

EU FOOD AND FARMING POLICY, AND FOOD SECURITY

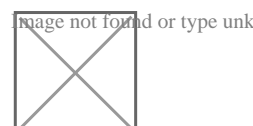


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FOREWORD

Food is a basic human need and ensuring food security is a fundamental responsibility of any government on the planet. This is also what makes farming such an essential and noble activity.

But too often the moral imperative to ensure food security has been used in policy debates as a justification to intensify agriculture, according to the logic of a capital and input intensive industrial model, whatever the cost for farmers and for nature.

While immense progress has been made since 1945 to eradicate hunger, an estimated 821 million people still suffer from undernourishment. Causes of hunger are complex and relate most of the time to issues of access to food, or to the means of producing food, rather than to insufficient production.

Many people suffering from hunger are small farmers, who have to compete with imports of cheap food, exported from countries where agriculture is heavily mechanised – and sometimes heavily subsidised. That is why trade liberalisation is not always the best option, and why each country or region should be entitled to have its own agriculture policy to support regional farmers and production chains, like we have the Common Agricultural Policy (CAP) in Europe.

Claiming that we need to ever increase the quantity of food we produce to “feed the world” is a simplistic and misleading approach, too often used to promote input intensive practices or risky technologies. It is even more misleading as 80% of all agricultural land globally is dedicated to animal production, including feed. Europe itself imports 17 million tonnes of proteins every year to feed its livestock. Extensive livestock production is essential to close nutrient cycles and to preserve biodiversity rich grasslands and landscapes. But there is no question that the level of consumption and production of animal products at the global level is the key variable on which our collective capacity to feed a growing population without destroying nature depends. Moreover, in Europe alone, it is estimated that around 88 million tonnes (20%) of food waste are generated annually, with associated costs estimated of 143 billion euros.

Healthy soils, clean water, a stable climate, accessible and reliable seeds, thriving biodiversity are the essential natural resources on which all farmers ultimately depend to produce enough quality food. That is why the sustainability dimension should always be explicitly addressed in discussions on food security and agriculture policies.

Producing healthy food while respecting natural cycles and land carrying capacities is a fundamental principle of organic agriculture. There is no simple or single solution to ensuring access to food for all, but we hope that this report will convince you that agroecological approaches such as organic farming are part of the solution.

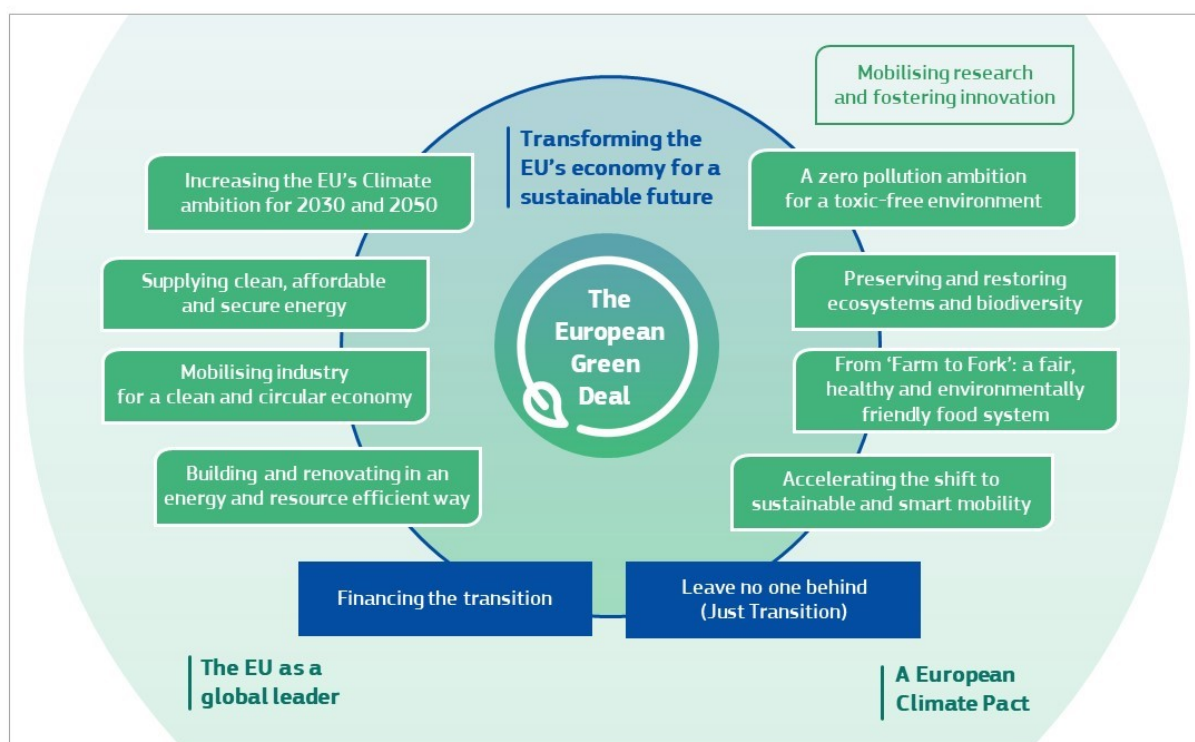
Jan Plagge,
IFOAM EU President

FOOD SECURITY AND AGRICULTURAL AND FOOD POLICY IN THE EU

INTRODUCTION

The sustainability of our food and agriculture systems is an enormous challenge facing the planet and humanity. Currently an estimated 821 million people worldwide are undernourished, and two billion adults are overweight or obese. Moreover, food production is a major contributor to rising global temperatures and the loss of biodiversity and ecosystem services, which jeopardises long-term food security. In the EU, the urgency of confronting many of these challenges is set out in the European Green Deal, an ambitious statement of intent from the European Commission, published in December 2019, for the EU to become the first climate-neutral continent by 2050 (Figure 1). To achieve this, it sets out a series of actions to green the economy and address the climate and environmental-related challenges facing different sectors across the EU. As part of the Green Deal the Commission is set to publish a Farm to Fork Strategy to inform the direction of travel of the CAP post-2020 and other policies related to food and farming. This is part of the efforts being made to formulate a more sustainable food policy at the EU level.

Figure 1: The European Green Deal



Source: European Commission, 2019

PURPOSE

The aim of this briefing is to examine the multi-dimensional nature of food security and the need for a wider discourse on the underlying sustainability challenges for food security in an EU context, which are often missing from the debate.

The briefing starts by exploring the concept of food security from the perspective of the EU. This is followed by a look at some sustainability dimensions of EU food production, their implications for long-term food security and the role the CAP has played as the EU's main policy influencing the development of its food and farming systems. The briefing concludes with some reflections on the importance of taking a wider sustainability perspective on the EU's role in domestic and global food security within the reform of the CAP post-2020 and the forthcoming Farm to Fork Strategy.

USE OF THE TERM FOOD SECURITY IN AN EU POLICY CONTEXT

Food security is often referred to in discussions on the development of food and farming policies both at the EU and international level. The most recent global definition of food security was adopted at the World Food Summit (WFS) of 1996 and reaffirmed at the last WFS in 2009 which states that:

"Food security exists when all people at all times have physical, [social] and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life."

It recognises four dimensions of food security as follows:

- availability (of sufficient quantities of appropriate quality food);
- access (to adequate resources for acquiring appropriate food)
- utilisation (of food through adequate diet, clean water, sanitation and health care); and
- stability (of supply by providing access to adequate food at all times – essentially fulfilling the other three dimensions).

For food security to exist these four dimensions should be sufficiently present.

The definition of food security, however, does not explicitly highlight the sustainability dimension of food production, although it is inherent in terms of ensuring the 'stability' of our food supply in the long-term. The absence of this explicit recognition could be one of the reasons why sustainability does not get the focus it requires in the debates surrounding food security.

In EU policy-making the concept of food security has been widely used to legitimise agricultural and food policy choices, notably under the Common Agriculture Policy (CAP). However, the term can have different meanings and understandings amongst stakeholder groups and policymakers. Due to the ill-defined nature of food security in an EU context the relationship between the CAP and food security is hotly contested amongst different stakeholders and policymakers. While many discourses are used to justify the development of the CAP in this respect two narratives are particularly evident. On the one hand a 'productivist' narrative argues that the CAP should be used to stimulate agricultural production and increase productivity for the purpose of increasing food availability. Under this trajectory food security is often cited as a kind of public good to secure Europe's food supply and contribute to global food production. This is despite the production of food clearly being a private good. Where this narrative considers environmental and climate issues, these are all too often seen as constraints to production rather than opportunities to secure the long-term capacity of the land to produce food.

On the other hand 'environmental' or 'public goods' narratives are used to highlight the long-term sustainability benefits of farming systems in which the provision of economic, social and environmental goods and services go hand in hand. This line of thinking argues that sustainable farming systems are an essential precondition for food security and for safeguarding Europe's productive capacity in the long-term.

Both narratives have influenced successive reforms of the CAP to varying degrees. However, to date there has been limited success in reconciling these contested narratives, despite the potential to reconcile the underlying drivers of both. This has resulted in a policy that lacks a clear direction of travel in relation to its response to food security. For instance, the results of the 2013 CAP reform show that while there is greater recognition of the environmental and climate challenges facing the EU agricultural sector, these concerns are not at the heart of the policy, given the continuing dominance of direct payments which provide largely untargeted income support to farmers. While a similar picture is evident in the post-2020 CAP reform, greater attention has started to be given to a 'food sustainability' narrative that has emerged in recent years, calling for greater focus on sustainable food consumption as well as production. The failure to reconcile these contested narratives also

has significant implications for how the forthcoming Farm to Fork Strategy and subsequent stakeholder debates might pave the way for the EU to formulate a more sustainable food policy for the future. A brief overview of how food security has been used to influence the policy design of the CAP is set out in Box 1.

Box 1: The relationship between the CAP and Food Security

In the EU, the concept of food security has significantly influenced the development of the CAP. Originally conceived in the post-second world war period to enhance European food security, the policy's founding aims included objectives to increase agricultural productivity, ensure a fair standard of living for farmers, stable markets, and ensure the availability of supplies at reasonable prices for consumers. While these formal objectives remain relevant they often not considered from the perspective of sustainable development despite it being a fundamental objective of the EU (EU, 2012). Nevertheless, the CAP has continued to evolve overtime. Successive reforms particularly since the mid-1990s have sought to (Hill, 2015):

- shift from price and production support towards direct payments for producers decoupled from production and a gradual increase in trade liberalisation;*
- improve the environmental and climate performance of agriculture through the sustainable management of natural resources, action on biodiversity and climate change; and*
- invest in the wider rural area through national and regional rural development programmes.*

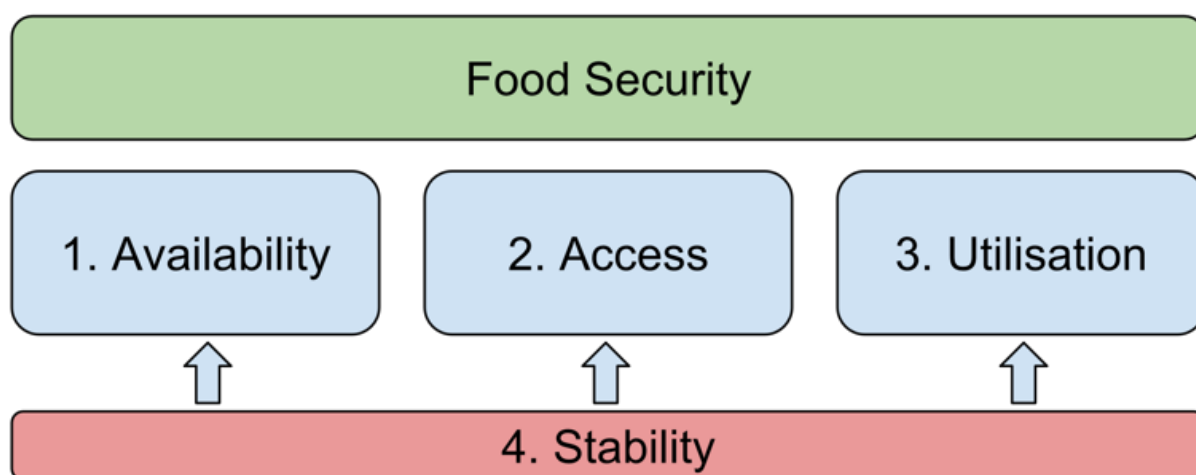
The most recent reforms of the CAP continue to make reference to the relationship between the CAP and food security to justify and elicit public support for the policy. In the Commission's 2010 CAP Communication (European Commission, 2010), food security was explicitly identified as a key challenge that the reform must respond to in order to confront food security concerns at EU and international level. This followed a global spike in food prices in 2007 and 2008. A combination of 'productivist' and 'public goods' narratives are invoked, with the Communication highlighting the importance of maintaining and improving the EU's productive capacity in order to not only contribute to global food demand, but also to respond to EU citizens' demands for high quality and a wide choice of food products. While the Communication highlighted enhancing the competitiveness and productivity of the EU agriculture sector as a key priority to respond to challenges and opportunities of trade liberalisation it also made reference to the need to shift towards sustainable production practices with an emphasis on the provision of environmental public goods and the need to pursue climate change mitigation. Both these narratives are employed as a means of setting the agenda of the reform with terminology often open to different interpretations. For example, Europe's productive capacity may be interpreted in the 'productivist' narrative as focusing solely on the need to produce more food, whereas under the 'public goods' narrative it concerns the need to ensure the long-term sustainability of EU farmland to produce food and other goods and services.

A similar dynamic is also evident in the reform of the CAP for the post 2020 period, although here the Commission's 2017 CAP Communication (European Commission, 2017) clearly identifies climate change and constraints on natural resources as driving food security challenges. How the priority to increase the environmental and climate ambition of the CAP is embedded into approaches that address the more dominant focus on supporting EU food production is less clear. In this respect it recalls that the EU agricultural sector ensures food security for over 500 million EU citizens and is a leading producer of food globally. A primarily 'productivist' narrative is evident in terms of the reference to the importance of further trade liberalisation and the integration of different sectors into global value chains. Here the focus is on responding to the dietary demands of a growing middle-class worldwide, through increased exports. At the same time greater emphasis is also given to addressing societal concerns regarding the sustainability of agricultural production. Moreover, the role of the CAP in improving the accessibility, variety and affordability of food amongst EU citizens is also highlighted. This appears to reflect to some extent the growing recognition of 'food sustainability' narratives.

FOOD SECURITY CHALLENGES IN AN EU CONTEXT

Globally, food security challenges are usually framed from the perspective that food production must increase by 60-70% in order to feed an expanding global population, expected to reach almost 10 billion people by 2050. In an EU context, the implication that there will be insufficient food available to feed the growing global population suggests that the EU agri-food sector has a key role to play in contributing to global food security by increasing output, primarily through increasing productivity. In particular, the EU agri-food sector is expected to enhance its competitiveness on the world market in order to capitalise on the dietary needs of a growing and more affluent global population. However this focus on addressing food availability ignores the far more nuanced issues facing food insecurity and the fact that food security challenges are highly context specific and vary significantly between low to high-income countries. As a result it is important to briefly consider food security challenges in a European context from the perspective of the four dimensions of food security (Figure 2) described below.

Figure 2: The four dimensions of food security



Source: Fraanje and Lee-Gammage, 2018

AVAILABILITY OF FOOD

The EU is generally self-sufficient in food commodities that can be produced with European climatic zones. Past and projected figures of EU agricultural output between 2010 and 2020 show that the EU is relatively self-sufficient in such commodities and is not overly dependent on food imports that could potentially undermine food supply. There are however some exceptions, notably in terms of oilseeds and meal imported for animal feed. At the same time EU food production continues to have multiple negative direct and indirect impacts on the environment and climate change both inside and outside its borders notably due to the import of animal feed. Moreover, EU estimates show there are significant challenges in addressing food waste with about 20% of the total food produced lost or wasted along different stages of the food chain. Trade is an important factor in food availability and an important element of the debate around the EU's role in global food security (Box 2).

Box 2: Trade and food security

Trade is often promoted as a means of achieving food security by increasing the availability and stability of the food supply through more affordable prices, and will inevitably continue to occur between the EU and other countries (Brooks and Matthews, 2015). Today trade in food commodities still plays a significant role in the EU supply chain, with the bloc the number one exporter (19% of

market share) and number two importer (12.6% of market share) of food and drink in the world in 2017 ([Food Drink Europe, 2019](#)). However, increasing trade liberalisation has been more beneficial for some countries than for others with particular challenges including the displacement of national production with imports and increased exposure to price volatility which threaten the livelihoods of small-scale producers in low-income countries ([Oxfam International, 2018](#); [De Schutter \(2011\)](#)). For example, evidence of trade between the EU and countries in Sub-Saharan Africa, and the Caribbean and the Pacific shows that elements of the CAP continue to have a trade distorting effect and need to be further reformed (e.g. direct payments continuing to indirectly stimulate the over-production of certain commodities which are subsequently exported to low-income countries) ([Matthews and Rossella, 2019](#)). As a result, net-importing low-income countries should be supported and encouraged to develop their own food and farming systems in a sustainable way that empowers them to meet their food security needs. Globally the root causes of hunger and malnutrition still continue to be poverty, inequality and marginalisation with current drivers being conflict, climate shocks and economic downturns. Moreover, while economic development can help to reduce poverty and improve food security and nutrition, increased food security does not necessarily mean nutrition will be improved ([FAO et al., 2019](#)). Food security challenges are therefore highly context specific and vary significantly between low to high-income countries. As a result it is important to consider the different dimensions of food security relevant to trade both from an EU and a global context.

ACCESS TO FOOD

EU households spent on average 12.2 % of their total expenditure on food and non-alcoholic beverages ranging from 27.8% in Romania to 8.2% in the UK in 2017. Nevertheless, about 8% of the population in Northern America and Europe suffer from moderate to severe levels of food insecurity. In 2016, it was estimated that more than one in five people in the EU-28 was not able to access and afford a meal with meat, fish or a vegetarian equivalent every second day. This is primarily due to low income levels or loss of income. For instance, after the 2008 financial crisis there was a dramatic rise in the demand for food aid in high-income countries. The highest overall rates of food insecurity in the EU were recorded in Eastern European with Ireland and the UK having the largest post-crisis increases. These challenges could be expected to re-emerge in the event of another economic downturn.

UTILISATION OF FOOD

Food utilisation considers food consumption patterns including what people eat as well as how much they eat, as part of a balanced and nutritious diet. Diets can vary substantially across European countries with cultural factors playing a large role. Over time diets have shifted towards a higher consumption of fat, meat and sugar based on a small number of grains and animal-derived calories. In comparison to what is considered a healthy diet, Europe currently over-consumes meat and starchy food and under-consumes plant-based foods such fruit and vegetables, grain legumes and nuts. The rise in poorer-quality diets in Europe have contributed substantially to a rise in obesity and other diet-related non-communicable diseases, such as heart disease, and diabetes.

STABILITY OF FOOD SUPPLY

Stability evidently crosscuts the other dimensions of food security outlined above. While the majority of EU households have sufficient access to food at all times, in terms of food availability the negative impacts of food production and effects of climate change and biodiversity loss on agricultural production and agro-ecosystems are considered to be the single greatest challenge for maintaining European food security. Indeed, key cereal crops such as wheat and barley are already seeing a stagnation in yields in some parts of Europe as a result of the effects of climate change. Furthermore food consumption patterns show that there is a growing challenge of addressing unsustainable dietary patterns in terms of food choices and preferences.

This short consideration of the different dimensions of food security highlights the multi-faceted nature of the types of challenges facing European food and farming systems, notably the importance of securing the sustainability of European food production and of a greater focus on sustainable diets in the EU policy debate.

It also clearly demonstrates the limitations of a production only approach to food security. Some of these issues are explored further, including the role of the CAP in the next section.

ADDRESSING THE SUSTAINABILITY DIMENSION OF EU FOOD PRODUCTION

AGRICULTURE AND LAND MANAGEMENT

Since the 1960s the emphasis on increasing agricultural output through investments in capital, labour and inputs (mechanisation, use of pesticides and fertilisers, etc.) has significantly increased the EU's productive capacity with a dramatic increase in specialist cereal and meat production. Until the early 2000s, these developments were largely encouraged by price support schemes under the CAP which led to over-production. Over time this emphasis on production and increasing productivity led to dramatic structural changes with a shift away from low-intensity mixed farming systems towards regional specialisation, intensification and land abandonment throughout Europe, threatening the long-term sustainability of agro-ecosystems. This has seen cereal and oilseed crops covering the majority of arable areas and the rapid growth of cattle production, especially dairy, but without an increase in grazing areas due to yield improvements, breeding and animal feed imports (Box 3).

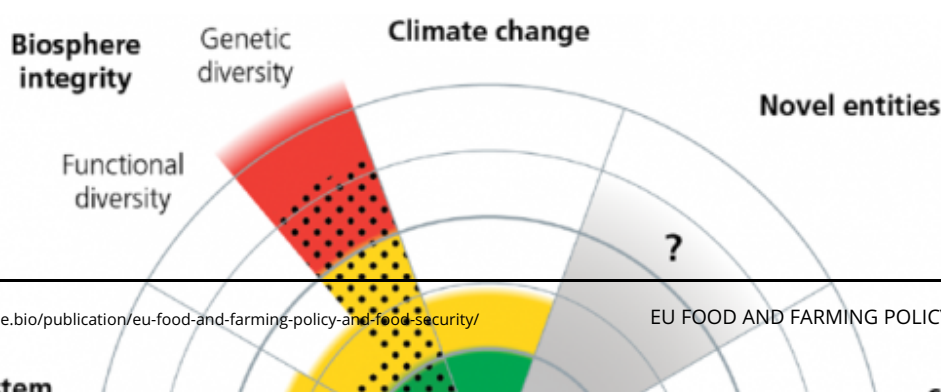
Box 3: Intensive livestock production and climate change

The livestock sector in particular has seen dramatic changes over the last decades. Global meat production has quadrupled between 1961 and 2010, with milk production more than doubling and egg production increasing more than fourfold (HLPE, 2017). In recent years, the negative impacts of intensive livestock production practices on the environment and climate have come under increasing scrutiny, including Europe's dominance as a consumer of natural resources beyond its borders (Godfray et al., 2018; Gerber et al., 2013). Global trends show a growing concentration of intensive livestock production in certain regions of the world, particularly within the pig and poultry sectors, but also increasingly in the beef and dairy sectors. In 2016, the EU-28 together with Brazil, China, and the United States were collectively responsible for 62.3% of total world meat production.

In the EU-28, consumption is double the world average for meat, and triple the world average for milk. The livestock sector is also highly dependent on imported animal feed (Westhoek et al., 2011). In 2013 the EU was a net importer of around 27 million tonnes of soybeans and soya products for oil production and animal feed (EEA, 2014). Imported feed has had a significant impact on deforestation globally, with 44% of deforestation associated with the EU consumption of animal feed crops between 1990 and 2008 (Cuypers et al., 2013). The livestock sector is also a significant emitter of greenhouse gas emissions (GHG). Indeed to achieve an 80% cut to its GHG by 2050, it is estimated that the livestock sector would need to contract by up to 74% (Buckwell and Nadeu, 2018). The challenge therefore is how to manage complex trade-offs to enable livestock's positive impacts to be realised while minimising and mitigating negative ones, including threats to the health of people and the environment. For example, low-intensity livestock systems can utilise land otherwise unsuitable for food production and support the management of highly biodiverse grasslands (Bignal and McCracken, 1996; Karp, 2012).

However, these specialist and intensive agricultural practices exert significant pressure on the natural environment and climate both within and outside the EU. This increases the environmental footprint of EU agricultural production and contributes to agri-food systems exceeding their planetary boundaries (Figure 3).

Figure 3: Planetary boundaries and role of agriculture



Evidence documented in the latest European environment state and outlook report clearly demonstrates that the agriculture sector continues to place significant pressures on the climate and degradation of natural resources such as biodiversity, air, water and soil across farmed landscapes and that these impacts are felt both inside and outside Europe. In particular:

- Agriculture intensification continues to remain a main cause of biodiversity loss including agrobiodiversity (Box 4). Biodiversity decline is evident in the downward trends in farmland birds and grassland butterflies between 1990-2016 and 1990-2017 respectively;
- Evidence from across Europe shows increasing concern about the residence and accumulation of pesticide residues in soils. There also appears to be a continuing dependency on pesticides with sales remaining relatively constant between 2011-2016;
- Nitrogen loads have improved between 2000 and 2010, but there has been no further improvement between 2010 and 2015 and a surplus of nitrogen on EU agricultural land remains, with hotspots in certain regions; and
- About 10% of GHG emissions come from the agricultural sector and while these have decreased since the 1990s, emissions from livestock and soils have been increasing again since 2012.

Box 4: Role of agrobiodiversity in food and farming systems

Agrobiodiversity refers to the variety of plants and animals used in food and agriculture. Agrobiodiversity not only provides the basis for food security (FAO, 2015) by supporting the provision of ecosystem services, but also helps to support productivity and facilitate dietary diversity (Mouill   et al., 2010; FAO, 2004).

There are estimated to be more than 50,000 edible plant species worldwide (FAO, 1995) with only 7,000 species consumed and 150 deemed commercially important. About 103 species make a significant contribution to the human food supply chain and are under threat due to agricultural intensification and specialisation (Thrupp, 2000). It is estimated that 90% of the world's food energy intake is only provided by just 15 crop species (FAO, 1995). Many of the under-utilised crops not only have excellent nutritional profiles, but are based on thousands of years of farmers selecting and producing various edible species suited to different social and environmental contexts.

The emphasis on specialisation of production systems as part of a move to greater economic efficiency has resulted in global food supply being centred on three cereal crops – maize, rice, and wheat. At the turn of the century it was estimated these crops contributed to around 60% of the calories consumed by humans either directly or indirectly (as animal feed). Due to their high yield potential and ease of storage and transportation they are considered the main sources of human food supply (Cassman et al., 2003) despite the breath of global agrobiodiversity (IAASTD, 2009). However, the conservation and sustainable use of agrobiodiversity, in particular preserving plant varieties and rearing endangered breeds, has become more critical than ever as agricultural systems consider how to become more resilient to climate change (FAO, 2011).

The loss agrobiodiversity is therefore a significant threat to food security as it not only undermines the diversity of production and resilience of agricultural systems, but also the diversity of what makes up a sustainable diet.

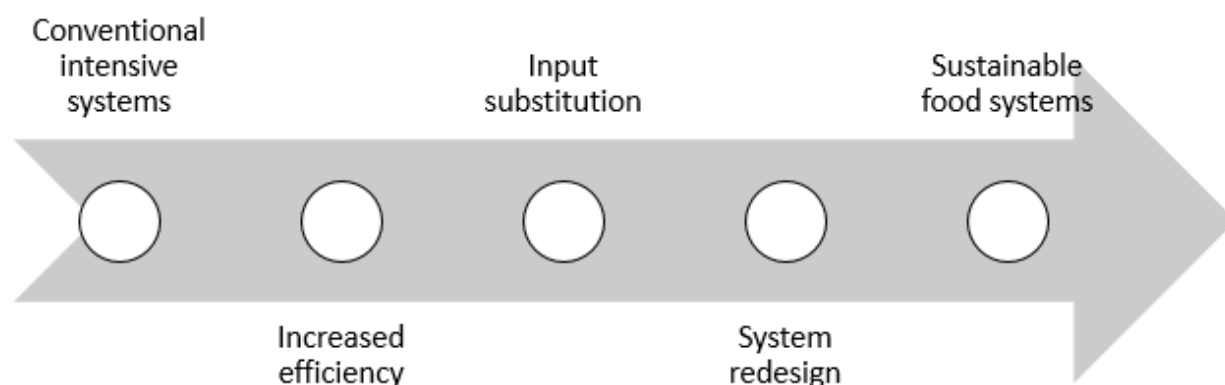
These trends clearly demonstrate the environmental and climate pressures resulting from agricultural practices that have become unsustainable and highlight the importance of putting environmental and climate considerations at the centre of future agricultural production methods (and hence EU agricultural policy). This is necessary to ensure production and yield stability in agricultural systems are resilient to future climatic changes as part of contributing to food security.

PATHWAYS TOWARDS MORE SUSTAINABLE FOOD AND FARMING SYSTEMS

While there is a growing consensus that fundamental changes are required to address the pressures posed by current production methods, there is less scientific or political agreement on which development pathways are needed to confront the scale of the sustainability challenges (e.g. organic farming, conservation agriculture, agroecology, ecological

intensification and sustainable intensification). As illustrated by the efficiency, substitution and redesign framework, there are those who consider that incremental change is needed to move from input-intensive industrial systems towards solutions based on increased efficiencies and input substitution (e.g. relying on the use of alternative inputs to agrochemicals). On the other hand, there are those who consider that more radical change is necessary where preventative solutions are put in place based on a fundamental redesign of the agroecosystem (Figure 4).

Figure 4: Efficiency, substitution and redesign framework



Source: Lampkin et al., 2015 based on Hill, 1985

Many of these development pathways are often framed by policymakers in terms of their ability to feed the world. The most notable binary pathways proposed are sustainable intensification and agroecology although there is significant crossover between the two. On the one hand sustainable intensification is generally seen to be about increasing production through greater efficiencies that consider environmental protection and resource management. Yet these approaches could potentially lead to continued reliance on inputs and the use of contested technologies such as genetically modified (GM) as well as new genetic engineering techniques for breeding. This reflects the fact the original sustainable intensification concept was designed to be deliberately non-prescriptive in terms of the technologies or practices that can be adopted in order to give farmers the flexibility to apply different approaches relevant to their needs. For example, in a European context given the high intensity of agricultural production, sustainable intensification it is argued, is about increasing the intensity of knowledge as to how physical inputs can be combined and managed in order to deliver resource efficient agriculture with significantly higher environmental performance. Nevertheless the concept is not uniformly understood with many considering it not to be a major departure from current agricultural practices due to the lack of common definition.

On the other hand agroecology is seen to be about 'system redesign' as opposed 'input substitution' where agroecosystems are developed to work with nature and farmers, and where farmers' knowledge has a central role, and there are efforts to make greater links between producers and consumers.

Currently, organic farming is the only codified form of agroecology that has a prescribed combination of practices designed to minimise environmental impacts with the produce marketed at a premium to consumers in recognition of these efforts.

There is also emerging evidence that organic farming not only helps to reduce environmental and climate impacts, but could make an important contribution to food security, if there is a significant overhaul in current food consumption (Box 5).

Box 5: The potential contribution of organic farming to food security

In 2018 organic farming represented 7.5 % of total EU farmland with total retail sales in the EU valued at 37.4 billion euro (Willer et al., 2020). While there is a largely body of evidence (Reganold and Wachter, 2016) demonstrating the positive contribution to food and farming systems, including greater profitability and environmental performance compared to conventional farming, the role of

organic farming in feeding the world is widely contested (Connor, 2008) due to the lower yields and the potential extra land needed to meet the gap. Studies shows organic yields gaps can range from being 20% lower on average depending on crop type and location (Seufert et al., 2012) or about 10% lower on average when there are greater similarities between the farming systems e.g. similar amounts of nitrogen only coming from manure or n-fixing crops are applied or where entire rotations are taken into account (Ponisio et al., 2015). Recent assessments of the potential for organic farming to feed the world, suggest that it can play an important role in global food security, when an overhaul of current consumption patterns are taken into account.

From a global perspective, based on the FAO 2050 projections, it is estimated that 60% of the world's nutritional needs could be achieved with organic farming if half of animal feed and food waste was reduced globally. This transition could significantly decrease a number of environmental impacts associated with reductions in nitrogen applications and pesticide use, lower greenhouse gas emissions, and only a marginal increase in farmland. In a European context, another study estimates that full conversion to organic farming by 2050, increases in ecological infrastructure and the redeployment of grasslands, including the extensification of livestock production, could feed up to 530 million people. This would result in a 40-47% reduction in GHG as well as positive environmental impacts associated with the phasing out of pesticides and introduction of more biologically diverse landscapes. Both assessments inevitably rely on significant changes in current dietary patterns and a major reduction in meat consumption in particular (Aubert et al., 2019).

CHANGES IN DIETARY PATTERNS AND SUSTAINABLE DIETS

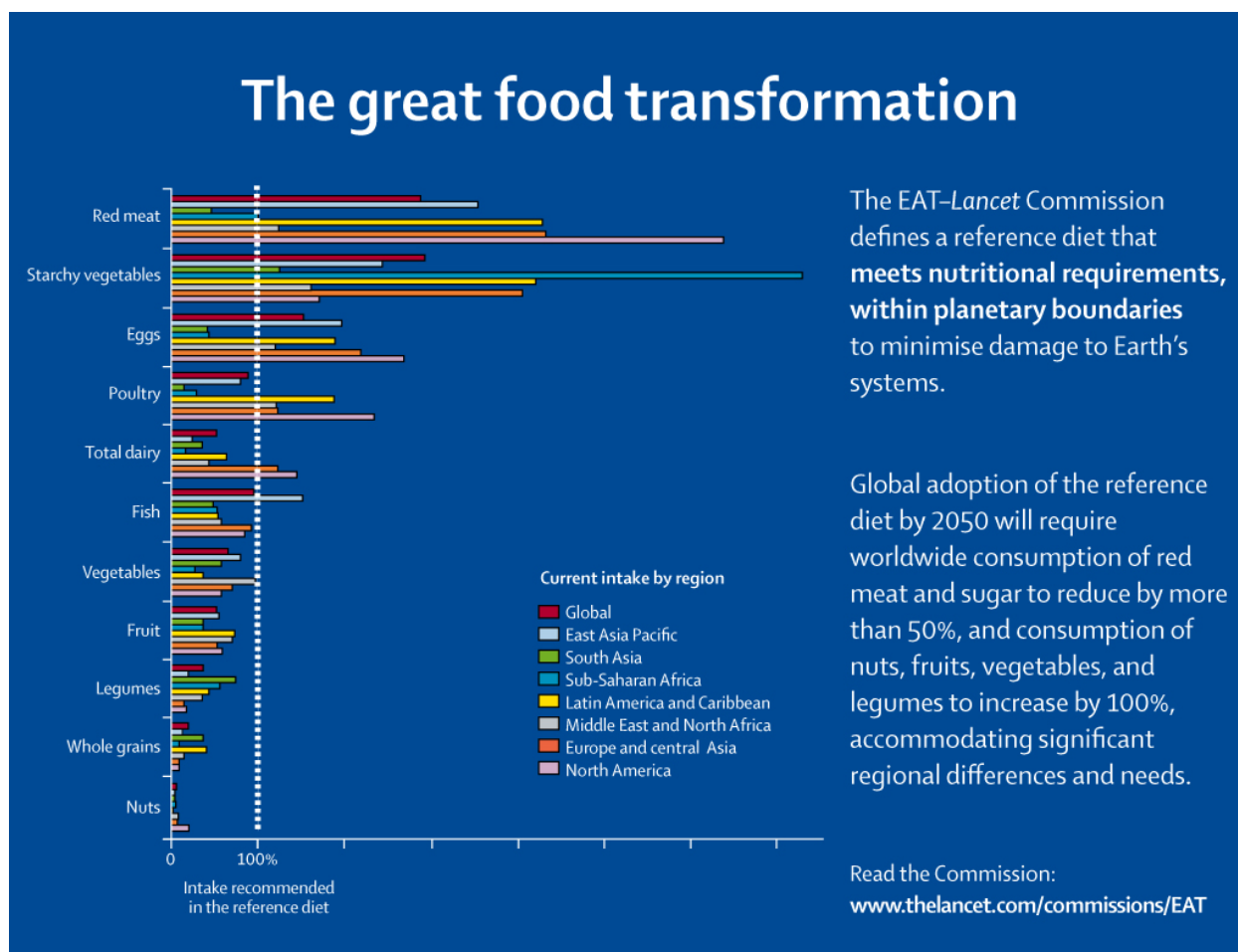
The predominant focus on agricultural production within policy debates in the EU has meant far less attention has been paid to consumption patterns and diets. Moreover, a common assumption is made that Western consumption patterns will continue and should be an aspiration. While the concept of sustainable diets – as being consistent with good health and low environmental impact – has been around since the 1980s, the need to consider sustainable production and sustainable diets together has received growing recognition in more recent years articulated through ‘food sustainability’ narratives in relation to food security. Sustainable diets are considered to be inextricably linked to both human health and environmental sustainability. While improving production practices and increasing crop yields and access to food has contributed to alleviating some global food security challenges, to some extent these benefits are being off-set by a shift to more energy intensive diets which are heavily-processed and contain higher amounts of protein from animal sources. Moreover, food choices are increasingly made within a food environment which influences consumer purchases depending on availability, affordability, convenience, and desirability of various foods. The food environment also takes account of physical, economic, policy and socio-cultural factors that may affect people’s choices and nutritional status such as food composition, food labelling, food promotion, food prices, food provision in schools and other settings, food availability and trade policies affecting food availability, price and quality.

European diets have also changed significantly over the last 50 years. Between 1961/1965 and 2000/2004 dietary patterns in EU countries saw a convergence towards more westernised diet particularly in Mediterranean countries. consume food products that are characteristically energy-dense, fatty, high in sugar or salt) has increased significantly over the last few decades. The largest amounts of these products, which are usually highly-palatable, cheap and generally contribute to obesity, are consumed in high-income countries, however there is also rapid growth seen in middle-income countries. In European countries ultra-processed foods can amount to over a quarter of food purchases on average ranging from 10% in Portugal to 50% in the UK. There is also a significant positive association between the availability of ultra-processed foods and national prevalence of obesity amongst adults. The shift away from diets based on regular freshly prepared meals has significantly transformed food supplies, food culture and dietary patterns in many parts of the world, with the sale and promotion of ultra-processed food and drinks now considered a major driver of global epidemics of non-communicable diseases.

These trends have significant implications for both environmental and human health. For instance European consumption of meat and dairy alone has increased dramatically over the last 50 years leading to range of negative environmental impacts both in and outside Europe, as well as human health risks, with consumption 70% higher than recommended dietary guidelines. Poor dietary patterns also contribute to poor health outcomes due to people becoming overweight or obese. In Europe, over half of adults and over a quarter of school-age children across Europe were overweight and increased significantly in all age groups between 2000 and 2018. EU figures show obesity rates have risen in almost all European countries since 2000 and in 2014. About 16% of adults were categorised as obese across all Member States as a result of energy-dense foods and less active lifestyles. Indeed there is growing evidence that major region-specific changes to our

current dietary patterns are required to support better human and environmental health by 2050. In a European context this includes significant reductions in the consumption of animal products, and an increase in fruit and vegetables, nuts, and legumes (Figure 5).

Figure 5: Recommended regional dietary changes required by 2050 to stay within planetary boundaries



THE LANCET

The best science for better lives

Source: Willet et al., 2019

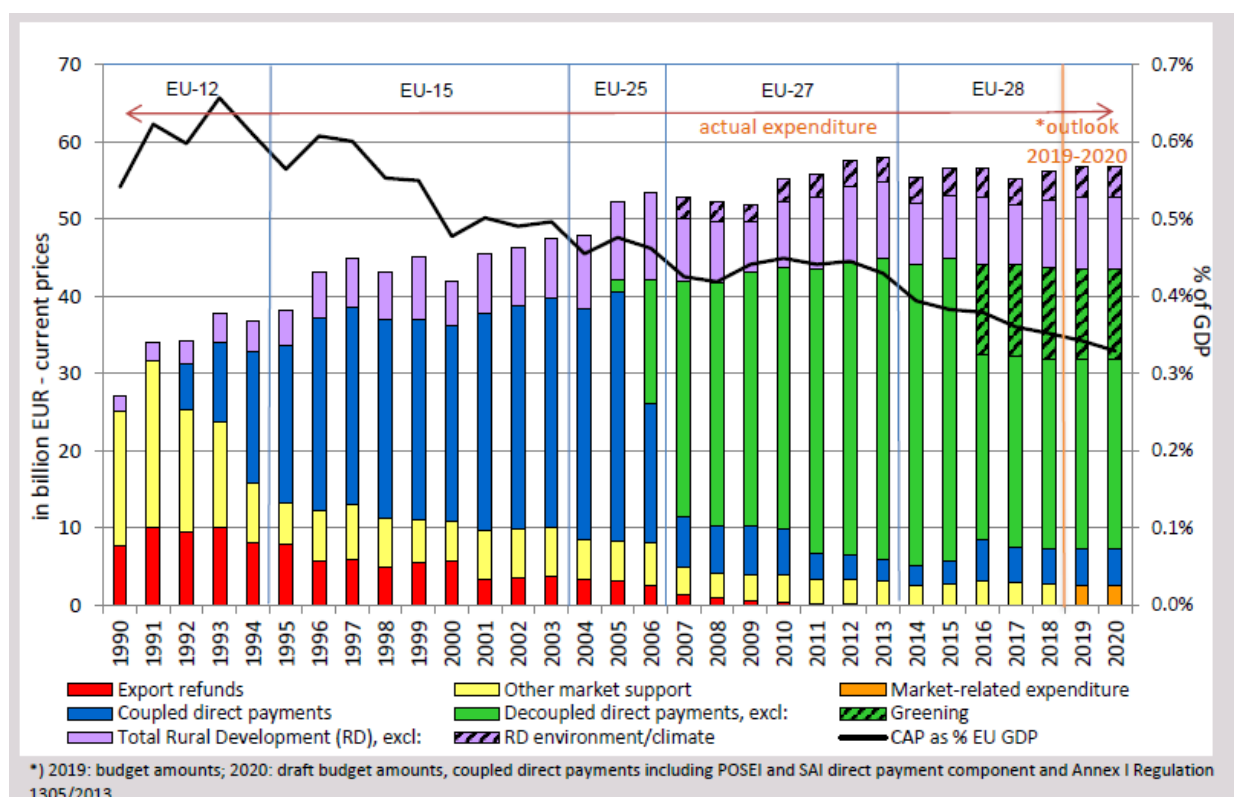
These trends show the growing importance of sustainable diets as part of the overall challenge of addressing the sustainability dimension of food production and highlights the need for a broader approach to food security in the EU policy debate that goes well beyond the farm scale.

ROLE OF THE CAP IN SUSTAINABLE FOOD PRODUCTION

Despite these current pressures and trends, it is important to acknowledge that there have been some improvements in the sustainability of EU food production. This largely relates to improvements in the sustainability of farming practices and land management, particularly as a result of successive reforms of the CAP. This reflects the fact that, as the largest source of EU funds (representing approximately 40% of the EU budget in 2018) and public expenditure targeted at the agricultural sector, the CAP influences the business and management decisions of farmers through a combination of rules and incentives. The CAP has progressively shifted away from supporting farmers through price and production support schemes since the mid-

1990s towards offering direct payments to farmers decoupled from production as a new form of income support as well as placing more emphasis on the environment and rural development (Figure 6).

Figure 6: CAP expenditure 1990-2020



Source: European Commission (2019) based on data from DG AGRI, Eurostat and Global Insight

The policy has also placed more emphasis on complying with basic environmental requirements, with the introduction of cross-compliance in the mid-2000s. A stronger focus was also put on sustainability with the introduction of measures to support more sustainable land management through the establishment of compulsory agri-environment schemes and voluntary support for organic farming which are now a central component of EU rural development programmes. For example, agri-environmental commitments covered 26.3 % of the EU farmland area for the period 2007-2013 (including organic farming and excluding Croatia), while the commitments for the period 2014-2020 are expected to cover about 22.5% of the area by 2020 (excluding organic farming). Although these figures are not directly comparable (as a result of the way the data has been compiled and reported) and the degree of scheme targeting can vary significantly, they demonstrate the important role rural development programmes have and continue to play in supporting sustainable agriculture and land management in the EU. Support for conversion and maintenance payments for organic farming have contributed significantly to the growth of the organic farmland between the mid-1990s and 2014. Moreover, the current CAP 2014-2020 is expected to support further conversion to organic farming by 2020. However, when compared to the total organic farmland area in 2014 these increases to 2020 appear to be modest in many Member States.

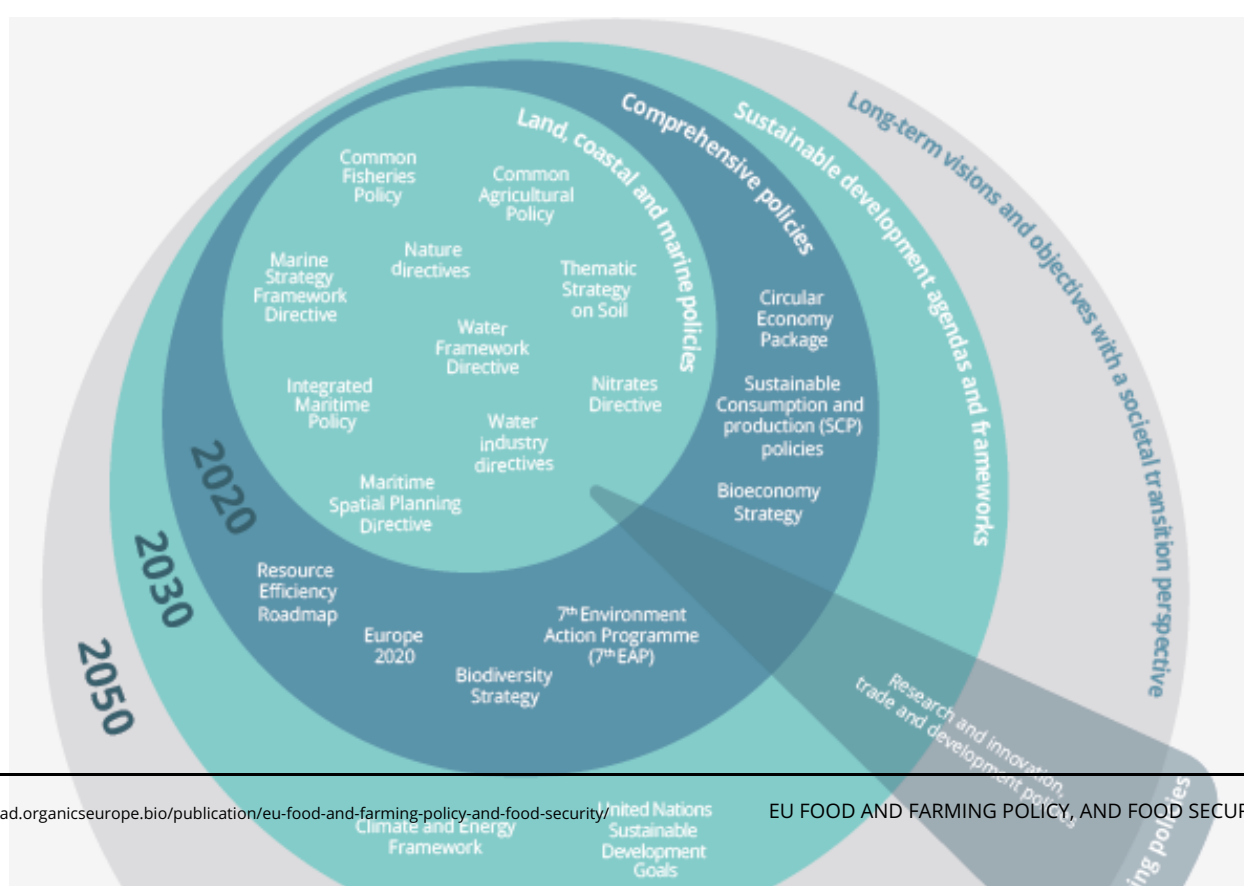
Nevertheless, environment and climate objectives have become gradually more prominent within the CAP over time – particularly since the last reform. In this 2013 reform there were further efforts to mainstream environmental and climate considerations into direct payments with the introduction of ‘greening’ measures. This had the potential for up to one third of the total CAP budget to be targeted at land management actions to address environmental and climate priorities based on the principle of public money for public goods. However, the results of the ‘greening’ measures have been extremely mixed to date. Firstly a significant proportion of the EU’s farmland area was exempt from the requirements and secondly the actual implementation choices, which primarily targeted arable land, were taken by Member States and largely driven by efforts to avoid changes to existing farming practice and avoid administrative burden. As result the greening payments have had a limited impact on increasing sustainable land management and action on climate change in the EU agriculture sector. Moreover between the two programming periods 2007-2013 and 2014-2020, the total allocation of rural development spending for agri-environment and organic farming has been reduced significantly across a number of Member States.

The latest reform of the CAP for post-2020 is presented as new departure in supporting the transition towards a more sustainable agricultural sector, through a new delivery model focused on results and greater accountability. This is intended to increase the level of ambition environmental and climate ambition of the policy. This is a positive development, particularly in terms of using direct payments in a targeted way to support the transition toward more sustainable land management. It can also help to complement land management support under the rural development programmes, as long as sufficient funding is provided for all elements of the policy needed to drive the necessary change. However, there are caveats, notably the fact that basic income support continues to remain a dominant component and could trump these new innovations in the policy.

While the majority of the CAP funds remain focused on providing income support to farmers, measures available under the rural development programmes have increased support for initiatives that could have the potential to stimulate sustainable food production as well as influence sustainable dietary patterns to some extent through changes to the food environment. These measures largely concern the restructuring, modernisation or development of farm and food businesses as well as Community-led Local Development/LEADER. The development of short supply chains has also been given greater prominence in the current CAP 2014-2020. There is evidence that Member States are using these measures to support food supply initiatives at regional and local level. However, there is no CAP objective or rural development priority that is explicitly aimed at promoting sustainable food production across the supply chain or designed to influence sustainable dietary patterns specifically. Thus while some measures have the scope to support health and nutrition outcomes in principle, the specific contribution and overall effectiveness of such measures in supporting sustainable diets remains unclear. There are also no clear policy signals as to why they should receive political priority in agricultural policy. This lack of political prioritisation is also exacerbated by the fact that they are seen as secondary to economic concerns. In contrast, the post-2020 CAP does place more emphasis on these issues including a specific objective on the role of EU agriculture in addressing societal demands for more sustainable food production and reducing food waste. However, there is no specific target designed to monitor or measure the delivery of more sustainable diets under the proposal. As a result, it remains unclear how Member States are to address this objective in practice to ensure a greater coherence between agriculture and health and nutrition policies as part of a more integrated approach to European food security.

Despite the resources available within the CAP to support sustainable food production it is evident that the policy only influences some dimensions of food security. Indeed prior to the launch of the European Green Deal, there are already a number of other instruments across the EU policy framework, beyond the CAP, that can influence the development of EU food and farming systems both directly and indirectly to 2050 (Figure 7).

Figure 7: Non-exhaustive overview EU food and sustainability policies prior to the Green Deal



Full consideration of these policies is also critical in the formulation of any comprehensive response to food security in an EU context. For example, the EU Structural Funds have the potential to support the development of sustainable food distribution networks to improve the availability and the stability of supply. Investments in green public procurement and fiscal policies such as taxation can influence how sustainable food is utilised and can be accessed affordably. Elsewhere policies concerning climate change, research and innovation and the circular economy can help to improve the stability of both food production and supply. Finally, trading practices between different actors in the food chain and trade agreements between the EU and other countries can address all dimensions of food security in terms of fair market prices and ensuring sustainable livelihoods for producers.

Overall the evidence of the challenges facing agriculture and land management and diet patterns in Europe, coupled with the design and implementation of the current CAP and lack of consistency between EU policies to address these challenges, clearly demonstrates the need for more coordinated action across EU policies in terms of the way they are implemented. The EU's Farm to Fork Strategy, as part of the overall EU Green Deal, therefore has the potential to bring together these policies to address food security in a more sustainable way.

TOWARDS A MORE HOLISTIC APPROACH TO EU FOOD SECURITY

CONCLUSION

Food security is often used to justify the development of agriculture and food policies in the EU. Yet the EU's role in domestic and global food security is not clearly defined and has been used to argue for greater focus on production rather than to address all aspects of food security (availability, access, utilisation, stability). Despite environmental and dietary sustainability being intrinsic to food security they are often not sufficiently taken into account in policy.

These wider aspects are essential in a balanced approach to addressing food security within the EU and globally and speak more to the importance of resilience of the EU's food system, rather than food security in the abstract. The EU's approach to food security should therefore consider both the EU and global context of action taken within the EU, taking account of the different dimensions of food security from a sustainability perspective.

This will require acknowledgement that increasing Europe's agricultural output and the bloc's competitiveness in global markets will do little to enhance global food security in other regions. It would further undermine the much-needed shift towards more sustainable production and consumption coming at the expense of the long-term sustainability of natural resources and ecosystems services necessary to maintain global and domestic food security.

The European Commission's forthcoming Farm to Fork Strategy presents a significant opportunity for the EU to show leadership in its approach to food security through sustainable food production. This will require a clear political vision for the future of food and farming systems in the EU to 2030 and 2050 aligned with the UN SDGs, identifying the priorities for food-related policy areas (e.g. agriculture, trade and development etc.) and their interaction. The Farm to Fork Strategy will also need to be consistent with other emerging and long-term strategies, such as the revised Biodiversity Strategy, EU climate law, amongst others. It should also fully enable the use of the EU Structural and Investment Funds, including the rural development and cohesion funds, to drive this transition as part of the efforts to move towards a more circular and sustainable bioeconomy.

Agriculture policy is a tool to achieve Europe's ambitions, not an end in and of itself, therefore as a delivery tool, the CAP has a central role to play in supporting the transition to a more secure and resilient food system in the EU, built on the sustainability of production and consumption. A new contract between farmers and society should be based on a full transition towards rewarding farmers for the environmental and climate goods they deliver, not just simple compliance with EU legislation. This requires a transition away from CAP direct support towards outcome-based payments combined with knowledge transfer, advice and innovation. This could be complemented by the introduction of other environmental fiscal measures on pesticides and synthetic fertilisers (e.g. based on chemical or nutrient content, volume etc) as well as imported feed. Such measures should be aligned with the EU's proposed carbon border adjustment mechanism.

CAP strategic plans offer the opportunity to take a more coordinated approach to addressing the challenges of sustainable agriculture and land management. Yet the potential subsidiarity given to Member States remains a risk and is not helped by the lack of a clear vision for the EU agricultural sector to 2030 and 2050. This includes the absence of measureable targets designed to ensure the sector makes an active contribution to EU environmental, climate and other sustainability objectives, and to track progress towards those objectives. Therefore, strong accountability and robust monitoring need to be put in place in addition to effective transparency rules around national CAP strategic plans. This should include the right bodies and tools to allow citizens interests to be actively reflected in future policy making and monitoring, along with greater focus on empowering and upscaling pioneering national, regional and local initiatives in order to strengthen rural-urban linkages between land management and sustainable diets. A genuine shift towards more sustainable, resilient and secure food and farming systems requires issues related to both land management and sustainable diets to be treated together rather than in isolation.

Supporting this necessary shift will require not only maximising the opportunities available under the CAP, but also taking advantage of relevant EU policies and instruments related to food and farming. New approaches to address the gap between the retail price of food where the true cost of sustainability is internalised in the price of food commodities and products will be necessary alongside strategic planning. Fiscal measures need to be allied with the EU's green public procurement policy and greater education about our food and farming decisions at all ages and in all sectors of society, particularly through

school curriculum.

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