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H2020 VALUMICS Project

Anticipatory scenarios for sustainable, resilient, efficient and fair food value chains on the basis of contrasted paradigms

Objectives

To identify policy options, business strategies and practices for policy makers, corporates actors and primary producers that support the sustainability, resilience and adaptive capacity of European food value chains and food system;

To develop future scenarios aimed at countering the identified sustainability issues by testing a broad range of options.

The VALUMICS work on anticipatory scenarios and synthesis for sustainable, resilient, efficient and fair food value chains is here summarised.

Anticipatory **long-term (2050) target scenarios were created that all fulfil the objectives of being sustainable, efficient, fair and resilient, but relying on contrasting worldviews or paradigms with their underlying assumptions and consequent governance systems and actor behavioral patterns.** The aim was to enlighten a broad range of options to reach the objectives (not to compare, which scenario is ‘best’ and not to predict which is most probable), available to be implemented in potentially distinctive spatiotemporal contexts, and to be combined in varied mixtures.

The scenarios were formed around two archetypic axes used in several forecasting exercises: *leadership* of food system actors from private (market-led) through public (regulatory) to civil-society actors (voluntary collaboration), and *connectivity* from local through regional (such as EU) to global. The focus was on three plausible, internally coherent combinations: **Market-led Global, Public-led Regional** and **Civil-society-led Local** scenarios.

The Anticipatory Scenarios

Market-led Global scenario describes a world where governance is based on market-led mechanisms and consumer transparency. Food, feed and inputs are produced globally in regions with comparative advantage regarding sustainability and traded as highly processed to equalize distribution of value-added, reduce transportation costs and emissions, and recycle residues locally within the production and processing regions. Sustainability is incentivized economically and based on competition rules, trade systems, food value chain (FVC) transparency through intelligent packages and branding/identity-differentiation of actors on the ‘market-place of attention’. Open markets enable fair competition and efficient resource use.

Public-led Regional scenario describes a future where regional (sub-global) public institutions have a strong role in regulating and supporting FVCs and networks. Food consumption is based on primary production in Europe with areas specialized for production of different commodities according to comparative advantage regarding sustainability and traded as highly processed in the regions of the primary production within Europe. The responsibility of creating sustainable, efficient, fair, and resilient FVCs is handed over to the regional governance systems and to the governments subsidiary to that, and to other public institutions that ensure their function with a strong regulatory frame.

Future Food Systems

In the global market-led scenario open markets enable fair competition and efficient resource use. The fairness of the distribution of the value-added and market consolidation are managed through international agreements as well as corporate social responsibility (CSR), brands and full transparency of the supply chain among actors including consumers.

In the public-led scenario strong public institutions regulate profit distribution and prices, working conditions and fair competition.

In the civil society-led scenario social norms and local agreements form the basis for fairness. Loose national legislation leaves space to co-operatives to agree on local rules of action, and there are community-level accounting systems for work distribution based on participants' competence and capabilities.

Civil society-led Local scenario describes a world where inclusive cooperation across FVC within and among local communities initiated and led by the civil-society shapes local food production, short supply chains and food provision and consumption practices. Community supported agriculture (CSA) and industry (CSI), urban agriculture, fishing, hunting and gathering are central parts of food provision based on local resources and decentralized energy systems where actors and households are energy producers. Food producers and consumers are self-organized to cooperatives across the FVC, governing production and consumption tightly together. Proximity is the means to transparency, and local currencies based on exchange of services and products may appear.

Future Food System Options

In this first WP8 deliverable report, the overarching food system and FVC scenarios as well as initial visions from VALUMICS case studies for specific commodity chains were presented. They were deepened, tested and iterated in the following project tasks, and the paths to them were identified. The required changes were identified focusing on the available leverages and potential lock-ins. The scenarios were evaluated for socio-economic, physical and technological feasibility, and iterations were implemented. Subsequently, the scenario pathways were tested using quantitative simulation models and the final version of the plausible scenarios were reported through project reports and policy briefs.

In order to confront intransigent food consumption habits, several levers for change were proposed to reshape the food environment including through environmental labelling, retail choice editing and public procurement. With respect to market organization, a number of policy mechanisms were put forth that would seek to level the playing field between sustainable and conventional producers, including restrictions and “sustainability agreements”.

Conclusions

For Europe to meet its ambitious climate and biodiversity targets while addressing fairness within food value chains, ambitious transformations will need to be made by actors at all levels of the FVC, from farmers to processors to retailers and consumers. The created target scenarios on contrasting ways to achieve these objectives revealed a broad range of plausible alternatives and complementary means to achieve resilience, efficiency and fairness to be drawn from in FVCs of various spatio-temporal contexts.

Key sources for further information

To discuss the research presented in this brief, please email Helena.Kahiluoto@lut.fi

Deliverable

Kahiluoto, H. Sandström, V., Kuisma, M., Rimhanen, K., Barling, D. (2020). Anticipatory scenarios for sustainable, resilient, efficient and fair food value chains on the basis of contrasted paradigms. VALUMICS project “Understanding Food Value Chains and Network Dynamics” funded by European Union’s Horizon 2020 research and innovation programme GA No 727243. Deliverable D8.1, LUT University, Lappeenranta, Finland, 48 pages.

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