) at IST 2016

Wednesday, Sep 7, 09.00 - 10.30 (A7 - Part 1) and 10.45 - 12.15 (B7 - Part 2)

Social-Ecological Research Session: Transformations towards a Sustainable Economy Sen

Senate Hall

Wednesday, Sep 7, 16.45 - 18.15 (E7)

Dialogue Session: Implementing the Sustainable Development Goals: How can research contribute to sustainable consumption and production patterns

Senate Hall



As a special cooperation initiative between the Sustainability Transitions Research Network (STRN) and the German Federal Ministry of Education and Research's (BMBF) Programme "Research for Sustainable Development" (FONA3) the IST Conference will include a Social-Ecological Research Session on the BMBF's funding initiative "Sustainable Economy" in the context of its funding priority "Social-Ecological Research". Furthermore, a Dialogue Session will be discussing questions regarding transformations towards a sustainable economy in the context of the SDGs co-hosted by the BMBF.

In these sessions the focus is on the role of science in generating transformative knowledge and the potential of research projects to contribute to a more sustainable economy in practice. Transformation processes and strategies at different levels will be discussed, such as the interplay of dynamics at the level of firms, consumers, civil society initiatives and economic policies. It will also be discussed what concepts and methods are particularly suitable in this field of research and challenges of involving stakeholders in the research process will also be a key topic.

The sessions will feature presentations and speakers from German as well as international contexts, especially including projects funded in the BMBF's "Sustainable Economy" initiative and research from the STRN network. The aim is to foster an exchange of perspectives between both communities, initiate collaboration and identify promising approaches for research towards a sustainable economy.

# EnerTransRuhr

Project presentation: EnerTransRuhr – Integrated perspectives and transformative research designs for the energy transition in North Rhine-Westphalia

Wednesday, Sep 7, 10.45 - 12.15

Presentation of Project Results / Panel Discussion

Lecture Hall 33

#### Wednesday, Sep 7, 16.45 - 18.15

Interactive Event: Poster Presentations, Agent-Based Models and Transformational Products

Foyer



Graphic design: Stephan Preuß, Grafik + Design

Research on energy system transitions is faced with a variety of integration challenges:

- Integration of perspectives on technological and socio-cultural innovations;
- Integration of analyses of European, national and regional transformation strategies;
- · Integration of energy and resource issues to avoid problem shifting;
- Integration of model-based system knowledge and knowledge generated in experiments for steering transformation processes.

In the project "EnerTransRuhr" a research design has been developed to address this integration challenge. The project focus was on increasing energy efficiency in buildings in the Ruhr area cities Bottrop, Dortmund and Oberhausen. The interplay of various influencing factors and transformation strategies were analysed, such as the refurbishment potential in existing building stocks, motivation and decision strategies of different actor groups, the impact of changed social practices in households and political framework conditions acting as drivers or barriers for energetic refurbishment as well as energy saving behaviour.

Integrating the various individual projects and work packages was achieved via agent-based models (ABM). The models provide a common language for grasping the variety of

# Side events

influencing factors of energetic refurbishment strategies. Real-world experiments, in this case "living labs", where users test concrete strategies, and "governance experiments", where management and incentive strategies are being tested, are used to inform the process of further developing and optimising the ABMs.

Project results will be presented on Wednesday, Sep 7, 10.45 – 12.15 in Lecture Hall 33. Uwe Schneidewind will give an overview of the project. In a panel discussion, project team members will discuss the challenges of transformative research designs and the potential of agent-based models and urban real-world experiments as boundary objects in transdisciplinary research processes.

In the afternoon, 16.45-18.15, we invite you to join us for an interactive session. There will be poster presentations highlighting key aspects of the project. An exhibition of "transformational products" tested in user experiments will offer insights in the relation between technological innovations and behaviour in the field of energy saving practices in households. Some of the agent-based models used in the project will be run on screens and explained by the researchers who developed them. We also invite you to join us for food and drinks where you will also have the opportunity to test and experiment with the agent-based models and some transformational products yourself.

# Visiting the Urban Real-World Labs at "Arrenberg"

#### Thursday, Sep 8, 15.00 - 18.00

"Welcome to Wuppertal" – Visiting the urban Real-World Labs at the urban district "Arrenberg"

# Thursday, Sep 8, 18.00 - 21.00

Restaurant Day at the urban district "Arrenberg"

In the urban district "Arrenberg" a whole city quarter has set out to become  $CO_2$ -neutral by the year 2030. At your visit you can experience current and planned projects and meet the people shaping local transformations. There will be three different routes to discover the "Arrenberg" and its diverse sites of transformation. Learn more about the "Farmbox", self-driving buses, foodsharing, electromobility, the pilot project "Microgrid at the Arrenberg district", community-supported agriculture, the vision of the "Arrenberg-farm" ... and many more.

In the evening, another special event will take place at the Arrenberg: the Restaurant Day. Small "one-day restaurants" hosted by Arrenberg residents will open their doors and invite all visitors to a joyful and unique food experience.

# Trafo 3.0 project sessions

Past dynamics & current challenges in three transformation processes

# Trafo 3.0





Room: K6

Room: K6

# Friday, Sep 9, 10:30 - 12:00 Sustainable meat production & consumption Room: K6

- "Past dynamics and current challenges in the transformation towards sustainable meat production & consumption", Dr. Dietlinde Quack, Oeko Institute
- "Agriculture-related issues in the transformation process of meat production", Dr. Ulrike Klöble, Association for Technology and Structures in Agriculture (KTBL)
- Introduction and facilitation: Franziska Wolff, Oeko Institute

#### Friday, Sep 9, 12:45 - 14:15 Paperless book publishing & reading

- "Past dynamics and current challenges in the transformation towards paperless book publishing & reading", Carl-Otto Gensch, Oeko Institute
- "The transformation of the book market: platform economy and system-relevant infrastructures", *Volker Oppmann*, *log.os GmbH & Co. KG*
- · Introduction and facilitation: Inga Hilbert, Oeko Institute

### Friday, Sep 9, 14:30 - 16:00 Light electric mobility (e-bikes)

- "Past dynamics and current challenges in the transformation towards light electric mobility", *Ruth Blanck, Oeko Institute*
- "Policy measures for the use of e-bikes and their environmental potential", Dr. Frederic Rudolph, Wuppertal Institute
- "Infrastructure for e-bikes: the case of the Cycle-Highway RS 1", N.N., Regional Association Ruhr (RVR)
- Introduction and facilitation: Dirk Arne Heyen, Oeko Institute

This side-event takes place within the BMBF-funded research project "Trafo 3.0".

# About the Trafo 3.0 project:

(How) can societal transformation processes be initiated, supported and governed so that they are sustainable? This is the core question of the Trafo 3.0 research project conducted by Oeko Institute, a German environmental research and policy think tank, together with various stakeholders.



Based on previous projects and existing transition literature, transdisciplinary and action-oriented research is conducted with regard to three ongoing transformation processes: sustainable production and consumption of meat, paperless publishing and reading, and the use of e-bikes for urban and regional mobility.



The overall objective of the project is the further development and field-testing of a transformation heuristic, and the drafting of an electronic manual to support politicians and practitioners in contributing to the initiation and shaping of socio-ecological transformation processes.

More information on the project, running from April 2015 to March 2018, can be found on the website www.trafo-3-0. de (German language only so far).

The project is funded by the German Federal Ministry for Education and Research (BMBF), funding reference: 01UT1426.

#### About this side-event:

The event is open to IST Conference participants and anybody else interested.

The three thematic sessions outlined above are independent of one another and can be attended individually or in combination.

Each session consists of a short introduction into the project and its conceptual framework, 2 or 3 presentations from project members and external presenters, and a discussion with the audience.

# Can International Cooperation Drive the Energy Transition?

Panel Discussion hosted by the German Federal Environment Foundation (DBU)



Friday, Sep 9, 13.00 - 14.00

Lecture Hall 33

#### Speakers:

Prof. Dr. Peter Hennicke, former President of the Wuppertal Institute, Germany

Prof. Dr. emeritus Thomas B. Johansson, Lund University, Sweden

Prof. Dr. Hironori Hamanaka, Chair of the Board of Directors, Institute for Global Environmental Strategies (IGES), Japan

Despite differences in policies on energy and its supply, Japan and Germany are confronted by a similar challenge: to restructure their energy systems in such a way that they are low-risk, reliable, resource-efficient and climate-neutral in the long term. At the same time, both countries must remain internationally competitive on the basis of this ecological modernisation.

A planned institutionalised exchange between experts from both countries will aim to facilitate better strategies for meeting this challenge in the future. Prof. Peter Hennicke, former president of the Wuppertal Institute has initiated a project to form a German-Japanese Energy Council, funded by the German Federal Environment Foundation amongst other partners.

The focus of the council's work will be on facilitating scientific exchange of experiences in energy management, and on mutual learning. The goal of the project, and the council's main task, will be to highlight new and long-term strategies for implementing an ambitious energy transition based on good examples from both countries.

As a side event of the IST conference, hosted by the German Federal Environment Foundation, Peter Hennicke will introduce the project. In a panel discussion with international experts in the field of energy transition research, perspectives will be exchanged on the potential of international cooperation to foster a global energy transition.

# Book launch

Maja Göpel: The Great Mindshift: Why We Need a New Economic Paradigm for Sustainability Transformations (The Anthropocene: Politik – Economics – Society – Science; Vol. 2).

Hans Günter Brauch, Úrsula Oswald Spring, John Grin, Jürgen Scheffran (Eds.): Handbook on Sustainability Transitions and Sustainable Peace (Hexagon Series on Human and Environmental Security and Peace, Vol. 10).

## Friday, Sep 9, 10.30 - 12.00

Lecture Hall 33

#### Speakers:

Prof. Dr. Uwe Schneidewind, Wuppertal Institut

Dr. Maja Göpel, Wuppertal Institut

Prof. Dr. Jürgen Scheffran, Hamburg University, CLISEC

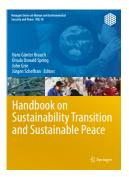
Prof. Dr. Ernst-Ulrich von Weizsäcker, founder of the Wuppertal Institut

PD Dr. Hans Günter Brauch, FU Berlin & AFES-PRESS



Sustainable development is the 21st Century's wicked problem. For over 40 years, the world has known about ecological limits to economic growth and social limits to economic inequality. Yet, our attempted solutions – mostly more efficient technologies – have reversed few unsustainable trends. So sustainability advocates now call for a paradigm shift, Great Transformation, radical change or system innovations – changes which evolve the current design of incentives, policies and institutions. This book describes the path ahead. It combines system transformation research with political economy and change leadership insights when discussing the need for a great mindshift in how

human wellbeing, economic prosperity and healthy ecosystems are understood, illustrating its nature through mapping pioneering practices and their commonalities.

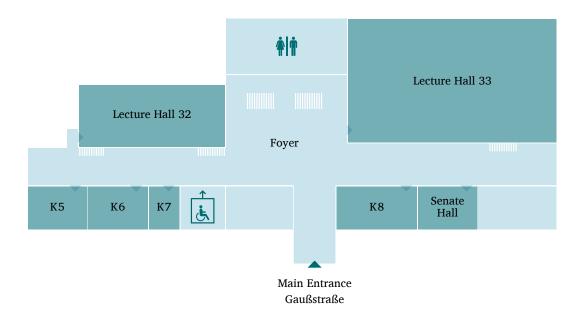


In the Sustainability Transition and Sustainable Peace Handbook 60 authors from many disciplines and from 18 countries examine in ten parts: Moving towards Sustainability Transition; Aiming at Sustainable Peace; Meeting Challenges of the 21st Century: Demographic Imbalances, Temperature Rise and the Climate–Conflict Nexus; Initiating Research on Global Environmental Change, Limits to Growth, Decoupling of Growth and Resource Needs; Developing Theoretical Approaches on Sustainability and Transitions; Analysing National Debates on Sustainability in North America; Preparing Transitions towards a Sustainable Economy and Society, Production and Consump-

tion and Urbanization; Examining Sustainability Transitions in the Water, Food and Health Sectors from Latin American and European Perspectives; Preparing Sustainability Transitions in the Energy Sector; and Relying on Transnational, International, Regional and National Governance for Strategies and Policies Towards Sustainability Transition.

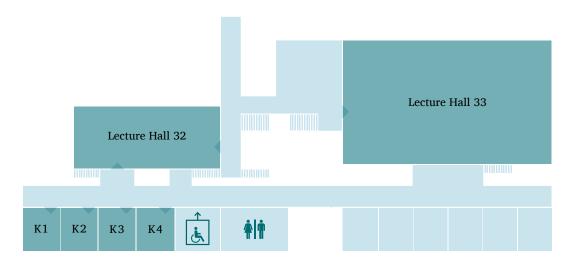
# Lecture hall complex, Building K, University of Wuppertal

# Ground floor



# Floorplans

# 1<sup>st</sup> floor



University of Wuppertal, Campus Grifflenberg Hörsaalzentrum, Building K Gaußstr. 20 42119 Wuppertal





Organizing Committee IST Conference 2016

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