

ZNE Conference “Sustainability Assessment of Agrifood Systems”

When: **20-21 November 2025**

Where: **Old University Library (AUB) of the Justus Liebig University,
Bismarckstr. 37, 35390 Giessen**

The Center for Sustainable Food Systems (ZNE) is organizing its first international ZNE conference on “Sustainability Assessment of Agrifood Systems”.

Sustainability assessment of agrifood systems is crucial for understanding the related environmental, economic, and social impacts of different food systems. Assessment is a precondition to mitigating climate change, reducing resource depletion and improving public health. It also guides policy makers and stakeholders in making informed decisions, fostering innovation and promoting sustainable production and consumption.

The main objective of the conference is to discuss methodical developments in sustainability assessment, the potential of sustainability assessment approaches for the transformation of our food system and key factors affecting the development, application and dissemination of these approaches in practice.

The conference will provide a valuable opportunity for interdisciplinary debate, with the participation of JLU researchers and invited scientists from around the world.

Programme:

Day 1: Thursday, 20 November 2025

8:30 – 9:00	Foyer AUB Registration
9:00 – 9:20	Room: AUB 1 Opening and welcome <i>Wencke Gwozdz, Vice President for Research and Graduate Studies, Executive Board of JLU Giessen</i> <i>Ramona Teuber, Executive Board of the ZNE, Chair of Agricultural and Food Market Analysis, JLU Giessen</i> <i>Irina Solovieva, ZNE Coordinator, JLU Giessen</i>
9:20 – 10:40	Room: AUB 1 Plenary session: <u>Tools and Approaches in Sustainability Assessment of Agrifood Systems – Setting the Agenda</u> Moderation: Ramona Teuber , Chair of Agricultural and Food Market Analysis, ZNE, JLU Giessen

	<p>Keynotes:</p> <p>Life Cycle Assessment of Biobased Systems: Robust Quantification or Sustainability Claims? <i>Vanessa Zeller, Working Group of Material Flow Management and Resource Economy, TU Darmstadt</i></p> <p>Research on Sustainability Assessment of Agrifood Systems – Some Critical Reflections from a Sustainability Science Perspective <i>Christian Herzig, Chair of Business Administration in Food Economics and Agribusiness & Executive Board of the ZNE, JLU Giessen</i></p>
10:40 – 11:00	Coffee Break
11:00 – 12:30	<p style="text-align: right;">Room: AUB 2</p> <p><u>Parallel Session 1: Gemeinsame Entscheidung der Kriterien zirkulärer Rinderhaltungssysteme</u></p> <p>Session Organisation: Lisa Petzoldt, <i>Institut für Landschaftsökologie und Ressourcenmanagement, JLU Gießen</i> Moderation: Alice Aubert, <i>Institut für Umwelt und Natürliche Ressourcen, Züricher Hochschule für Angewandte Wissenschaften</i></p> <p>Hands-on workshop mit einem Expertengremium, das im partizipativen Ansatz über die wesentlichen Kriterien entscheidet</p> <p>Expertengremium: Akteure aus der Landwirtschaft, Verwaltung, Vermarktung, NGO und Wissenschaft</p>
	<p style="text-align: right;">Room: AUB 3</p> <p><u>Parallel Session 2: Shifting Perspectives on Sustainability: Integrating Diverse Knowledges in Agrifood Systems Assessment</u></p> <p>Session organisers: Gudrun Keding and Aspasia Werner, <i>Chair of International Food and Nutrition Security, ZNE, JLU Giessen</i> Moderation: Gudrun Keding</p> <p>Presentations:</p> <p>School meal programmes as part of Agrifood systems <i>Eve Chakacha, Department of Nutritional Sciences, JLU Giessen</i></p> <p>Food Sovereignty Indicators: Can they take Ecuador to an alternative food regime? <i>David Singana, HINASES group (Human-Nature relations in agricultural socio-ecological systems), Chair of Agricultural, Food and Environmental Policy, JLU Giessen</i></p> <p>Whose Knowledge Counts? Local Definitions of Nutritional Health and Well-Being in Antigua and Barbuda <i>Aspasia Werner, Chair of International Food and Nutrition Security, ZNE, JLU Giessen</i></p>

	<p>From Knowledge to Action: Evidence-based policy making towards healthy and sustainable food systems Nicole Claasen, Sector Programme Food and Nutrition Security, Global Agenda for Food and Nutrition Security, GIZ</p>
12:30 – 14:00	Lunch Break
14:00 – 15:30	<p style="text-align: right;">Room: AUB 2</p> <p><u>Parallel Session 3: Co-design of new sustainability assessment approaches for farms and food systems (living labs)</u> Session organiser: Christian Herzig, Chair of Business Administration in Food Economics and Agribusiness, ZNE, JLU Giessen Moderation: Cesare Zanasi, Department of Agricultural and Food Sciences, University of Bologna</p> <p>Presentations:</p> <p>Towards a modular and coherent approach to sustainability assessment of food value chains Christian Schader, Department of Food System Sciences, FiBL Switzerland</p> <p>Anticipatory role of participatory sustainability assessment in living labs Katharina Helming, Leibniz Centre for Agricultural Landscape Research (ZALF)</p> <p>Co-design of new calculative practices in regional food systems – an actor-oriented and pragmatic-constructivist perspective Christian Herzig, Chair of Business Administration in Food Economics and Agribusiness, ZNE, JLU Giessen</p>
	<p style="text-align: right;">Room: AUB 3</p> <p><u>Parallel Session 4: Nutritional medicine for understanding and treating gastroenterological diseases</u> Session organiser: Elke Roeb, Chair of Gastroenterology, ZNE, JLU Giessen Moderation: Elke Roeb</p> <p>Presentations:</p> <p>MASLD, prevention and treatment by nutrition Elke Roeb, Chair of Gastroenterology, ZNE, JLU Giessen</p> <p>Inflammatory bowel disease and nutrition Jan De Laffolie, General paediatrics and neonatology, Paediatric gastroenterology, ZNE, JLU Giessen</p> <p>Celiac disease Sebastian Stricker, General paediatrics and neonatology, Paediatric gastroenterology, JLU Giessen</p>

	<p>Cytokines and MASLD, from mouse to men <i>Verena von Bülow, Research Group Gastroenterology, ZNE, JLU Giessen</i></p> <p>Food intolerances <i>Jan De Laffolie, General paediatrics and neonatology, Paediatric gastroenterology, ZNE, JLU Giessen</i></p> <p>Round table discussion: Statements for nutritional medicine All session participants</p>
15:30 – 15:50	Coffee Break
15:50 – 17:20	<p style="text-align: right;">Room: AUB 2</p> <p><u>Parallel Session 5: Animal welfare assessment and valuation in the context of sustainable dairy systems</u> Session organiser: Viola Schevel, <i>Chair of Business Administration in Food Economics and Agribusiness, JLU Giessen</i> Moderation: Corinna Ullrich, <i>Chair of Agricultural and Food Market Analysis, JLU Giessen</i></p> <p>Presentations: Animal welfare assessments Uta König von Borstel, <i>Chair of Animal Husbandry, Behaviour and Welfare, JLU Giessen</i></p> <p>Valuation of animal Welfare Viola Schevel, <i>Chair of Business Administration in Food Economics and Agribusiness, JLU Giessen</i></p> <p>World Café – Participants reflection on Animal Welfare Valuation All session participants</p> <p>Panel discussion Presentation of the World Café results</p>
	<p style="text-align: right;">Room: AUB 3</p> <p><u>Parallel Session 6: Sustainability assessment in healthcare</u> Session organiser: Ulrike Gisch, <i>Chair of Nutritional Psychology, ZNE, JLU Giessen</i> Moderation: Ulrike Gisch</p> <p>Presentations: Restrictive eating patterns in children and adolescents Jan De Laffolie, <i>General paediatrics and neonatology, Paediatric gastroenterology, ZNE, JLU Giessen</i></p>

	<p>Positive Deviance (PD) approach in the context of nutrition <i>Marie Haas, Chair of International Food and Nutrition Security, ZNE, JLU Giessen</i></p> <p>Prevention methods in the context of nutrition-related diseases <i>Elke Roeb, Chair of Gastroenterology, ZNE, JLU Giessen</i></p> <p>Sustainability measurement of obesity interventions <i>Merve Dzhambaz Kaya, Chair of Nutritional Psychology, JLU Giessen</i></p> <p>Concluding Commentary <i>Ulrike Gisch, Chair of Nutritional Psychology, ZNE, JLU Giessen</i></p>
17:20 – 18:00	<p style="text-align: right;">Room: AUB 1</p> <p>Final round in plenary Moderation: <i>Irina Solovieva, ZNE, JLU Gießen</i></p> <p>Presentation of the session results and wrap-up</p>
19:00	<p>Get together at the Bistro Die Kate (Bismarckstr. 32) Self-paid basis</p>

Day 2: Friday, 21 November 2025

9:00 – 10:30	<p style="text-align: right;">Room: AUB 2</p> <p><u>Parallel Session 7: Multidimensional assessment in agrifood systems: From sustainable farming practices to agroecology</u>¹ Session organisers: <i>Wiebke Niether, Chair of Organic Farming, ZNE</i> and <i>Irina Solovieva, ZNE, JLU Giessen</i> Moderation: <i>Irina Solovieva, ZNE, JLU Giessen</i></p> <p>Presentations:</p> <p>Monitoring the performance of a sustainable food system: The case of Organic Districts <i>Cesare Zanasi, Department of Agricultural and Food Sciences, University of Bologna</i></p> <p>Agroecological Sustainability of Traditional Green Leafy Vegetable Value Chains in Uganda: A Supply-Side Perspective <i>Robert Asiimwe, Chair of Agricultural and Food Market Analysis, JLU Giessen</i></p> <p>Risk preferences, perceptions, and the adoption of agroecology: a panel data approach in Nigeria <i>Chukwuma Ume, Chair of Agricultural and Food Market Analysis, JLU Giessen</i></p>
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¹ The session will take place in a hybrid format.

	<p>Circular Economy Transitions in Botswana's Agro-Food Systems: A Multi-dimensional Perspective on Food Waste Reduction Pearl B. Lefadola, <i>Department of Family and Consumer Sciences, University of Botswana</i></p> <p>Participatory development of multi-dimensional assessment tool for agroecology performance in living labs Wiebke Niether, <i>Chair of Organic Farming, ZNE, JLU Giessen</i></p> <p>Fishbowl discussion: Multi-dimensional assessment indicators All session participants</p>
	<p style="text-align: right;">Room: AUB 3</p> <p><u>Parallel Session 8: Valuing Biodiversity in Agri-Food Systems: Economic Approaches and Emerging Methods</u> Session organiser: Marielle Rüppel, <i>Chair of Business Administration in Food Economics and Agribusiness, JLU Giessen</i> Moderation: Viola Schevel</p> <p>Presentations: True Cost Accounting for biodiversity Marielle Rüppel, <i>JLU Gießen</i></p> <p>Capturing the value of biodiversity: stated preference methods and deliberative monetary valuation Johannes Linde and Vera Baier, <i>Helmholtz Centre for Environmental Research (UFZ) Leipzig</i></p> <p>Interactive discussion All session participants</p>
10:30 – 10:50	Coffee Break
10:50 – 12:20	<p style="text-align: right;">Room: AUB 2</p> <p><u>Parallel Session 9: Implementation of and critical analysis of true cost accounting¹</u> Session organiser: Corinna Ullrich, <i>Chair of Agricultural and Food Market Analysis, JLU Giessen</i> Moderation: Irina Solovieva, <i>ZNE Coordinator, JLU Giessen</i></p> <p>Presentations: Towards true prices in food retailing: the value added tax as an instrument transforming agri-food systems Benjamin Oebel & Lennart Stein, <i>Faculty of Business Administration, Management in the Eco-Industry, Nuremberg University of Technology Georg Simon Ohm</i></p>

	<p>Stakeholder Skepticism and Pragmatic Approaches for True Price Labeling Sebastian M. Carlsson, <i>Swedish University of Agricultural Sciences, Department of Human and Social Sciences</i></p> <p>Why not to implement TCA – a critical perspective Corinna Ullrich, <i>Chair of Agricultural and Food Market Analysis, JLU Giessen</i></p> <p style="text-align: right;">Room: AUB 3</p> <p><u>Parallel Session 10: Towards Net Zero farming: Sustainability assessment of annual and perennial crop innovations in farming systems</u></p> <p>Session organiser: John Clifton-Brown, <i>Chair of Crop Biomass and Bioresources, ZNE, JLU Giessen</i> Moderation: John Clifton-Brown</p> <p>Presentations:</p> <p>What is the Cool Farm Tool (CFT) and how can it be used to advise policy makers on Net Zero Farming practices? Sylvia Vetter, <i>School of Biological Sciences, University of Aberdeen</i></p> <p>CFT Case study on a Hesse farm: Towards Climate-Neutral Farming by integrating perennial Miscanthus into an arable farming system Julia Weyrauch, <i>Chair of Crop Biomass and Bioresources, ZNE, JLU Giessen</i></p> <p>Feed Supplements and Sustainability Scenarios: the case for Miscanthus and sugarcane straw derived Xylooligosaccharides (XOS- polymers of the sugar xylose) Rakesh Bhatia¹, Moritz Wagner², Guilherme Nogueira¹ ¹ <i>Chair of Crop Biomass and Bioresources, JLU Giessen</i> ² <i>Department of Applied Ecology, Hochschule Geisenheim University</i></p> <p>Discussion: Progress on adjusting the CFT for novel crops. All session participants</p>
12:20 – 13:00	<p style="text-align: right;">Raum: AUB 1</p> <p>Wrap-up and farewell Moderation: Anika Wagner, <i>Chair of Nutrition and Immune System, Executive Board of the ZNE, JLU Giessen</i></p> <p>Presentation of the session results and conference closure</p>

Sessions overview:

Plenary session: Tools and Approaches in Sustainability Assessment of Agrifood Systems – Setting the Agenda

Keynotes:

Research on Sustainability Assessment of Agrifood Systems – Some Critical Reflections from a Sustainability Science Perspective

Christian Herzig, *Chair of Business Administration in Food Economics and Agribusiness & Executive Board of the ZNE, JLU Giessen*

Life Cycle Assessment of Biobased Systems: Robust Quantification or Sustainability Claims?

Vanessa Zeller, *Working Group of Material Flow Management and Resource Economy, TU Darmstadt*

Parallel Session 1: Gemeinsame Entscheidung der Kriterien zirkulärer Rinderhaltungssysteme

Rinderhaltungssysteme umfassen ein breites Spektrum individueller Betriebsformen, die sich aus den Standortmerkmalen, den Ressourcenkapazitäten, dem Zugang zu Märkten und dem spezifischen Management ergeben. Die zirkuläre Rinderhaltung ist eine nachhaltige landwirtschaftliche Praxis, die sich auf Synergien konzentriert, die erst durch die Verknüpfung einer tierwohl-ausgerichteten Rinderhaltung mit Landnutzung, autarkerer Infrastruktur, sozialen Aspekten und Regionalität auf betriebs- und regionaler Ebene entstehen. Um ein gemeinsames Verständnis für zirkuläre Rinderhaltungssysteme zu entwickeln, braucht es eine Einigung über die wesentlichen Kriterien. Mit dem Ziel, ein praxisorientiertes Ergebnis zu erreichen werden Experten aus verschiedenen Bereichen entlang der Wertschöpfungskette beteiligt. Die Expertengruppe umfasst Akteure aus den Bereichen Landwirtschaft, Verwaltung, Vermarktung, NGO und Wissenschaft. Die Ergebnisse werden den teilnehmenden Akteuren zur Verfügung gestellt.

Als geeignete Methode verwenden wir die multi-kriteriale Entscheidungsanalyse (MCDA, e.g. Haag et al. 2022²), da diese Methode eine gute Handhabung solcher komplexen Systemen, wie Wertschöpfungsketten für Milch- und Fleischprodukte, ermöglicht. Die MCDA ist eine Methode zur Unterstützung von Entscheidungsprozessen, bei denen viele, manchmal widersprüchliche Kriterien berücksichtigt werden müssen. Sie hilft dabei, komplexe Entscheidungen strukturiert zu analysieren, indem die Kriterien bewertet und gewichtet werden. Dadurch wird eine transparente und nachvollziehbare Entscheidungsfindung unterstützt, die gemeinsam von verschiedenen Akteuren getroffen werden.

² Haag, F., Aubert, A.H., Lienert, J., 2022: ValueDecisions, a web app to support decisions with conflicting objectives, multiple stakeholders, and uncertainty. *Environmental Modelling & Software* 105361.

Die MCDA-Vorgehensweise beinhaltet die Schritte 1. - 4., wobei sich bei dem Workshop auf die Schritte 1. und 2. fokussiert werden:

Ablauf & MCDA-Schritte	Umsetzung
Begrüßung & Einführung	Lisa Petzoldt und Alice Aubert
1. Definition der Zielkategorien	Vorschlag von Lisa Petzoldt, Evaluierung durch das Expertengremium, Moderation: Alice Aubert
2. Bildung der Kriterien- und Indikatoren-hierarchie	Vorschlag von Lisa Petzoldt, Evaluierung durch das Expertengremium, Moderation: Alice Aubert
Zusammenfassung & weiterer Ablauf	Alice Aubert und Lisa Petzoldt
3. Messeinheiten	Jeder Experte, angeleitet durch Lisa Petzoldt und Alice Aubert
4. Gewichtung der Kriterien und Indikatoren	Jeder Experte, angeleitet durch Lisa Petzoldt und Alice Aubert

Parallel Session 2: Shifting Perspectives on Sustainability: Integrating Diverse Knowledges in Agrifood Systems Assessment

This session explores the guiding question: “Whose knowledge counts in sustainability assessments of agrifood systems?” While many frameworks emphasize technical robustness, they often fail to capture the cultural, political, and social dimensions that shape food systems. Such approaches risk reproducing epistemic exclusions, privileging standardized, Global North-centric metrics while overlooking the perspectives of small-scale producers, Indigenous communities, youth, and food-insecure populations.

The session brings together case studies from different contexts—school meal programmes, food sovereignty indicators in Ecuador, and community definitions of nutritional health and well-being in Antigua and Barbuda. Each contribution highlights how dominant framings can be challenged and how alternative approaches, grounded in local knowledge and practices, can reshape the way sustainability in agrifood systems is understood and assessed.

The following presentations will be given during the session, each addressing different dimensions of agrifood systems and sustainability:

School meal programmes as part of Agrifood systems

Eve Chakacha, *Department of Nutritional Sciences, JLU Giessen*

This contribution highlights key aspects of school meal programmes, including food production, food sourcing, procurement procedures, and the composition of meals, illustrated through selected case studies. The discussion engages with the FAO School Food and Nutrition

Framework as well as other frameworks that support the assessment of sustainability. Particular emphasis is placed on the three pillars of sustainability (environmental, social, and economic) in relation to school meal programmes, drawing on insights from previous research. By approaching the topic from this perspective, the presentation demonstrates how school meal programmes encompass the different components of agri-food systems.

Food Sovereignty Indicators: Can they take Ecuador to an alternative food regime?

David Singana, *HINASES group (Human-Nature relations in agricultural socio-ecological systems), Chair of Agricultural, Food and Environmental Policy, JLU Giessen*

The concept of food sovereignty was enshrined in the Ecuadorian constitution of 2008. Progress in this area has led to the publication of indicators to assess the progress of food sovereignty in 2024. These indicators were developed in collaboration with the Ecuadorian state and civil society. However, the indicators may be more aligned with the corporate regime. This presentation, therefore, aims to highlight the nuances of the indicators within the context of corporate co-optation.

Whose Knowledge Counts? Local Definitions of Nutritional Health and Well-Being in Antigua and Barbuda

Aspasia Werner, *Chair of International Food and Nutrition Security, ZNE, JLU Giessen*

This presentation examines how dominant Western health paradigms often fail to capture the cultural, historical, and social dimensions of nutrition and well-being. Using the case of Antigua and Barbuda, it explores how community definitions of nutritional health and well-being (N(H)WB) are shaped. Drawing on a mixed-methods pilot study the presentation seeks to highlight how local knowledge systems and youth perspectives challenge standardized approaches and broaden the ways sustainability in agrifood systems can be understood and assessed.

From Knowledge to Action: Evidence-based policy making towards healthy and sustainable food systems

Nicole Claasen, *Sector Programme Food and Nutrition Security, Global Agenda for Food and Nutrition Security, GIZ*

Parallel Session 3: Co-design of new sustainability assessment approaches for farms and food systems (living labs)

The workshop examines how new calculative assessment practices for sustainable food systems can be developed in a participatory way. It centers on the motivations of the actors involved in a co-designing process and improves our understanding of key factors relevant to the development and implementation of new calculative practices for sustainability at both corporate and regional level. From a socio-practical perspective, we investigate how, in collaboration with farms and local actor groups, new ways of achieving a more holistic balance sheet can be identified and tested. In addition, the workshop will explore the possibilities for

conducting participatory sustainability assessments in regional living labs and the question of which sustainability instruments and life cycle analyses can be used as a basis for assessing innovations in agrifood living labs that take into account the ecological, social and economic impacts of agricultural and food systems.

The session will include the following inputs:

Towards a modular and coherent approach to sustainability assessment of food value chains

Christian Schader, *Department of Food System Sciences, FiBL Switzerland*

Anticipatory role of participatory sustainability assessment in living labs

Katharina Helming, *Leibniz Centre for Agricultural Landscape Research*

Co-design of new calculative practices in regional food systems – an actor-oriented and pragmatic-constructivist perspective

Christian Herzig, *Chair of Business Administration in Food Economics and Agribusiness, ZNE, JLU Giessen*

Parallel Session 4: Nutritional medicine for understanding and treating gastroenterological diseases

Almost all gastroenterological diseases are directly related to or influenced by diet, such as food intolerances, food allergies, celiac disease, irritable bowel syndrome, inflammatory bowel diseases, gastrointestinal tumors, or chronic liver diseases.

The role of nutrition in the prevention & therapy of diseases of the digestive organs is therefore of great importance. A recommended plant-based diet would not only be useful for the prevention of diseases, but is also necessary for an ecologically sustainable global nutrition strategy.

The session will include the following inputs:

MASLD, prevention and treatment by nutrition

Elke Roeb, *Chair of Gastroenterology, ZNE, JLU Giessen*

Inflammatory bowel disease and nutrition

Jan De Laffolie, *General paediatrics and neonatology, Paediatric gastroenterology, ZNE, JLU Giessen*

Celiac disease

Sebastian Stricker, *General paediatrics and neonatology, Paediatric gastroenterology, JLU Giessen*

Cytokines and MASLD, from mouse to men

Verena von Bülow, *Research Group Gastroenterology, ZNE, JLU Giessen*

Food intolerances

Jan De Laffolie, *General paediatrics and neonatology, Paediatric gastroenterology, ZNE, JLU Giessen*

The session will be concluded by the round table discussion with all the session participants to discuss and formulate relevant statements for nutritional medicine.

Parallel Session 5: Animal welfare assessment and valuation in the context of sustainable dairy systems

This session focuses on the role of animal welfare in sustainable milk production. Animal welfare presents significant challenges in terms of measurement and integration into farm-level sustainability assessments. This session will be organised in the workshop format and will address the assessment and valuation of animal welfare on dairy farms, with a particular focus on integrating welfare aspects into sustainability assessment frameworks.

The workshop will be structured as follows:

Animal welfare assessments

Uta König von Borstel, *Chair of Animal Husbandry, Behaviour and Welfare, JLU Giessen*

The first input will provide an overview of current approaches to animal welfare assessment and the challenges of measuring welfare beyond traditional health-based parameters.

Valuation of animal Welfare

Viola Schevel, *Chair of Business Administration in Food Economics and Agribusiness, JLU Giessen*

Next, a shared understanding of the True Cost Accounting (TCA) concept as a valuation system will be established through a brief overview of its main principles and the presentation of an application example. This introduction will form a common basis for the group discussion that follows.

World Café – Participants reflection on Animal Welfare Valuation

All session participants

Inspired by the World Café format, the group phase aims to activate participants' expertise and stimulate in-depth debate. Participants can choose to join one discussion group that best matches their background or interest. Each group will be assigned to a table (three to five groups in total, depending on the session size) representing different stakeholder perspectives — for example, consumers, farmers, NGOs, the retail sector (LEH), and policy makers. Each group will have time to discuss the suitability and potential implications of using the TCA approach for animal welfare valuation. At the end of this phase, each group will nominate one member to participate in the subsequent panel discussion.

Panel discussion

Presentation of the World Café results

The panel discussion will provide an opportunity to explore the opportunities, limitations, and ethical considerations of monetizing animal welfare, drawing on insights from the group discussions. The workshop will conclude with a summary of the key findings, new insights, and potential solutions identified during the session.

Parallel Session 6: Sustainability assessment in healthcare

The objective of SDG 3 "Good Health and Well-being" is to ensure healthy lives and support well-being for all people at all ages. However, particularly in the context of health, the question arises as to which indicators can be used to measure sustainability across different areas of the healthcare system. This session will therefore focus on medical, psychological and nutritional perspectives of sustainability assessment.

The goal of the session is to gain a more comprehensive understanding of the role of sustainability and sustainability measurements in the health sciences, using the examples of medicine, psychology, and nutritional sciences.

Restrictive eating patterns in children and adolescents

Jan de Laffolie, *General paediatrics and neonatology, Paediatric gastroenterology, ZNE, JLU Giessen*

In the first presentation, the focus will be on restrictive eating patterns in children and adolescents. The essential restrictive eating patterns in childhood, adequate applications, and risks in implementation will be described. Additionally, restrictive eating patterns will be presented as a potential predictor for ARFID or other eating disorders. Regarding sustainability and sustainability measurement, aspects of prevention and intervention in working with children and adolescents will be discussed.

Positive Deviance (PD) approach in the context of nutrition

Marie Haas, *Chair of International Food and Nutrition Security, ZNE, JLU Giessen*

The second presentation will address the Positive Deviance (PD) approach in the context of nutrition. After a brief introduction to the PD approach, its application to complex problems, such as malnutrition in children, will be discussed, followed by practical examples, including those from India. Moreover, the relevance and benefit of the PD approach as a sustainable intervention method will be discussed.

Prevention methods in the context of nutrition-related diseases

Elke Roeb, *Research Group Gastroenterology, ZNE, JLU Giessen*

In the third presentation, prevention methods will be discussed. By focusing on various nutritional aspects (nutrition, eating behavior, learning healthy eating), it will be shown which indicators and measures exist in the context of nutrition-related diseases to ensure sustainability.

Sustainability measurement of obesity interventions

Merve Dzhambaz Kaya, *Chair of Nutritional Psychology, JLU Giessen*

The fourth presentation will focus on the sustainability measurement of obesity interventions. First, a brief overview of the disorder of obesity will be provided. Then, an overview of various obesity interventions will be given. The focus of the presentation will then be on sustainability indicators in the context of obesity interventions.

Concluding Commentary

Ulrike Gisch, *Chair of Nutritional Psychology, ZNE, JLU Giessen*

In a concluding commentary, the central findings of this session will be summarized, discussed, and connected with each other. The goal of this session should be to deepen the understanding of sustainability and sustainability measurements in the health sciences.

Parallel Session 7: Multidimensional assessment in agrifood systems: From sustainable farming practices to agroecology

This session aims to explore the various dimensions involved in assessing agrifood systems, focusing on the transition from conventional sustainable farming practices to holistic agroecological approaches. It will explore the environmental, social, and economic indicators used to evaluate sustainability in agriculture and food production. Participants will discuss innovative assessment frameworks and approaches that capture complex interactions within agrifood systems, highlighting best practices and case studies covering diverse agricultural systems and environments. The session will also consider policy implications and strategies to promote agroecology as a key driver for resilient and sustainable food systems.

The session will include the following inputs:

Monitoring the performance of a sustainable food system: The case of Organic Districts

Cesare Zanasi, *Department of Agricultural and Food Sciences, University of Bologna*

Agroecological Sustainability of Traditional Green Leafy Vegetable Value Chains in Uganda: A Supply-Side Perspective

Robert Asiimwe, *Chair of Agricultural and Food Market Analysis, JLU Giessen*

Risk preferences, perceptions, and the adoption of agroecology: a panel data approach in Nigeria

Chukwuma Ume, *Chair of Agricultural and Food Market Analysis, JLU Giessen*

Circular Economy Transitions in Botswana's Agro-Food Systems: A Multidimensional Perspective on Food Waste Reduction

Pearl B. Lefadola, *Department of Family and Consumer Sciences, University of Botswana*

Participatory development of multi-dimensional assessment tool for agroecology performance in living labs

Wiebke Niether, *Chair of Organic Farming, ZNE, JLU Giessen*

The session will be concluded by the interactive fishbowl discussion with all the session participants to discuss the multi-dimensional indicators suitable to assess various dimensions of sustainable food systems based on agroecological principles.

Parallel Session 8: Valuing Biodiversity in Agri-Food Systems: Economic Approaches and Emerging Methods

Biodiversity plays a critical role in the resilience and sustainability of agriculture and food systems, yet its value often remains invisible in economic decision-making. This session explores how economic valuation can help bridge this gap by making the benefits of biodiversity more tangible across sectors and disciplines.

The session topics include:

- Overview of the main economic valuation approaches for biodiversity
- Focus on two stated preference methods:
 - Deliberative Monetary Valuation (DMV)
 - Discrete Choice Experiments (DCEs)
- Opportunities and limitations of True Cost Accounting (TCA) for Biodiversity

We will demonstrate how these methods capture diverse values, integrate stakeholder perspectives, and support policy design in complex agri-food systems.

Through examples and interactive discussion, participants will gain insight into:

- How economic valuation helps quantify the benefits of biodiversity in agriculture and food systems
- Strengths and limitations of different valuation approaches
- The potential of DCEs and DMV to reflect plural values, trade-offs and preferences in decision-making
- The integration into TCA

Presentations:

True Cost Accounting for biodiversity

Marielle Rüppel, *JLU Gießen*

Capturing the value of biodiversity through stated preference methods (deliberative monetary valuation and discrete choice experiments)

Johannes Linde and Vera Baier, *Helmholtz Centre for Environmental Research (UFZ) Leipzig*

Interactive discussion

All session participants

Parallel Session 9: Implementation of and critical analysis of true cost accounting

True cost accounting is becoming increasingly popular in sustainability assessments. This calculation method is often seen as a necessary step in a free market economy to make the value and price of environmental services and environmental damage visible and monetizable. These are the externalities that occur during the production of food or goods. Through this valorization, these externalities will supposedly be adequately considered in political processes and sustainability assessments.

But is this conclusion correct? Can we attribute monetary values to the ecological benefits and damages of production, the intrinsic value of nature, the social value added by value chains, and animal welfare? Should we then add up the valuations of these very different dimensions and weigh them against each other? And how could TCA be implemented in practice?

In the workshop, the concept of true cost accounting will be presented, and its practical implementation will be demonstrated using examples (Benjamin Oebel, Lennart Stein).

In a second contribution, the concept will be critically scrutinized. (Corinna Ullrich, Sebastian M. Carlsson).

Additional contributions will be made regarding the implementation of TCA and its critical points.

Presentations:

Towards true prices in food retailing: the value added tax as an instrument transforming agri-food systems

Benjamin Oebel & Lennart Stein, *Faculty of Business Administration, Management in the Eco-Industry, Nuremberg University of Technology Georg Simon Ohm*

Stakeholder Skepticism and Pragmatic Approaches for True Price Labeling

Sebastian M. Carlsson, *Swedish University of Agricultural Sciences, Department of Human and Social Sciences*

Why not to implement TCA – a critical perspective

Corinna Ullrich, *Chair of Agricultural and Food Market Analysis, JLU Giessen*

Parallel Session 10: Towards Net Zero farming: Sustainability assessment of annual and perennial crop innovations in farming systems

According to FAO, agrifood systems contribute up to 30% of global greenhouse gas emissions. This needs to be reduced rapidly, especially in light of the European Green Deal and its ambitious aim of reducing the emissions by at least 50% by 2030.

The Cool Farm Tool was developed to analyse scenarios on farms which could reduce the GHG emissions. CFT is not a fiendishly complex Integrated Assessment Model (IAM), but rather a simplified system that can be used with stakeholders with minimal datasets to explore options and create scenarios. Unlike IAMs, CFT has enjoyed widespread adoption, and is the #1 GHG calculator for agriculture worldwide used by commercial practitioners. In this session, CFT developer and user, Dr. Sylvia Vetter, will overview the CFT approach. Further speakers in the session will use the CFT (and associated LCA approaches, e.g. OpenLCA) to explore farm system change scenarios with new data from current experiments ongoing on real farms (e.g. with the integration of arable and perennial crops).

The session will include the following inputs:

What is the Cool Farm Tool (CFT) and how can it be used to advise policy makers on Net Zero Farming practices?

Sylvia Vetter, School of Biological Sciences, University of Aberdeen

CFT Case study on a Hesse farm: Towards Climate-Neutral Farming by integrating perennial Miscanthus into an arable farming system

Julia Weyrauch, Chair of Crop Biomass and Bioresources, ZNE, JLU Giessen

Feed Supplements and Sustainability Scenarios: the case for Miscanthus and sugarcane straw derived Xylooligosaccharides (XOS- polymers of the sugar xylose)

Rakesh Bhatia¹, Moritz Wagner², Guilherme Nogueira¹

¹ *Chair of Crop Biomass and Bioresources, JLU Giessen*

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Discussion: Progress on adjusting the CFT for novel crops.

All session participants

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