

Building sustainable rural futures

THE ADDED VALUE OF SYSTEMS APPROACHES IN TIMES OF CHANGE AND UNCERTAINTY







9th European IFSA Symposium 4-7 July 2010 in Vienna, Austria

Building sustainable rural futures

The added value of systems approaches in times of change and uncertainty

Proceedings

Edited by: Ika Darnhofer and Michaela Grötzer

Vienna, July 2010

University of Natural Resources and Applied Life Sciences, Vienna ISBN 978-3-200-01908-9



Table of content

Information about the 9 th IFSA Symposium	ii
Morkshops in Thomas 1. Knowledge systems, leaving and collective action	
Workshops in Theme 1: Knowledge systems, learning and collective action	1
WS 1.1 – Innovation and change facilitation for rural development	1
WS 1.2 – Care farming: Challenges and innovations across the domains of agriculture	220
and social care	
WS 1.3 – Reaching the unreached	
WS 1.4 – Design methods, system approaches and co-innovation	360
WS 1.5 – Transdisciplinarity as a framework for integrating science and	470
stakeholder's perpectives	
WS 1.6 – Learning from and with local experts	
WS 1.7 – Virtual realities and the future of distance learning in rural areas	
WS 1.8 – Knowledge systems, innovations and social learning in organic farming	664
Workshops in Theme 2: Transition, resilience and adaptive management	
WS 2.1 – Methods and procedures for building sustainable farming systems	779
WS 2.2 – Narratives of interdisciplinary studies of farm system sustainability	973
WS 2.3 – Family farming under pressure. Reassessing options for liveability and permanence	992
WS 2.4 – Farming's relation to unconscious systems: Pictures, images and symbols	1200
WS 2.5 – Adaptive management in subsistence agriculture	1244
Workshops in Theme 3: Energy production, CO₂ sink and climate change	
WS 3.1 – Climate change: Agriculture, food security and human health	1300
WS 3.2 – Addressing climate change in the food chain: How can science make a change	
in practice?	1417
WS 3.3 – Sustainable biofuel production in developing countries: "Green" energy as the key?	1450
WS 3.4 – Promoting the discovery of alternative futures by reframing climate change	
communication	1538
Workshops in Theme 4: Sustainable food systems	
WS 4.1 – Mountain food products: A special system of provision	
WS 4.2 – Localised and sustainable agri-food systems in times of rural changes	
WS 4.3 – Fair and regional: New trends in organic and sustainable food systems	1749
WS 4.4 – Transitions towards sustainable agriculture: From farmers to agro-food systems	1822
WS 4.5 – Animal welfare: Education – Labelling – Action	1955
Workshops in Theme 5: Landscape and rural land use	
WS 5.1 – Designing sustainable landscapes	1994
WS 5.2 – Landscape and tourism: New models and practices for the relation with	
the rural world	2066
WS 5.3 – Systems approach in technology-oriented farming system design	
WS 5.4 – Education in landscape and territory agronomy	2167

www.ifsa-europe.org



Information about the 9th European IFSA Symposium

The Scientific Committee

The members of the Scientific Committee of the IFSA 2010 were: Encarnation Aguilar, Lisa Aigelsperger, Theodosia Anthopoulou, Ton Baars, Andreja Borec, Bram Bos, Christine Buchmann, Álvaro Campelo, Peter Carberry, Ataharul Chowdhury, Monica Commandeur, Artur Cristóvão, Benoît Dedieu, Emiel Elferink, Marjolein Elings, John Fairweather, Bernhard Freyer, Mariaassunta Galli, Helena Gómez Macpherson, Katharina Gössinger, Jan Hassink, Dorit Haubenhofer, Kirsten von der Heiden, Sebastian Helgenberger, Harry Hoffmann, Samsul Huda, Christian Hülsebusch, Lesley Hunt, Brigitte Kaufmann, Huub Kerckhoffs, Alex Koutsourris, Susanne Kummer, Gijs Kuneman, Claire Lamine, Hans Langeveld, Sylvie Lardon, Wei-li Liang, Thomas Lindenthal, Santiago Lopez-Ridaura, Salma Loudiyi, Jo Luck, Shi-ming Luo, Catherine Macombe, Sophie Madelrieux, Ana Alexandra Marta-Costa, Rebecka Milestad, Camilla Moonen, Egon Noe, Ulrike Nuck, Susanne Padel, Nikola Patzel, Tarla Rai Peterson, Cesar Revoredo-Giha, Paulina Rytkönen, Martina Schäfer, Markus Schermer, Erik Schmid, Otto Schmid, Flurina Schneider, Emiliana L. Soares da Silva, Nadarajah Sriskandarajah, Derk Jan Stobbelaar, Mel Taylor, Götz Uckert, Onno van Eijk, and Christian Vogl.

Reviewers

All papers published in the proceedings have been reviewed and revised before being published. We thank all reviewers for their time and work, which ensured the scientific quality of these proceedings.

Lisa Aigelsperger, George Alexopoulos, Ton Baars, Cecile Barnaud, Luca Maria Battaglini, Thomas Becker, Pieter Jelle Beers, Jayson Benge, Greet Blom-Zandstra, Bram Bos, Willem Brandenburg, Christine Buchmann, Hugh Campbell, Álvaro Campelo, Massimo Canali, Peter Carberry, Armelle Caron, Marion Casagrande, Marianne Cerf, Ataharul Chowdhury, Nathalie Cialdella, Xavier Coquil, Monica Commandeur, F. Constable, Caterina Contini, K.J. Coughlan, Sylvie Cournut, Anne Crawford, Artur Cristóvão, Benoît Dedieu, Christian Eichert, Emiel Elferink, Marjolein Elings, Boelie Elzen, John Fairweather, Til Feikea, Elisabete Figueiredo, Cécile Fiorelli, Isabel Fischer, Bernhard Freyer, Lola Dominguez Garcia, Ehud Gelb, David Gibbon, L. Giraldo, Katharina Gössinger, Lucie Gouttenoire, Glen Greer, Dorit Haubenhofer, Jan Hassink, Kirsten von der Heiden, Sebastin Helgenberger, Florence Hellec, Volker Hoffmann, Stefan Hörtenhuber, Christian Hülsebusch, A.K.S. Huda, Lesley Hunt, Ramanathan Kathiresan, Brigitte Kaufmann, Leonidas Kazakopoulos, Laurens Klerkx, Florence Kling-Eveillard, Timothy Koehnen, Alex Koutsouris, Susanne Kummer, Beata Kupiec-Teahan, Julie Labatut, Hans Langeveld, Sylvie Lardon, Pyrène Larrey-Lassalle, Gilbert Leistra, Asaf Leshem, Wei-li Liang, Santiago Lopez-Ridaura, Jo Luck, Dave Lucock, Shi-ming Luo, Catherine Macombe, Sophie Madelrieux, Mads Madsen, Jon Manhire, Anne Markey, Ana Alexandra Marta-Costa, Guillaume Martin, Eva Meiberger, Rebecka Milestad, Henrik Moller, Camilla Moonen, Manuel Belo Moreira, Selyf Morgan, Ruth Nettle, Egon Noe, Michael O'Kane, Roger Packham, Susanne Padel, Nikola Patzel, Tarla Rai Peterson, Caroline Petit, Jim Phelan, Flavio Pinto, Lorène Prost, John Reid, Cesar Revoredo-Giha, Maria Miguel Ribeiro, Camille Rueff, Juan-Pablo Rodríguez, Isabel Rodrigo, Philippe Roux, Chris Rosin, Walter Rossing, Paulina Rytkönen, K.L. Sahrawat Fabio Santucci, Caroline Saunders, Martina Schäfer, Lena Schaller, Markus Schermer, Alexander Schjøll, Otto Schmid, Flurina Schneider, Mila Sell, Emiliana Silva, Gerhard Soja, Nadarajah Sriskandarajah, Derk-Jan Stobbelaar, John Sumelius, Paul Swagemakers, Delmotte Sylvestre, Nina Nawal Taha, Cleo Tebby, Angelika Thomas, Jessica Thompson, Luís Tibério, Gunn Turid Kvam, Elske van der Fliert Onno, van Eijk, Jacobus van Meel, Jaap van Os, Christian R. Vogl, Cecilia Waldenstrom, Suhas P. Wani, Eelke Wielinga, Padraig Wims, A. Yen, and Joyce Zwartkruis.

www.ifsa-europe.org iii



The 9th European IFSA Symposium was jointly organised by:





University of Natural Resources and Applied Life Sciences, Vienna Department of Sustainable Agricultural Systems





University of Natural Resources and Applied Life Sciences, Vienna Department of Economic and Social Sciences



University of Natural Resources and Applied Life Sciences, Vienna CDR | Centre for Development Research

The Local Organising Committee

The IFSA 2010 was organised by Ika Darnhofer, Susanne Kummer, Michael Hauser and Christian Vogl.

They received ample support from Johannes Trautendorfer and Michaela Grötzer during the months preceding the Symposium. To make sure that everything runs smoothly during the Symposium, they were helped by: Lisa Aigelsperger, Rafia Aktar, Atarahul Chowdhuri, and Renate Renner

The Field Trips were coordinated by Susanne Kummer, who organised them with Elmar Fischer-Neuberger, Marlene Günther, Friedrich Leitgeb and Tena Mimica.

Information about the IFSA Europe Group

The IFSA Europe Group

The European Group of the International Farming Systems Association has been organising Symposia every two years since 1994. These symposia invite all researchers, whether their research takes place in Europe, in countries of the global South, or in other industrialised countries. The common thread is that they follow the farming systems approach. This approach is systemic, as much attention is put on how the elements of the farming system are linked and how they interact; it is multi-disciplinary in that agricultural technology, agronomy, ecology and social sciences are understood as necessary to understand a farming system; and it is trans-disciplinary since the farm family as well as other stakeholders are an integral part of the farming system.

At IFSA Symposia papers are presented in Workshops. Each Workshop is organised by one or several convenors. Convenors are in charge of writing the call text for their workshop, selecting the papers that will be presented in their Workshop, reviewing the full papers, and accepting the final, revised version of the paper. As the convenors ensure the scientific quality, they are the scientific committee of the IFSA Symposia.

For more information, please refer to the website of the IFSA Europe Group: www.ifsa-europe.org. This website is also a repository of previous IFSA Symposia, i.e. the full papers of all presentations can be downloaded freely.

www.ifsa-europe.org iv