

Storyline 2: Agro-ecology for exports

Globalised food systems - high level of implementation of agro-ecological farming practises

The SSP 5 scenario, Fossil-fuelled Development – Taking the Highway, forms the basis for this narrative. In this future, focus is on competitive markets, innovation and participatory societies with the goal of reaching sustainable development through rapid technological progress and diffusion, including geo-engineering if needed (O'Neill et al., 2017). Integration of global markets continues with further removal of trade barriers, including giving access to disadvantaged actors, leading to high levels of international trade. The increased global wealth leads to the adoption of resource and energy demanding lifestyles by the growing global middle-class as developing countries follow the resource and fossil energy demanding developments of industrialised countries. Faith lies in solving the environmental consequences of this with different types of engineered technical solutions (SSP5). There is low investments into renewable energy while major investments in fossil energy continues (SSP5).

Following this storyline, food systems, as other sectors, have become increasingly globalised with high trade both within the EU and across the globe. In the EU specifically, strong support for and investment in agro-ecology led to a large increase in land managed with (weak) agro-ecological practises and the total area reach somewhere between 20-50% in 2050¹. The main driver for this development has been using agro-ecological approaches as a means to produce high-value foods for trade between Member states but also for exports to the newly affluent economies where a rapidly growing middle class (SSP5) is demanding “clean and healthy” foods. However, most trade takes place within the EU, cf. e.g. the recent strong trends of Spanish exports of organic products such as fruits, vegetables, wine, oil and nuts, continue due to the strong boom in demand by consumers from the middle-northern countries of Europe.

Several export-oriented policies and initiatives have been put in place in Member state in order to meet the consumer demand for “clean and healthy” foods². Most agro-ecological farming systems are more of the ‘substitution’ rather than the ‘redesign’ variant and policy focus mainly on the substitution of problematic inputs. Products are sold on global and EU markets under third-party verified certification schemes – digital technologies (SSP5) has enabled the efficient control and management of such certification systems. Increased cooperation on global level to facilitate trade (SSP5) has led to the development of a global standard for organic production based on mainly weak agro-ecological principles (input substitution). Focus is on the ban of pesticides to prevent potential negative effects on human health. Apart from increased investments in export oriented strategies, the agricultural policy in the EU is similar to that of today. However, payments for certified organic farming and other similar certifications that have export market potential are at first increased to stimulate this production, but are then gradually phased out. In this future, small-scale agro-

¹ An example of this being a plausible future development of EU agriculture is the Swedish food strategy launched in 2017 which suggests increased organic production (goal for 2030 is 30% of agricultural land), including exports, to increase rural employment and economic growth.

² See for example Danish governments investments in export activities related to organic foods.
https://www.foedevarestyrelsen.dk/english/SiteCollectionDocuments/Kemi%20og%20foedevarekvalitet/Oekologiplan%20Danmark_English_Print.pdf

ecological producers have a hard time competing with large companies that have a much greater capacity to invest heavily in promotion of ‘greener’ products on global markets.

Since most commodities are traded on the EU or global markets which require large-scale production able to deliver stable volumes to large food industries, large-scale farms dominate both the conventional and agro-ecological farming in Europe. Infrastructure and other support for local markets are not prioritised, which further drives small-scale farmers out of business. Imports into the EU of cheap, bulk commodities like soy for feed, palm oil and wheat increase to supply low-price food to large low-income population groups in the EU. Globally, EU agriculture’s large share of land under agro-ecological practises is an exception, supplying a global niche market. In general, global agriculture is dominated by input and technology intense high yielding conventional production practises (SSP5). A growing share of food is also produced in entirely industrialised systems that require little or no agricultural land for its feedstock³.

Eating patterns develop according to current projections, staying rich in meat other resource intense food products and unhealthy foods in developed counties, with increasing meat and dairy consumption in developing counties , but with variations between income groups. Policy targeting demand to support healthy or sustainable diets is non-existent. Current developments with low-income populations struggling with diet-related diseases continue while the eating patterns of high-income populations improve somewhat⁴. That is, a highly segmented food market is evident in this storyline in which anonymous agro-ecological products are consumed by the informed well-educated populations and exported outside the EU, while the majority consumes conventional low quality food. Food waste levels remain similar to current levels or decrease somewhat in countries where waste reduction policies are implemented.

³ See for example <https://solarfoods.fi/#vision>

⁴ <https://academic.oup.com/ajcn/article/87/5/1107/4650128>

<https://www.cambridge.org/core/journals/british-journal-of-nutrition/article/prospective-associations-between-socioeconomic-status-and-dietary-patterns-in-european-children-the-identification-and-prevention-of-dietary-and-lifestyle-induced-health-effects-in-children-and-infants-idefics-study/CAD97E2AC8B25B513F5D8C9797D2BCD1>