

**BRIEFING NOTE No. 137**

# **A greener Europe at the expense of Africa?**

## **WHY THE EU MUST ADDRESS THE EXTERNAL IMPLICATIONS OF THE FARM TO FORK STRATEGY**

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The Farm to Fork Strategy (F2F) is the European Union's ambitious policy framework to promote a more sustainable and resilient European food system and support a global transition to sustainable food systems. Recent studies suggest that effectively pursuing the F2F's quantified environmental targets, as well as related targets in the European Green Deal's Biodiversity Strategy, will result in reduced agricultural production in Europe. This in turn will likely lead to increased European agricultural imports and reduced exports. Such changes could contribute to higher international food prices and increased global food insecurity. Africa, with its fast-growing population, changing diets and increasing reliance on food imports, is likely to be particularly affected. Lower European agricultural production could also lead to increasing agricultural production outside Europe. Depending on how and where it takes place, this shift in agricultural production could generate increased greenhouse gas emissions and biodiversity loss, undermining the F2F's global sustainability objectives. To better align the F2F's European and global sustainability ambitions, the European Union needs to make full use of its various policy instruments - including trade policy, investment facilitation, development assistance and international diplomacy - to support efforts by developing countries to improve the sustainability and resilience of their own food systems. Particular attention should be given to supporting a transition to sustainable food systems in Africa, given the severe challenges facing that continent's food systems.

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## The EU's Farm to Fork Strategy aims to promote sustainable food systems in Europe and globally

The Farm to Fork Strategy (F2F), unveiled in May 2020 as a key component of the European Green Deal, is the European Union (EU)'s policy framework to promote the transition to a sustainable and resilient European food system by 2030. The F2F aims to bring about a European food system that ensures food security while having a reduced environmental and climate footprint. It aims to achieve this by promoting sustainable food production, consumption, processing and distribution and a reduction in food loss and waste (Dekeyser & Rampa, 2021; EC, 2020a). The F2F represents the first attempt to address food system sustainability in a comprehensive manner by targeting the whole European food system (Schebesta & Candel, 2020).

The F2F's objectives are also supported by other Green Deal strategies, such as the Circular Economy Action Plan, which sets out food waste reduction and packaging targets. The EU's Biodiversity Strategy for 2030 is the most closely linked to the F2F. Having been launched together with the F2F, it complements the F2F with pesticide and land use targets (EC, 2020b; EC, 2021b). Specific targets set in the F2F and Biodiversity Strategy include: reducing fertiliser use by 20%; halving the use and risk of chemical pesticides and antimicrobial drugs; bringing back at least 10% of land under high-diversity landscape features; halving food waste; and placing 25% of agricultural land under organic farming. These specific targets relate mostly to agricultural production and land use, rather than to dietary change and consumption, for which the F2F specifies more general ambitions.

The F2F primarily focuses on the European food system, but also aims to "support the global transition to sustainable agri-food systems" (EC, 2020a, p. 18). The EU wants to support the global transition to more sustainable food systems through its external policy instruments, including development assistance and

trade policy, by seeking ambitious outcomes in international standard setting bodies and multilateral fora and by establishing 'Green Alliances' with willing partners. The EU also aims to ensure all food placed on the European market adheres to high standards and to accompany European requirements with efforts to raise sustainability standards globally. This attempt to 'export' F2F norms has already ruffled feathers with the United States, which fears that the F2F will create new trade barriers (Wax & Anderson, 2021).

## The F2F could lead to reduced agricultural production in the EU

Recent studies have sought to model the impact of efforts to achieve F2F and Biodiversity Strategy targets on input use and land use change (Barreiro-Hurle et al., 2021; Beckman et al., 2020; 2021). These studies suggest that achieving those targets will deliver significant environmental benefits for the EU's food system, including reduced greenhouse gas and ammonia emissions, but that most of these benefits arise from reduced production. Indeed, the studies predict that meeting the F2F and Biodiversity Strategy's input and land use changes will likely result in considerably reduced European production of cereals, oilseeds, dairy cows, beef, pork and poultry. This loss of production will lead to less European exports and/or increased imports of these commodities if European demand for them does not similarly decline (Barreiro-Hurle et al., 2021). Overall, the value of European agricultural production could be 12% lower by 2030 because of the F2F's input and land use targets (Beckman et al., 2021). The EU seeks to invest more in research and technologies that boost productivity in a sustainable manner, but historical trends suggest such investments can take decades to materialise in productivity improvements (ibid). Without these improvements, an EU official acknowledged that the F2F input and land use targets can lead to a reduction in production in the short to medium term (Clarke, 2020).

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These projections may provide too pessimistic a picture of the potential impacts on the European food system as the F2F also envisages other dynamics, such as a shift to more sustainable diets, that could not be included in the models used by these studies (Zimmer, 2020). Shifts to more sustainable diets are hugely important for improving the sustainability of modern food systems (Springmann et al., 2018; Willett et al., 2019). Lower European production might not lead to less exports and more imports if European diets become sufficiently sustainable. The exclusion of dietary change in the cited models is thus a major drawback for projecting the F2F's impacts.

Some caution is warranted about the extent to which the F2F can promote more sustainable diets though. The EU has fewer policy levers to promote dietary change at scale compared to promoting sustainable food production and thus relies more on action by EU member states, who exhibit various degrees of ambition in this regard. Strong ambition is needed, as ensuring a positive impact from the shift to a more sustainable diet requires that most of the population change their eating patterns, something that has been shown to be difficult to encourage (Eker et al., 2019; Sanchez-Sabate & Sabaté, 2019).

Europeans have already partly replaced beef with less resource-intensive poultry and pork, and much is expected from the development of plant-based substitutes for meat. However, it is not clear if and how the F2F will support or sustain such dietary changes. The F2F's proposals for promoting sustainable diets - for example a mandatory sustainability label - may struggle to change people's dietary choices sufficiently. In the case of sustainability labelling, some studies indicate that environmental sustainability generally is not a strong motivator for dietary change, and it is unclear if more environmental sustainability information has an impact on diet choices (Morren et al., 2021; Sanchez-Sabate & Sabaté, 2019). So while recent projections of the F2F's impact have major limitations due to their exclusion of dietary change as a key dynamic, caution needs to be taken as well about the extent to which the F2F can support shifts to sustainable diets using the proposed tools.

## Decreased agricultural production in the EU could mean higher global food prices and increased food insecurity outside Europe, especially in Africa and Asia

The studies cited above project that implementation of the F2F and Biodiversity Strategy could result in lower EU agricultural production. They also suggest that this decreased production will impact EU agricultural trade, leading to less agricultural exports from the EU and more agricultural imports into the EU (Barreiro-Hurle et al., 2021; Beckmann et al., 2020). Given the EU's importance in global agricultural trade - the EU is the largest exporter and second largest importer of agricultural products (EC, 2021a) - such shifts are projected to contribute to higher global food prices (Beckman et al., 2020). These higher prices would occur for products that experience a significant decline in EU exports, but also for other products that experience declining production as producers globally shift their production to fill the European supply gap (Beckman et al., 2021).

Traditionally, higher food prices are costly for (mostly urban) consumers and a boon for (mostly rural) producers. As many of the global poor are farmers, higher food prices can actually reduce poverty and lead to greater food security in the long run. But increased food insecurity can be expected in the short term, before markets and producers adapt, or when a country is heavily dependent on food imports (Gillson & Fouad, 2014; Headey & Martin, 2016). Certain poor countries in sub-Saharan Africa are particularly vulnerable due to their high food import dependency, which is likely to further increase (D'Amour et al., 2016; Gillson & Busch, 2014; van Ittersum et al., 2016). Consumer prices can rise further if exchange rates depreciate due to large imports (Headey & Martin, 2016). Increasingly, Africans might be hurt rather than benefit from rising food prices, with the benefits to rural net producers outweighed by the impact on off-farm labourers, rural net consumers, landless poor and especially the fast-growing urban populations (Hertel, 2016). Indeed, in their recent study on the F2F

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and Biodiversity Strategy, Beckman et al. (2020) projected that higher international food prices, resulting mostly from lower European production, would cause tens of millions of people to become food insecure by 2030, mostly in Africa and Asia.

## The environmental benefits of the F2F could be undermined by increased production outside Europe

Decreased agricultural production in the EU and resulting increases in global food prices are likely to incentivise more agricultural production outside the EU. Studies predict that production will shift to Africa, Asia and Latin America (Beckman et al., 2020; Fellmann et al., 2018). Africa, in particular, holds great potential to expand agricultural production, as it is said to have 60% of the world's uncultivated arable land, largely under forest cover, and significant room for improving agricultural productivity (FAO & OECD, 2021; Jayne et al., 2014). If lower European production leads to increased production elsewhere, the geographical shift in production could undermine many of the environmental benefits of the F2F and Biodiversity Strategy (Barreiro-Hurle et al., 2021).

For example, the F2F and Biodiversity Strategy's positive impacts on greenhouse gas emissions (due to lower production and increased efficiency in Europe) might be offset by higher emissions from increasing agricultural production outside the EU. Similarly, the F2F and Biodiversity Strategy's potential biodiversity gains could be offset if they contribute to agricultural expansion in biodiversity hotspots around the equator.

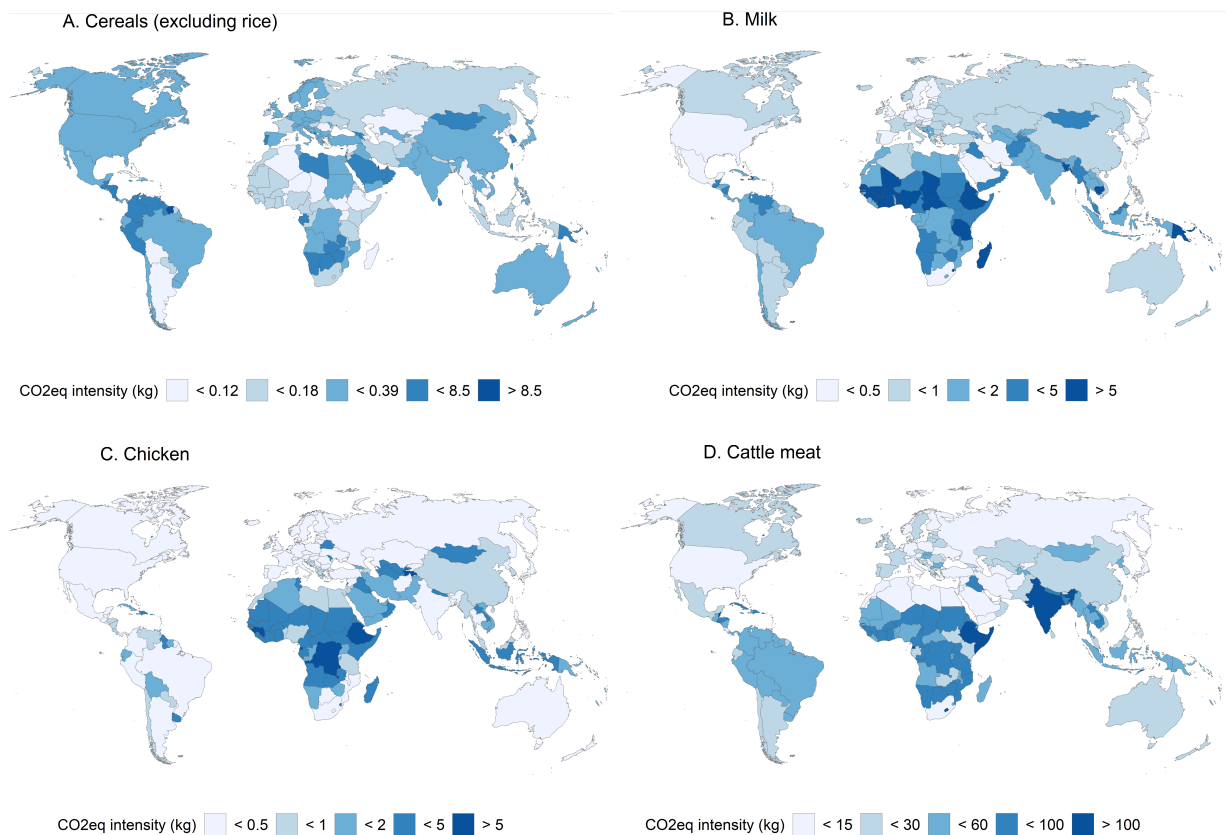
It is projected that much of the F2F and Biodiversity Strategy's gains in terms of reducing greenhouse gas emissions leaks away when decreased European production is partly offset by increased production elsewhere (Barreiro-Hurle et al., 2021). The emissions intensities of agricultural products vary strongly across the world (FAO, 2021). Food produced in Africa, Asia and Latin America generally has a higher greenhouse gas emissions footprint than the equivalent product produced in Europe. For example, producing one

kilogram of chicken emits 1.14 kg of greenhouse gas in Africa, 0.8 kg in Asia, 0.4 kg in South America, and only 0.3 kg in Europe (FAO, 2021). While the geographical variation in emissions is far lower for cereals, the F2F and Biodiversity Strategy are poised to reduce European production of food for which Europe has a lower emissions footprint than Africa, Asia and Latin America, namely chicken, cattle and milk (Figure 1B-D; Barreiro-Hurle et al., 2021).

The F2F and the Biodiversity Strategy aim to recover Europe's biodiversity through measures such as reducing pesticide use and promoting more high-diversity landscape features. But if the F2F and Biodiversity Strategy contribute to increased agricultural production in Africa and Latin America, the biodiversity loss encountered globally could far outweigh the biodiversity gains in Europe achieved by the two policy frameworks (Tilman et al., 2017; Williams et al., 2020). Already, agricultural expansion is the greatest threat to biodiversity globally, and this dynamic is projected to particularly impact sub-Saharan Africa (Figure 2A; Habel et al., 2019; Williams et al., 2020). Meeting Africa's food demand with more African agricultural production is likely to require agricultural expansion, with consequences for biodiversity conservation (Giller et al., 2021).

Biodiversity is not equally distributed across the globe. There is more biodiversity richness around the equator and less in temperate zones (e.g. most of Europe) and around the poles (Saupe et al., 2019). For example, Europe has fewer endemic mammal, bird, and amphibian species compared to Africa, Asia, or Latin America (Ritchie & Roser, 2021). Species are being driven to extinction mostly in Africa, Asia and Latin America, where agricultural expansion drives the risk of further extinctions as well (Figure 2B). These regions should be higher priority for conservation and restoration efforts, even more so than Europe (Girardello et al., 2019; Strassburg et al., 2020; Williams et al., 2021). Conventional conservation efforts, such as site-based area protection, may be insufficient to protect biodiversity (Williams et al., 2021). Biodiversity policies therefore need to focus on the underlying threats to biodiversity, which means supporting regional and international trade to meet increasing food demand and enabling sufficient non-farm livelihoods, as well (Tilman et al., 2017).

Figure 1. CO2eq emissions intensity for cereals (excluding rice), milk, chicken and cattle meat in 2017, by country.



Source: FAO, 2021;

Visualisation by Koen Dekeyser for ECDPM, 2021

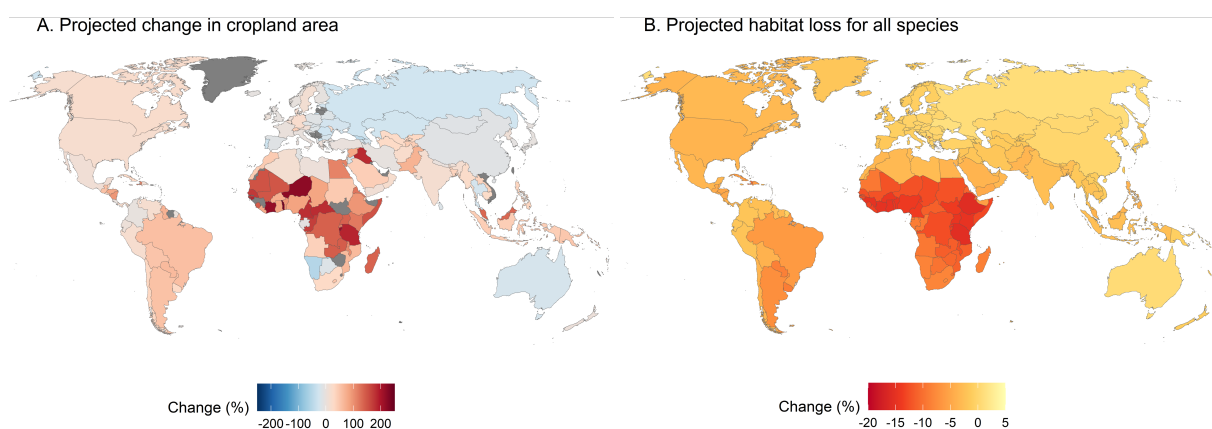
## The EU should use its full range of policy tools to pursue the F2F's global sustainability ambitions, and should pay particular attention to supporting food systems in Africa

In promoting the transition to a more sustainable European food system, the F2F and Biodiversity Strategy could unintentionally and indirectly generate negative impacts on food systems outside Europe, including greater food insecurity, higher greenhouse gas emissions and increased biodiversity loss. These negative impacts undermine the F2F's

ambition of supporting a global transition to more sustainable food systems. Promoting a shift to more sustainable diets in Europe could go some way to preventing these negative impacts, but the EU is relatively limited in the tools it can use to change European diets. Instead it will need to encourage EU member states to pursue ambitious objectives in terms of promoting sustainable diets. Another way the EU could try to reduce negative spillover impacts from implementation of the F2F and Biodiversity Strategy is by investing in research into sustainable agricultural practices that boost productivity, thereby counteracting declining production resulting from F2F and Biodiversity Strategy measures. However, historical evidence suggests that such productivity improvements can take decades to materialise (Beckman et al., 2021).



Figure 2. Projected change in cropland area and habitat loss for all species from 2010 to 2050, by country



Source: Williams et al., 2020;

Visualisation by Koen Dekeyser for ECDPM, 2021, based on Ritchie, 2021.

Beyond trying to limit negative indirect impacts the EU should take steps to assess and monitor the global impact of the F2F and Biodiversity Strategy. To mitigate potential negative impacts outside Europe, the EU should adopt policies and promote investments that encourage and support other countries to transition to more resilient and sustainable food systems. Fortunately, the EU has many tools at its disposal to do that.

The EU should use its various trade policy instruments - and the pull of its large market - to encourage and incentivise trade partners to promote more sustainable practices in their food systems (Rampa et al., 2020). Inserting provisions in EU trade agreements on sustainable food systems - something the EU has already committed to in the F2F - would be a good start. In line with the F2F commitment to support small-scale farmers to meet global sustainability standards and access markets, the EU and EU member states should increase aid-for-trade and other forms of development assistance to support efforts in partner countries to adopt more sustainable practices and transition to more sustainable food systems.

Given that the transition to sustainable food systems globally requires significantly increased investment - around an additional \$14 billion donor investment per year is needed across food systems globally (Laborde et al., 2020) - the EU should also promote more private and public investment in sustainable food systems around the world. In this regard, the EU can promote the use of blended finance instruments to encourage private investments in partner countries that are likely to improve the sustainability of the food systems in those countries. The EU and its member states can also work with governments in partner countries to advocate for and share lessons on increasing public investment in sustainable food systems. In addition, the EU should also ensure that a greater share of the significant investment it makes in agricultural research and development<sup>1</sup> is tailored to the specific challenges facing food systems - not only agricultural production - in developing countries.

In seeking to ensure coherence between the F2F's European and global sustainability ambitions, the EU should dedicate special efforts to support African

<sup>1</sup> See for example the recent pledge of €220 million from the EU and certain EU member states to the CGIAR research partnership (CGIAR, 2021).

countries to improve the resilience and sustainability of their food systems. While the world will demand much more food by 2050 (van Dijk et al., 2021), this demand will especially rise in Africa. Africa already suffers from high levels of food insecurity and hunger on the continent is projected to increase by 2030 (FAO et al., 2021). High levels of poverty, a rapidly growing population and an increasing reliance on food imports make Africa vulnerable to global food price increases (FAO & OECD, 2021; van Ittersum et al., 2016). Africa's own agricultural productivity, meanwhile, is greatly threatened by climate change (Janssens et al., 2020). In addition, across a number of agricultural product categories, African production results in significantly more greenhouse gas emissions per unit of output than production in Europe. Lastly, Africa's rich biodiversity is threatened by agricultural land expansion which is projected to occur even in the absence of any F2F-related impacts (Crippa et al., 2021; FAO & OECD, 2021).

Comprehensive policy frameworks like the F2F and Biodiversity Strategy that support more sustainable food systems are urgently needed to safeguard planetary and human health. However, the EU needs to take into account how the European food system interacts with other food systems when designing a comprehensive food policy, in order to prevent or mitigate unintended negative impacts outside its borders and achieve real sustainability gains worldwide.

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