

Food and Nutrition Security requires a system approach: Launch of EU Knowledge Hub

Large international consortium aims to face the challenge of sustainable food systems to address climate change and malnutrition through an integrated approach adaptative and mitigatory strategies

SYSTEMIC is an EU Knowledge Hub on Food and Nutrition Security. It started on the 1st July 2020 and it will run for 3 years. The overall aim is to foster transnational and interdisciplinary collaboration and networking to catalyse and accelerate research that integrates the different facets of the food system to address climate and global change challenges. The SYSTEMIC project will work through a series of workshops on cross-cutting themes, building on and connecting existing initiatives, projects, and programs. The objectives will be exemplified using specific test cases including cereals, legumes, and olive oil for terrestrial, and fish, molluscs and algae for aquatic systems, but the generated data management processes could be applied to other systems in the future.

Securing sufficient and healthy food for all, while minimizing environmental impact is the great challenge we face already today. Local production limits and global trade challenge equal access to food. With climate change increasingly affecting food production in areas which are already disadvantaged, unprecedented population (especially in urban and coastal areas) and income growth, and deterioration of usable land, these challenges will intensify. We need a holistic approach to transform the global food production system with the ability to adapt to regional necessities.

Although the information on policies and technologies that would enhance productivity and sustainability of individual agricultural sectors is available to some extent, literature is practically devoid of information and experiences for countries and communities considering an integrated approach (cross-sectoral policies, strategies, and technologies) for food and nutrition security. This project is the first effort to fill this gap, providing information on proven options and opportunities that provides sustainable, resilient, and

nutritional food from both land and sea. The project follows the integration of the center of the food chain, starting from the resources used to the primary production to finish in food products containing a nutritive value, consumption, and its health effects. The project looks for alternative strategies associated with the reduction of environmental impacts and for patterns of circular economy, to support the European Union to overcome the challenging scenarios predicted for the next 30 years.

The overall aim of the SYSTEMIC project "an integrated approach to the challenge of sustainable food systems: adaptive and mitigatory strategies to address climate change and malnutrition", is to implement adaptive strategies for sustainable food production, consumption, and public health by addressing the diverse impacts of climate change on nutrition quality and composition of food and defining standards to achieve food and nutrition security. The project aims to address the challenges of the impacts of climate change on food systems and encourage healthy, environmentally sustainable diets. National and transnational collaboration in R&D projects, together with the transfer of knowledge and technology, is the major aim of the research teams working on this project. SYSTEMIC uses an integrated approach and the research group shares research data based on FAIR data management principles to make data findable, accessible, interoperable, and reusable. SYSTEMIC is a three years project working on seven interrelated working packages and case studies.

SYSTEMIC has received funding for a total Budget of about 1.7 Million Euros from national research funding parties in Belgium (FWO), France (INRAE), Germany (BLE), Italy (MIPAAF), Latvia (IZM), Norway (RCN), Portugal (FCT), and Spain (AEI) in a joint action of JPI HDHL (Healthy Diet for a Healthy Life), JPI-OCEANS (Joint Programming Initiative Healthy and Productive Seas and Oceans) and FACCE-JPI (Joint Programming Initiative for Agriculture, Climate Change, and Food Security) launched in 2019 under the ERA-NET ERA-HDHL (n° 696295)

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