

Proposal (Vorhabensbeschreibung)

Diversifying sustainable and organic food systems – FOODIVERSE

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Abstract:

Food consumption significantly influences resource use and the environmental effects of food production and distribution. Currently a rather homogenous group of well-educated and affluent consumers is strongly interested in organic food. The mainstream food supply chains and their governance are characterised by a food regime that creates large quantities of standardised food. A more diverse food system could deliver more choices and could be more sustainable. What is lacking is a systematic and practice-oriented characterisation of diversity in the food system and its impact on resilience, enhancing socio-economic and environmental pillars of sustainability.

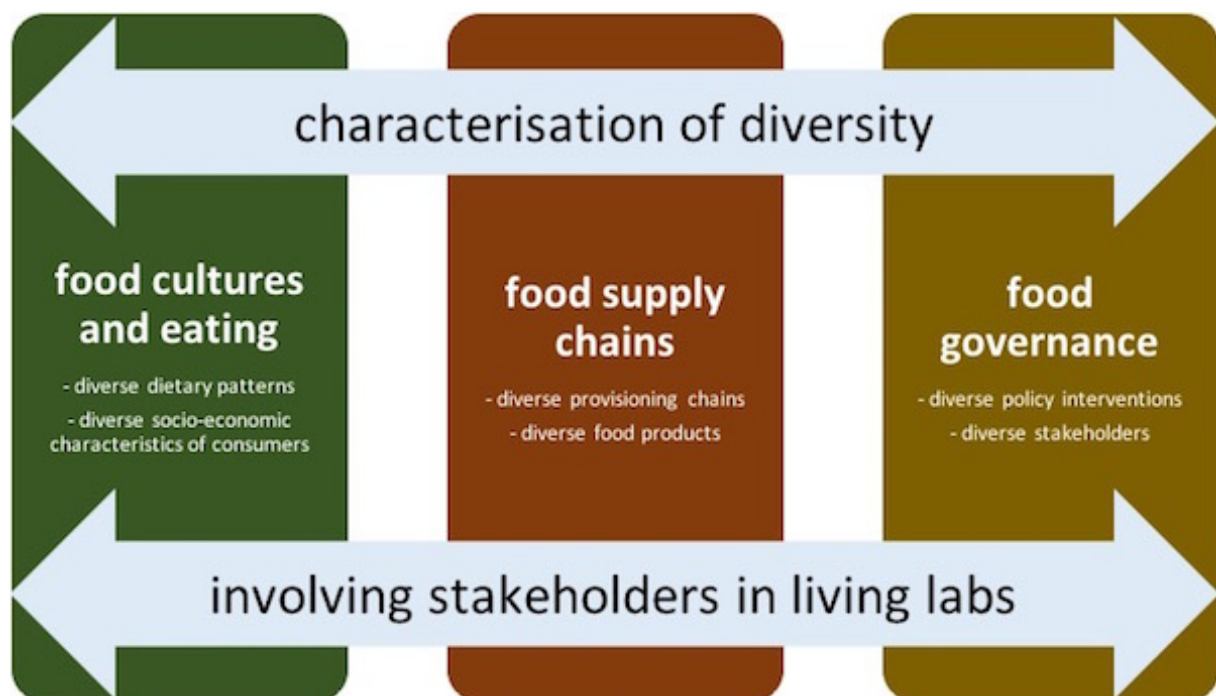
The **FOODIVERSE project aims to produce practice-oriented knowledge on how diversity in diets, novel food supply chains and food governance contributes to more organic and sustainable food systems.** The project provides multi-level perspectives on transforming local food systems across Europe by promoting diversity of consumers, producers and key stakeholders. Methodologically and theoretically this project takes a relational approach on diversity, emphasising different characteristics in various contexts and across different scales. Diversity has diverse meanings, for example in urban Norway or in rural United Kingdom, but also to German consumers, Italian government officials or Polish food producers. We seek to identify the relations in characteristics of diversity that accelerate a transformation toward more sustainable food systems.

The project directly promotes organic food systems through involving consumers, producers, food-processors and those governing food systems with a living lab methodology. A user-centred and innovation approach in local contexts of Italy, Germany, Norway, Poland and the United Kingdom assists in comparing whilst instantaneously implementing the results in real-life scenarios. We engage different actors and include a diverse range of viewpoints on organic food systems.

I. Objective (Gesamtziel des Vorhabens)

Currently, there is little knowledge about how a diversification of the food system might lead to an increased consumption as well as production and distribution of organic food. Starting from diverse food cultures and diets **our main hypothesis assumes a diverse food system as more sustainable**, strengthening resilience and enhancing socio-economic and environmental benefits along the food chain. Accordingly, **the objective of the FOODIVERSE project is to better understand diversity in organic and other sustainable food systems at consumer, supply chain and governance levels**. We thereby aim to provide **innovative insights on characteristics of diversity invigorating pathways towards more sustainable development**. We will focus on how diversity in food systems reinforces resilience. Diverse food systems provide a higher variety of resources (procedures, social networks and practices, cultural patterns, products, micro-economies etc.), which can be easily applied and respond to changing environments. The diversity of food systems ensures fulfilling socio-economic and nutritional needs in sustainable ways. Gaitán-Cremaschi et. al (2019) define three key components in diverse food systems: the agricultural production system, the value chain, and associated support structures in governance regulations and infrastructures. The governance of these key components has crucial impact on households' availability of (enough food), access to (fair distribution) and use of healthy and nutritious food, as well as the resilience and stability of the food system as such. Thus, the FOODIVERSE project is 'flipping the chain', putting diversity in local food cultures and eating at its core, because a homogenisation of diets has detrimental impacts on food provisioning systems (ERAnet SUSfood / CORE organic call topic 2c and 2d).

Figure 1: Diversity in the food system



Food practices and dietary choices both affect and are affected by how resources are used and how food is produced and distributed within the food system. Contemporary diets are demarcated by an increased intake of calories, animal proteins, and ultra-formulated standardised foods that are high in sugar, salt and fat. Even though the consumption of organic food as a more healthy and sustainable option has increased during recent years, highly educated and/or affluent are the most frequent consumers (Vittersø et al., 2019b). Little is known about how people have access to and provide for diverse diets, especially in terms of organic and local food. There is also little knowledge about the cultural and social meaning of diverse and sustainable diets seen from a consumer perspective. In this project we will map, compare, analyse and discuss drivers and barriers for developing a more diverse, local food system. Ways of providing for food vary, even between households and across localities (Mikkelsen 2011). Thus, we will investigate cultural (values, meanings and representations) and material (physical landscapes, ecologies and political economy) dimensions of diverse food (Johnston and Goodman 2015) in order to gain knowledge of how diversification of diets across different socio-economic groups may strengthen consumption of local and organic food.

Starting from a local food culture perspective, the FOODIVERSE project particularly focusses on how the relations and linkages across different characteristics of diversity may increase resilience and thus supporting a transition to local food systems that are socially, economically and environmentally sustainable. The organic food system is at the core of our investigation, because it is the only legally defined system following public and additional private standards. However, we will also explore the extent to which organic food systems can learn from other food systems with sustainability standards. FOODIVERSE compares key characteristics of diverse food systems in five European countries: the United Kingdom, Poland, Norway, Italy, and Germany. We combine quantitative and qualitative data and implement living labs as 'innovation ecosystems'. In order to promote diversity in the supply chain we need to understand diversity in consumption practices. Previous research demonstrates that practices vary strongly both within countries and across borders (Halkier et al., 2007; Kjærnes, Harvey, & Warde, 2007). Sustainability and organic food have different meanings and connotations according to food cultures and socio-economic factors. Therefore, the project will investigate the role of diversity by comparing food cultures, food consumption practices and diets and how consumption affects - and is affected by - diverse food supply chains and food governance in the participating countries. The project will comparatively analyse diversity in three key areas, with each participating country being responsible for gathering and analysing local data, following a joint protocol that has been developed in work packages:

- (1) **diversity in dietary patterns** and socio-economic characteristics of consumers analysing existing quantitative data and focus group discussions.
- (2) **diversity in food supply chains** and range of food products conducting a comprehensive market audit of the biological diversity of food products available in supermarket, territorial and private catering supply chains and undertaking key informant interviews with leading actors within these chains in all five study countries.
- (3) **diversity in policy interventions** as well as key stakeholders involved in local food systems, which we analyse by supportive frameworks as well as conducting a local network analysis.

Based on this analytical input, we provide a living lab approach. This will be a practitioner centred design in an open-ended 'innovation ecosystem' bringing stakeholders in local contexts into a dialog, embedded in the broader food system. Through this methodology, we aim at providing solutions that are adapted to local settings, and that comply with a more diversified and sustainable food system. The living lab approach will also assist in testing our hypothesis that a diverse food system is a more sustainable one. In order to establish living labs, we will approach local food initiatives in the five countries. In Germany there might be local food councils or organic model regions involved. Such an endeavour has the advantage that we base the research on the need of stakeholders already active in promoting local sustainable and organic solutions for the food system.

We situate our approach at the confluence of the SUSFOOD and the CORE ORGANIC call to which this project proposal was submitted, considering organic food choices as more sustainable consumer behaviours, which we situate in local contexts across Europe. These consumption patterns instantaneously support health, trade, and job creation of local food systems. By involving local food initiatives, as indicated above, we aim to improve competitiveness of local SMEs that respond to consumer demand for a diverse, healthy, safe and attractive diet aiming at the fulfilment of a growing demand for organic products. We would therefore like to help to unleash the full potential that local food systems can have to contribute to diversity that in the end should also lead to more organic and sustainable food systems.

To sum up, the objective of the FOODIVERSE project is to better understand diversity in food systems at consumer, supply chain and governance levels. We are interested in diverse spatial scales, for instance the relationship of urban and rural communities that might be connected by promoting more local food systems. We also identify local drivers and barriers of diversity for culturally acceptable and economically accessible foods for consumers that are environmentally sound and economically fair for local producers. Diversity of food cultures and eating might reconnect consumers to nature by better understanding how the food is produced. Diversity is also directly linked to the organic/ agroecological principles of caring for the environment as well as for those producing the food enhancing diverse use of soils, crops and livestock in the end promoting biodiversity. However, the project moves beyond biodiversity at farm level, also considering a diversity in governing food production and consumption at local, national and European levels.

II. State of the art (Stand der Wissenschaft)

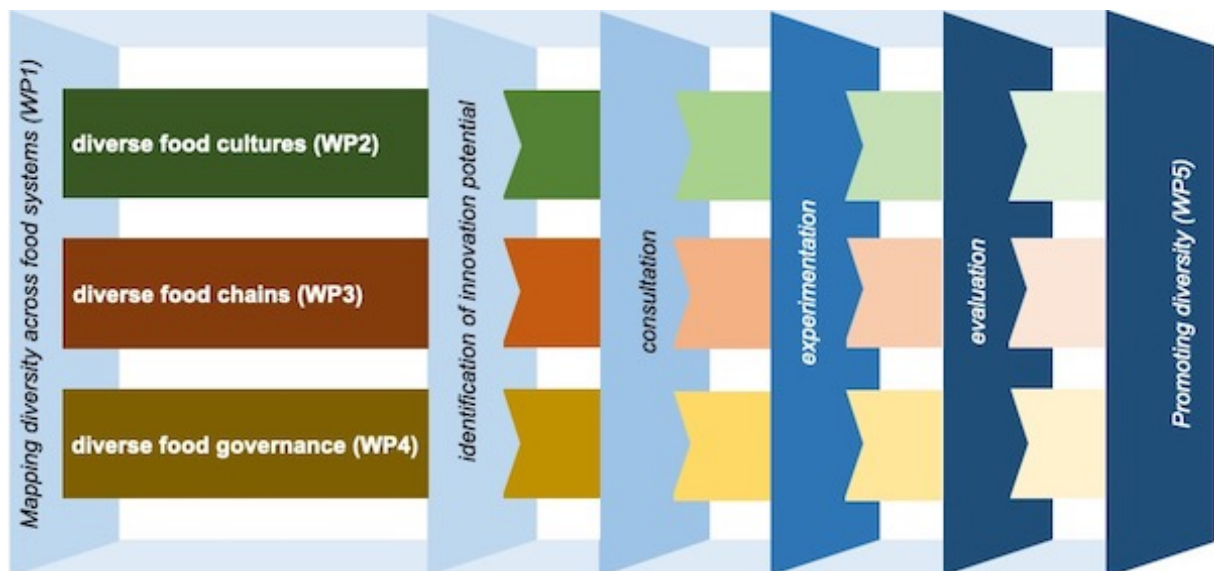
Diversity has gained little attention as a means to promote transitions towards more sustainable food systems. A systematic, multi-level and transformative approach on diverse food systems is missing. Diversity needs to be considered not only in terms of biodiversity at farm level (IPES-food 2016), but also with regard to activities of diverse actors and stakeholders in food cultures, food chains and forms of food governance. Although biodiversity is important for sustainable food systems, it is imperative to consider ecological, social, political and economic parameters of sustainable food systems. Contemporary food systems follow a productivist paradigm emphasising the role of cost and standardisation (Gaitán-Cremaschi et al. 2019). The IPES-food report affirms that “Food systems initiatives at the interface of science, policy and practice must therefore unify in their diversity, together tracing out pathways to sustainable food systems” (IPES-food 2015:17). The EAT-Lancet report (2019) identifies two targets in this respect: first, diets and eating and, second, food production, underscoring important linkages between human health, dietary patterns and sustainability. To identify future scenarios, it is important to understand the interaction across indicators of a diverse, sustainable diet within socio-economic and environmental contexts. Diverse food systems promote healthy and sustainable diets by supporting diverse needs in local contexts and advance biological, social and economic resilience by combining a variation in resources. Resilient systems can either ‘absorb’ or ‘adapt’ (equilibrium resilience), or they can ‘transform’ in response to shocks (evolutionary resilience). They also provide socio-economic and environmental benefits by advancing agro-ecological principles of production. Current climate change and the corona pandemic have both demonstrated the instability and vulnerability of global and local food security. More diverse food systems might enhance food security. The interdependencies and interconnectedness between biodiversity and varieties of food cultures need to be considered.

Local food systems are perceived as important among consumers, food chain actors and policy makers (Kneafsey et al., 2013, Vittersø et al., 2019a). However, to date, **we do not fully understand diversity in and across food systems as well as its impacts on sustainability**. Diversity in food systems relates to actors and activities on different levels. The consumer level might consider more diverse diets across seasons, including social, cultural and geographical aspects, which is more likely to cover nutrient needs as opposed to standardisation and low variety in convenience products (Johnston & Goodman 2015; Mikkelsen 2011). With regard to the food chain level, diversity is documented by biodiversity in production, such as in organic farming (IPES-food 2016). However, little is known about how diversity is conceived and valued in different ways across different food provisioning systems, such as mainstream supermarket provision, territorial food systems and catering provision (Wahlen, Heiskanen & Aalto 2012). Also, current food governance approaches focus on food policies at (supra-)national scale, seldom taking local food policies into account. Policy makers lack knowledge to approach and implement diversity. For example, the role of local food councils has gained attention, but their role for how diversity of food practices and dietary regimes interact with other part of the provisioning system is unclear. The linkages between diversity, sustainability and regenerative resilience are complex and vary in relation to food products and supply chains across contexts. Different ways of defining and measuring diversity asks for further multi-national, transdisciplinary and multi-actor research to fully understand these vital inter-connections. A transnational comparison across local settings is needed to understand interdependencies and synergies between diverse food cultures, food chains and food governances approaches in respective localities.

III. Detailed work plan (Vorhabensbezogene Ressourcenplanung)

The FOOdIVERSE project takes a food systems perspective focusing on the role of diversity in sustainability transitions in a socio-technical system. The project flips the food chain, starting with an emphasis on diverse food cultures and eating (WP2) to further consider diverse food supply chains (WP3) as well as diverse food governance approaches (WP4). Methodologically the FOOdIVERSE project takes a multi-actor and multi-scalar approach to investigate diversity translocally in living labs (WP5). The project is not interested in a top-down sustainability policies approach, but to bring together local stakeholders exchanging diverse perspectives on organic food together in a transdisciplinary way.

Figure 2: Work packages (WP)



The five work packages are structured as follows:

Work package 1: Mapping diversity across food systems (Lead: University of Giessen)

The objective of work package 1 is to ensure consistency in the project work and reporting. It also ensures clear communication between partners and external stakeholders. To fulfil this objective, WP 1 has two sub-objectives, first **internal management** facilitating work and dialogue between partners, coordinating the work packages and second, **external management** between the project as a whole and financial institutions, as well as between the consortium and advisory board.

WP1 secures a coherent research approach and coordinates activities among research partners. It is concerned with the relationship across the other WPs by mapping relevant theoretical characterisations of diversity that assist in better understanding diversity in food systems. By refining our approach, WP1 adjusts our estimate and timelines and comes up with a **risk assessment** (see below). It guarantees that deadlines are met, FOODIVERSE stays in the budget and processes run smoothly. WP1 provides reassurance that we will deliver and ensures a shared understanding on what the project will deliver and achieve (internal management). This work package is also responsible for the implementation of the communication and dissemination plan in close collaboration with WP5, being in touch with stakeholders in the project, keeping an eye on deadline and budget (external management). Through this central position, the WP1 is linking the other WPs and thereby takes over a coordinating role assuming internal and external management tasks.

Task 1.1: Internal management

Task 1.2: External management

Work package 2: diversifying food cultures and ways of eating

The objectives of work package 2 are to:

- Identify synergies and trade-offs between diversity and sustainability of dietary patterns in different modes of food consumption across countries and different localities to better understand differences in food cultures and diets and what causes these differences
- Identify barriers and possibilities for developing diverse sustainable diets and food consumption practices in different localities
- Better understand diversity and accessibility of organic and “good food” in the local foodscape of consumers across Europe

WP2 explores synergies and trade-offs between diversity and sustainability, including diets which are healthy, fair and accessible to all. It examines enabling and limiting factors for developing diverse and sustainable food cultures, diets and consumption practices at national and local levels in the five participating countries. The WP adopts a foodscapes approach to map patterns of food consumption and provisioning. Such mapping will compare and analyse differences among groups of households and individuals dependent on their geographical location, living conditions (housing) or socio-economic status. Foodscapes will also be used to analyse the social and cultural meaning of food and by focus group discussions exploring people’s views and ideas of their surrounding food environments. The foodscape concept will also function as a tool for identification and discussion of diversity and accessibility of organic and “good food” among different groups of consumers.

Task 2.1: Mapping food consumption patterns by means of analysing survey data

Task 2.2: Focus groups with consumers about diversity in local food cultures

Work package 3: Diversifying food supply chains

The objectives of work package 3 are to:

- map the current biological diversity of food products across three different food provisioning systems in five European Countries.
- understand how and for what purpose diversity is conceived and valued within different food provisioning systems and to explore the interconnections between diversity, sustainability and resilience.
- understand the drivers and barriers to achieving the supply of more diverse products across different food provisioning systems
- understand the influence that consumers/citizens are able to exert in different provisioning systems

WP3 examines the drivers and barriers to increase the use of biologically diverse products in different food supply chains in the UK, Norway, Germany, Poland and Italy. The WP adopts a systems-based approach to explore the interconnections between consumers, producers, distributors and other key food chain actors within three different food provisioning systems: (1) Organic and/or sustainable certified/labelled food products supplied predominantly via the supermarket sector; (2) Territorial Food Systems (including CSAs and groups set up to promote and distribute bio-diverse products, such as heritage grains and rare breeds); (3) Private caterers (including mainstream and more sustainability-focused operators).

Task 3.1: Market audit of different food provisioning systems

Task 3.2: Key informant interviews with stakeholders of selected food supply chains

Work package 4: Diversifying food governance

The objectives of work package 4 are to:

- Identify diversity in policy interventions to favour sustainable resource efficient food production, distribution and consumption across the participating countries and at different levels (national, regional and local).
- Map food system actors and activities in selected regions/contexts to develop an in-depth understanding of how contextual factors and governance approaches contribute to shape food systems as well as actors' capacity to collectively act to promote more sustainable and integrated forms of production, distribution, and consumption.

WP4 explores the different governmental policy interventions as well as citizens' and movements' local demand for organic food to foster sustainable food systems. WP4 compares the diversity of policy interventions at different levels (national, regional and local) through document analysis and key informant interviews. Based on this information, WP4 investigates the composition and relational structures of actors in different food systems by means of social network analysis to reveal differences in power and influence vis-à-vis resource exchange. We

will further analyse the ties between organisations and political authorities at different territorial levels to establish the potential of the various food organisations as important players in the system of local food governance.

Task 4.1: Identifying diversity of policy interventions translocally across Europe

Task 4.2: Mapping stakeholders and the influence of local networks

Work package 5: Promoting diversity – creating impact

The objectives of work package 5 are to:

- Setting up innovation spaces, framed within LL methodology, based on already existing networks, institutions, semi-organized and informal communities and evaluate their transformatory potential for more sustainable food systems
- Develop, test and experiment with particular diversity-oriented solutions and practices in local food systems and explore their sustainability potential
- Providing long-term social, economic and environmental impact by setting up LLs as interconnected communication and dissemination networks, and as social spaces for multi-actor and multi-level exploration of project's research hypotheses, methodologies and results
- Establishing links between local LL and channels for exchange of transformation knowledge and practices

WP5 adopts a living lab approach to co-create, explore, experiment and evaluate with local stakeholders supporting a transition towards a more diverse local food system. The user-centred open innovation ecosystem not only translates the results into practice, but also experiments with potential solutions and future scenarios. Living labs nourish the whole project with diverse stakeholders' and actors' perspectives, options, practices and ideals. WP5 guarantees a sound communication and dissemination strategy by organising events and activities with consumers, stakeholders along the food chain and in food governance. The WP will also lead communication with mass media, social media, regular newsletters, identify suitable open access journals, and come up with a research protocol for replication and publication of comparable national reports.

Task 5.1: Identifying innovation potential in local food initiatives

Task 5.2: Designing and co-creating social spaces of innovation together with initiatives

Task 5.3: Experimenting with living labs

Task 5.4: Testing and evaluating the preliminary results to identify the potential to scale-up
