JUSTUS-LIEBIG-UNIVERSITÄT GIESSEN

International Symposium on "Sustainable Food Systems – going beyond food security"

7.2.-8.2.2020 in Gießen, organized by JLU Gießen, FB 09

Contact: Irmgard.Jordan@ernaehrung.uni-giessen.de

Programm

Friday, 7.2.2020	
08.30 - 09.00 h	Opening sessions (IJ, MK)
09.00 – 09.30 h	**"Food for All - A national and global perspective on how to create sustainable food systems for nutrition in the framework of the SDGs and Human Right to Food"** By **Dr. Hanns-Christoph Eiden**, President of the Federal Office for Agriculture and Food (BLE)
09.30 – 09.45	Q/A
09.45 – 10.15 h	**"Incentives for more sustainable food systems"** By **Prof. Dr. Meike Wollni**, Environmental and Resource Economics, Göttingen University, Germany (Further Information)
10.15 – 10.30 h	Q/A
10.30 – 11.00 h	Coffee Break
11.00 – 11.30 h	**"Reverse thinking for food system transformation: from diet to impact"** By **Prof. Dr. ir. ID Inge Brouwer**, Department of Agrotechnology and Food Sciences, Subdivision Human Nutrition and Health, Wageningen University and Research, Netherlands (Further Information)
11.30 – 11.45 h	Q/A
11.45 – 12.45 h	Panel Discussion**: Transformation of the (global) food systems to reach SDGs while respecting planetary boundaries - What needs to be done? – How can this be achieved?** (IJ)
12.45 – 13.45 h	Lunch
13.45 – 14.30 h	**Rapid Fire presentation** - conversation starter for the open forum dialogue (BG, MGG)
14.30 – 15.15 h	Open Forum Dialogue
15.15 – 15.30	Short break to move to plenary
15.30 – 17.30 h	Workshops Round 1 (incl. selected table presentations)
17.30 – 18.00 h	Plenary: Presentation of Workshops Round 1 (RT)
19.00 – 21.30 h	Reception at the Mathematikum
Saturday, 08.02.2020	
09.00 – 09.15 h	Review of day 1 and welcome to day 2 (IJ, MK)
09.15 – 11.15 h	**Workshops Round 2** (incl. selected table presentations)
11.15 - -11.30 h	Short break to move to plenary
11.30 – 12.00 h	Presentation of workshops Round 2 (plenary) (SD)
12.00 – 13.00 h	Lunch Break
13.00 – 15.00 h	**Workshop Round 3** (incl. selected table presentations)
15.00 – 15.30 h	Coffee break
15.30 – 16.00 h	Presentation of workshops Round 3 (plenary) (MK)
16.00 – 17.30 h	Quo Vadis? (MP)
Departure	

Workshop descriptions and speakers (Stand 3.2.2020)

There will three rounds of workshops which cover four different topics each. Each workshop round will be followed by a plenary.

1. Friday, 7.2.2020, 15.30 - 17.30 h

2. Saturday, 8.2.2020, 9.15 - 11.15 h

3. Saturday, 8.2.2020, 13.00 - 15.00 h

Workshop Round 1: Friday, 7.2.2020, 15.30 - 17.30 h

1-1 Workshop on Nutrition-Sensitive Interventions and Programmes

Time: Friday, 7 February 2020, 15.30 – 17.30 h

In recent years nutrition-sensitive interventions and programmes have been set-up worldwide. The underlying idea is that in order to achieve sustainable food systems food systems related policies and investments need to become more nutrition-sensitive. In contrast to nutrition-specific interventions these interventions are defined as programmes that address the underlying causes of malnutrition. Thus, they are usually set up in complementary sectors such as agriculture, health, education or sanitation to only name a few.

The workshop will address the role of such interventions and programmes for achieving a more sustainable food system by addressing among others the following questions:

How can these interventions be conceptualized?

How can we measure the pathways and thus the success of nutrition-sensitive interventions?

Which factors seem to be especially relevant for nutrition-sensitive interventions to be effective and efficient?

Speakers:

- **Sinclair K** (WFP): From Pond to Table: Transforming inland fishing value-chains to support improved food security and nutrition in Sri Lanka
- **Batch V**. et al. (GIZ): The nutrition-sensitive Village Level Action Planning – Experiences and results from Malawi.
- **Chambers M** (iDE Bangladesh): Nutrition-Sensitive Market Ecosystems Development: Supporting inclusive, scalable, secure nutrition

Contact: Prof. Dr. Ramona Teuber & Dr. Birgit Gassler

1-2 Workshop on Food Industry

Time: Friday, February 7, 2020, 15.30-17.30 h

In this workshop, we will discuss the complexity of food systems in production and processing. Even though it seems obvious that the current food production and processing systems have a detrimental effect within all dimensions of ecology, strategies and changes towards a sustainable and healthy food environment seem to be either only implemented slowly or do not have the desired effects at all.

The first part of this workshop comprises of table presentations as examples for various aspects of the industry from the production of fish to the mindset of consumers: We will consider food production in aquacultures, the possibilities of a sustainable food service industry, and how the implementation of change has to go beyond the borders of production and processing and into the homes and minds of individuals. These topics also cover both

from detail to wide angle how different approaches in depth and breadth are necessary to better understand how a transformation can be implemented. Research can be zoomed in on single aspects, like the optimal changing frequency of the water in fish production sites or what to consider when tackling malnutrition in developing countries. Also, a system-wide approach to standardize practices across the sector of food service to be more sustainable can be discussed.

We will also give a tool for assessing the complex system that is food industry: the method of modelling food systems by NutriMod. This is a method to model complex systems within the four dimensions of nutrition ecology. We will simulate and discuss the making of a model of sustainable food production.

Speakers:

- **Dauda A** (Federal University Dutsinma, Nigeria): "Influence of water changing frequency on growth performance and nutrient utilisation of tropical fish species"
- **Rautiainen T** (South Eastern Finland University of Applied Sciences, Finland): "Process standardization in food service industry – a sustainability tool"
- **Atsbha M** (Mekelle University, Ethiopia): "Malnutrition in developing countries is beyond Food insecurity case of Ethiopia: Food texture and responsive feeding strategies as means mitigation strategies for malnutrition"
- **Weiland C** (Justus Liebig University Giessen) Compley System of Sustainalbe Production - Nutrimod Modelling Technique

Facilitator: Cornelia Weiland, WG Nutrition Ecology, Justus Liebig University Giessen

Contact: Dr. Eleonore Heil, Eleonore.A.Heil@ernaehrung.uni-giessen.de

1-3 Workshop on Corporate Global Agriculture

Time: Friday, February 7, 2020, 15.30 – 17.30 h

New business models of global agriculture operate at a much larger scale than even commercially oriented family farms and draw on hierarchical labor management. Due to its allegedly superior access to technology and markets, many observers consider such "biological manufacturing" an appropriate model for developing country agriculture. However, a crucial deficit in the current state of debate is the lack of knowledge concerning the economic and ecological sustainability and the social impacts of large-scale business models in agriculture. The workshop thus aims to address recent drivers, trends and impacts of such business models, with case studies from Europe and Asia.

Speakers:

- **Petrick M** (Justus-Liebig-University Gießen & Leibniz Institute of Agricultural Development in Transition Economies Halle (Saale)): "The rise of global corporate agriculture"
- **Domptail S** (Justus Liebig University Gießen): "Claims of land grabbing in Germany: an attempt to make space for environmental-friendly and agroecological agriculture?"
- **Bukin E** (Justus Liebig University Gießen): "The role of corporate farms in recent land market reforms in Ukraine"
- **Babadjanov J** (Justus Liebig University Gießen & Tashkent Institute of Irrigation and Agricultural Mechanization Engineers): "Cluster formation as a strategy of vertical integration: insights from cotton in Uzbekistan"

Contact: Prof. Dr. Martin Petrick, martin.petrick@agrar.uni-giessen.de

1-4 Workshop Nutrient Recycling

Time: Friday, 7 February 2020, 15.30 – 17.30 h

Human nutrition and food systems are usually reckoned as means-end-concepts. Food is produced, distributed and consumed. However, from a broadened system analysis perspective the recycling and feedback loops of getting new food from replaced soil nutrients must be included. Recycling is part of ecology and resource bases analysis to show sustainability. We will discuss how to include nutrient recycling as mean to sustain soil fertility and recognize the need for nutrient recycling in food choices. Moreover, energy and efforts for food production have to be put into the equation. The workshop will discuss various concepts of nutrient recycling at spatial and systematic levels. For instance, human excreta are huge if dumped and cities are not linked to rural areas. Instead the function of sewage and wastewater treatment and reshuffling of organic material is of great interest. A planners, agro-ecology and resource economics perspective shall be developed.

Speakers:

- **Ghimire SR** (Deutsche Welthungerhilfe e.V.): Perspectives of home gardening for social inclusion, women empowerment, economic empowerment and sustainable food security: a 16-year journey in Nepal, From formative research to scaling up (HG+)
- **Aweke CS** (Haramaya University, Ethiopia) Seasonality and Food security among Smallholder Rural Households in Eastern Ethiopia: Using panel data
- Ernst-August Nuppenau (Justus Liebig University Gießen)

List will be updated soon

Contact: Prof. Dr. E.-A. Nuppenau, ernst-august.nuppenau@agrar.uni-giessen.de

Workshop Round 2: Saturday, 8.2.2020, 09.15 - 11.15 h

2-1 Workshop on "Facilitating collaborative learning among agri-food value chain actors to support inclusive innovation processes"

Time: Saturday, 8 February 2020, 09.15-11.15 h

Integrating principles of transdisciplinarity and action research, we introduce collaborative learning as a methodological approach that is designed to support change-oriented learning processes among agri-food value chain actors. By supporting knowledge integration between these value chain actors and also with researchers, the aim is the co-development of context-specific innovations that can realistically be put into practice.

Agricultural research, and particularly agricultural research for development, have increased the application of participatory methods. When conceptualizing a research methodology, there are trade-offs in time, resources and control depending on the degree to which these participatory methods are applied. As the objectives of transdisciplinarity and co-innovation demand a high level of participation by non-academic actors, the overall research design needs to be flexible to put new ideas into action.

Our team will give an overview on the collaborative learning approach facilitated with single agri-food actor groups such as women farmers, and also with multi-stakeholder groups such as with farmers, traders, retailers and government officials. We will complement our presentation of this approach with examples from East and West Africa from research conducted through the RELOAD and UPGRADE Plus projects.

Participants will be encouraged to bring in their own experiences and dialogue about how such methodological approaches affect the role of the researcher, relationships in the process of research and research results. The opportunity of this workshop will further create space for reflection about how to leverage research to cultivate change that improves, strengthens and transforms value chains and food systems.

Speakers:

- **Keding G** (University of Göttingen): Fruit and vegetable processing and preservation in East Africa: avoiding food loss and waste and bridging seasonal nutritional gaps while contributing to sustainable diets
- **Menota GB** (Addis Abeba University): Effectiveness of selling fruits in pieces or in bulk in improving fruit consumption of high-school students: A cluster randomized controlled trial in urban setting of Ethiopia

Contact: Margareta Lelea (German Institute for Tropical and Subtropical Agricultutre (DITSL), Germany): m.a.lelea@ditsl.org

2-2 Workshop on Equity and Inclusion

Time: Saturday, 8 February 2020, 09.15-11.15 h

Interventions to improve food and nutrition security aim to prevent malnutrition in all its forms. A failure to address gender may exert adverse effects on women and even intensify their workload. Once agriculture trainings are offered a gender balance is achieved easier. A paradigm change in the division of labour between women and men at domestic level may simultaneously and sustainably improve food production, processing, and preparation as well as care.

This workshop will start with case studies from India and Malawi and an approach to develop sustainable gender just food systems. This will be followed by a guided participatory discussion which aims at identifying best practices and tools to include “gender and equity” aspects in food system analysis and development.

Speakers:

- **Mamani E** (University of Malawi, College of Medicine) Sustainability of the effectiveness of Community-Led Complementary Feeding and Learning Sessions (CCFLS) on Improving Child Feeding Practices and Nutrition Status of children aged 6-9months in Thyolo- An individual randomized controlled trial
- Bader N, Sarkar A, **Reinbott A**, *et al*. (GIZ): What enables and prevents women from following good nutrition practices in Madhya Pradesh, India? Results of a multi-sectoral nutrition project.
- **Vettersand J**, Wise L (WFP): Women and girls in the food system: the key to stop stunting in its tracks
- **Wach H** (WIDE Switzerland): Networking for sustainable gender just food systems

Contact: Dr. Irmgard Jordan and M. Gracia Glas, Irmgard.Jordan@ernaehrung.uni-giessen.de

2-3 Workshop on agroecological and organic food systems

Time: Saturday, 8 February 2020, 09.15-11.15 h

Agroecology is a promising option to combat the known adverse effects of industrialised agriculture as a pathways of eco-functional intensification. This approach is based on using internal natural resources and processes to secure agricultural productivity. Agroecologcial farming systems are often essential parts of local food system initiatives. As agroecology and organic farming has been advanced mainly by pioneer farmers from bottom-up movements, not only technological but also social innovations are important drivers of success.

This session will focus on the achievements of this more natural-based way of food production with emphasis on important impact categories such as productivity/ profitability, soil/water, climate change and biodiversity. Furthermore, strategies will be shown how direct consumer-

producer relation can support the transition towards more sustainable food and farming system.

Speakers:

- **Gattinger A** (Justus Liebig University): Organic farming and the building of sustainable food systems (preliminary title) – Eyhorn paper 2019
- **Singh D** (KVK, CAZRI): "Multifunctional small farm model for food security and environmental sustainability"
- Reusch M (Justus Liebig University): The political act of creating local food systems – Case of Gießen

Group work and discussion (visioning exercise):

Topic 1: how does agroecology contribute to socially just and sustainable food systems?

Topic 2: will be defined

Contact: Prof. Andreas Gattinger and Philipp Weckenbrock, Organic Farming with focus on Sustainable Soil Use, Institute of Crop Science and Breeding II, Justus-Liebig University Giessen, 35394 Giessen, Germany; Dr. Stephanie Domptail: Stephanie.Domptail@agrar.uni-giessen.de

Facilitator: Dr. Stephanie Domptail & Dr. Philip Weckenbrock

2-4 Workshop on "The value of sustainable food systems: Societal willingness to pay the sustainability price?"

Time: Saturday, 8 February 2020, 09.15-11.15 h

Evaluation systems are important for any systems to sustain. Sustainable food systems however need to be economically affordable, yet sustainable. Value of food is on the one hand bound to market commodities like other agricultural goods, nonetheless communicative and learning approaches increase consumer willingness to take responsibility in other evaluation systems, hence higher market prices, or different market channels (like Community Supported Agriculture systems).

The objective of the workshop is to discuss current market structures and communicative approaches with a special focus on sustainable food systems. The workshop will be based on a historical view on food market systems up to current market channels for sustainable (ethical and organic) foods and gaming theory (especially the dictator game). It will interactively assess ways for a food systems approach elaborating on communicative outreach with participants of food systems.

The overall aim of the workshop is to synthesize knowledge with regard to (sustainable) market channels, communication and societal willingness to pay.

Speakers:

- **Kopp T** (University Göttingen, FU Bozen): Bargaining power and contract farming
- **Schaak H** (University Göttingen): Landscape structures as valuable qualities of sustainable production systems
- **Risius A** (University Göttingen): Communication as means to value formation for sustainable food systems
- **Koch F** (Kartoffelkombinat e.V.): Values vs. Prices: Rethinking our comminucation and framing approaches in the sustainability movement

Contact: Antje Risius (University of Göttingen), a.risius@uni-goettingen.de

Workshop Round 3: Saturday, 8.2.2020, 13.00 - 15.00 h

3-1 Workshop on Human Health Aspects

Time: Saturday, 8 February 2020, 13.00 – 15.00 h

Making food systems sustainable also means to include human health aspects because health is a prerequisite to individuals' life and ability to work. Only people in good health can consume, digest, and absorb food. Therefore, health facilitates the optimal utilization of food. Besides the inherent food quality, traditional and modern knowledge about food and food safety will be discussed.

Research results from East Africa and India are presented as an introduction into the aspects of nutrient provision through diets. The workshop will then go on beyond addressing requirement-based intake of nutrients, water and energy towards bioactive plant compounds, food safety and behavioural aspects.

Speakers:

- **Ludwig C**, Erfle C, *et al.* (LVR Klinikum Essen): Nutritional deficits among schoolchildren in rural Tanzania
- **Ekesa B**, Nabuuma D, *et al.* (Bioversity International): Potential of participatorily developed diets in meeting iron and vitamin A dietary requirements of children 6-59 months in Eastern Democratic Republic of Congo
- Sarkar A, **Weingaertner L,** *et al.* (GIZ): Strengthening Resilience to Food and Nutrition Security: Findings from a Multi-Country Study in Mali, Malawi and India
- **Krawinkel M** (Justus Liebig University): The EAT-Lancet plan for sustainable diets – can it get implemented?

Followed by a joint discussion

Contact: Prof. Dr. Michael Krawinkel; Michael.Krawinkel@uni-giessen.de

3-2 Workshop on Climate Aspects

Time: Saturday, 8 February 2020, 13.00 – 15.00 h

Human induced climate change poses challenges to food, water and health security. The fourillars of food security are strongly linked to climate change, while activities associated with food production and distribution are major sources of climate forcing. Resilient and sustainable future food systems must respond to the challenges of a growing and urbanised population with changing dietary needs, they can cope with unexpected shocks and ensure a food-safe future, and they reduce the environmental impact of the food chain activities so as to not compromise the economic, social and environmental foundations for creating food security and nutrition for future generations.

In our workshop we will discuss climate change impacts, scientifically sound concepts of future food systems and their implementation considering expected climate change from local to global scales, the multitude of food systems and their climate footprints, we will identify gaps of scientific knowledge and key topics for future research. We will address relevant SDGs, their interactions and potential contradictions.

Speakers:

- **Schlattmann A,** *et al.* (University of Hannover): Sustainability assessment of agricultural water use in the Danube Basin: First steps towards a global monitoring tool

Contact: Dr. Elena Xoplaki; Elena.Xoplaki@geogr.uni-giessen.de

3-3 Workshop on „Agroecology and food sovereignty for food system transformation“

Time: Saturday, 8 February 2020, 13.00 – 15.00 h

Species extinction, climate crisis and increasing hunger worldwide - the results of current international reports prove how intensive agriculture has been exacerbating global ecological and social crises for decades. They also show the urgency of fundamental changes in our agricultural and food systems in order to feed the world in a healthy, ecologically and socially just way. The increasing evidence, together with the political pressure from social movements around the world, has opened spaces to discuss new paradigms about how and what food is produced and consumed. Agroecology as the integrative study of the ecology of the entire food system (Francis *et al.* 2003) is now widely discussed, even by the High Level Panel of Experts on Food Security and Nutrition (HLPE) which has recently released a report on "Agroecology and other Innovative Approaches" for sustainable agriculture and food systems.

Therefore, the workshop aims to discuss:

• the potential of agroecology for sustainable food systems and the implementation of the right to adequate food for all,

• how the momentum can be used to strengthen agroecology under the framework of food sovereignty,

• existing political lock-ins and threats such as cooptation of the concept. Process/methodology:

We will provide inputs from the organizers, short video from a partner organization in the global South and a world café session before reporting back to the plenary.

The participants of the workshop might integrate the concepts discussed in their academic work. The feedback from the participants will be considered for the policy convergence process of CFS and the Voluntary Guidelines on sustainable food systems.

Contact: Lena Bassermann (INKOTA-Netzwerk and Misereor), bassermann@inkota.de

3-4 Workshop on "Sustainable diets and their contribution to the Sustainable Development Goals (SDGs)" (was cancelled on Thursday, 5.2.2020, and replaced by workshop 3-4.1 "coming to terms")

Time: Saturday, 8 February 2020, 13.00 – 15.00 h

A promising method in Education for Sustainable Development (EDS) presents the simulation game as an action and experiential teaching method, to make systemic connections in sustainable development more tangible.

Using the internet-based software simcision and a system thinking approach, a simulation game on sustainable diets and their contribution to the SDGs was developed in order to visualize the interrelations of the SDGs in the need field of nutrition. Qualitative studies showed that it is feasible to recognize possible effects of the simulation game on affective learning outcomes to develop competences such as system thinking, collaborative decision-making in complex systems, critical thinking skills and changing perspective. Therefore, it may favour attitudes towards a change of consumption patterns to more sustainable diets.

This workshop offers to test the simulation game yourself, discuss its strength and limitations and how it can be used for data collection.

This workshop is limited to 14 active participants and unlimited number of observers.

Contact: Maike Cartsburg (Arbeitsgruppe Ernährungsökologie), cartsburg@nachhaltigeernaehrung.de

3-4.1 Workshop: Coming to terms with....

(this workshop replaces workshop 3-4 (simulation game) which had to be cancelled on a short notice)

Working in trans-disciplinary nutrition-agriculture research projects seems to be only natural in order to apply a holistic approach, to understand the various connections and linkages between food production and consumption, and to find balanced solutions for food and nutrition security challenges. However, within trans-disciplinary projects or when presenting results at conferences it was realised that several technical terms and indicators were used by one of the disciplines in a certain way which was taken for granted – while researchers from the other discipline understood the same term or indicator in a completely different way. This starts of when talking about micro- and macronutrients (for humans or for plants?), about processing (on the field like seed cleaning or in the kitchen like vegetable cooking?), about diversity (agricultural or dietary?), about variety (of a species or in the food?) or about the different forms of malnutrition (under-nutrition, over-nutrition or hidden hunger?) and the various indicators how to measure them.

Facilitator and Contact: Dr. Irmgard Jordan, Center for International Development and Environmental Research (ZEU); Irmgard.Jordan@ernaehrung.uni-giessen.de