

# A vision

for the future of the European dairy industry



Institute for  
European  
Environmental  
Policy

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This report was commissioned by Arla Foods

## **THE REPORT SHOULD BE CITED AS FOLLOWS**

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# Forewords

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The science is unequivocal: pressing challenges lie in front of us. The latest evidence from the European Environment Agency shows that the European Union is off track across nearly all its environmental and sustainability targets. For Europe to become a sustainable, climate friendly continent that stays within the planetary boundaries, we need to implement deep systemic changes – and do so quickly.

The EU urgently needs a new and ambitious blueprint for tackling climate change, pollution, biodiversity loss and overconsumption. That the new Commission's first major policy announcement – the Green Deal – starts to address this urgency carries an important message.

The food sector is at the centre of this – and the dairy sector, in particular. Representing more than 12 per cent of the EU's total agricultural output, dairy production is the Union's second biggest agricultural sector. But today, it faces numerous, interlinked challenges across all three pillars of sustainability – economic, social and environmental.

A few months ago, we were approached by Arla Foods to conduct a study on how the European dairy sector could become more sustainable – in all three pillars. As an independent think tank striving for sustainability and evidence-based policy making, we've taken on what we believe is a great opportunity and decided to write a report that goes beyond just fact checking and provides solutions and possible pathways for all actors involved in the value chain.

That's because the challenges lying ahead cannot be addressed by one party alone. The dairy sector itself can bring profound and necessary changes but, on their own, these will not be enough: policy makers, civil society, consumers and others will also have to become the drivers of the transition.

In the context of the Green Deal and the upcoming Farm to Fork strategy, we hope that our findings and conclusions contribute to the discussion and, above all, lead to evidence-based decisions that are so urgently needed.



Céline Charveriat,  
Executive Director  
Institute for European Environmental Policy

As one of Europe’s largest dairy cooperatives with farmer owners in seven European countries, Arla Foods is committed to sustainable dairy production. I am proud that Arla and many of our peers across Europe have stepped up to the sustainability challenge. But we also know there is more to do.

The public and political debate around sustainable food production continues to evolve and there are many, and often competing views on what action is needed to address the challenges. As a leading European dairy, we felt it was important to take a step back and really understand the current landscape, as well as the challenges and the opportunities facing the dairy sector taking into consideration the views of a number of stakeholders from across the value chain, from outside the dairy industry and within academia. As a farmer owned cooperative, this collaborative culture is part of Arla’s DNA.

We wanted to understand what can be done to ensure and strengthen a bright and sustainable future for the dairy sector and not least what we can all do to meet the changing expectations of the public – as dairy processors, as farmers, as governments and as civil society.

It was important to us to have an honest and realistic appraisal of the future of the European dairy industry that recommended practical actions. And we wanted an independent third party to carry out this research, so we were pleased to be able to commission the Institute for European Environmental Policy (IEEP) to do this important work.

The report clearly sets out the challenges. But it is also clear how much the dairy sector gives back to Europe and how complex and interlinked sustainability is when looking at the social, economic and environmental pillars. We need to take all these elements of dairy’s role into account in the ongoing discussions about how Europe and its food sector should transition into a sustainable continent in terms of economy, environment, health and quality of life as outlined in the European Commission’s Green Deal. I hope this report is a valuable contribution to this discussion.

Together with our 9,900 farmer owners, Arla Foods has a great sense of responsibility to lead the dairy sector. We will continue to play our part in taking the necessary action and establishing the essential partnerships. If we work closely together as an industry with governments, interest groups and consumers, I am confident that we can create a sustainable future for the European dairy sector.



Peder Tuborgh  
CEO  
Arla Foods



A vision for the  
**future**  
of the European dairy industry





The current agri-food sector model faces significant challenges across the world. Major concerns about sustainable production, a growing population and entrenched nationalism are putting a strain on the status quo.



# Setting the scene

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The 7<sup>th</sup> European Environmental Action Plan (EAP), adopted in 2013, set an inspiring vision: “In 2050, we live well, within the planet’s ecological limits. Our prosperity and healthy environment stem from an innovative, circular economy where nothing is wasted and where natural resources are managed sustainably, and biodiversity is protected, valued and restored in ways that enhance our society’s resilience.

Our low-carbon growth has long been decoupled from resource use, setting the pace for a safe and sustainable global society. However, evidence to date suggests that Europe is not on track to reach the objectives of the 7<sup>th</sup> EAP or the UN’s Sustainable Development Goals. Scientists are warning us that we are running out of time: the more we wait, the more likely it is that damage will become irreversible.

In response to the urgency of the situation and citizen demand, in December 2019, the European Commission, within its communication on the Green Deal, committed to transform the EU into a “fair and prosperous society, with a modern, resource efficient and competitive economy where there are no net emissions of GHG by 2050 and where economic growth is decoupled from resource use”. The Green Deal also aims at protecting, conserving and enhancing the EU’s natural capital and protecting the well-being of citizens from environmental risks.

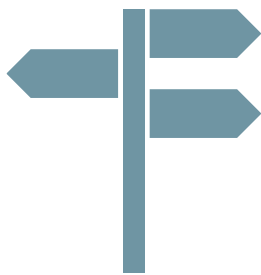


**“Our goal is to reconcile the economy with our planet, to reconcile the way we produce and the way we consume with our planet and to make it work for our people.”**

Ursula von der Leyen  
President of the European Commission

It is in this context that the dairy sector globally has made ambitious long-term commitments to contribute to the Sustainable Development Goals, such as ending poverty and hunger, and protecting the environment. This was set out in the 2016 “[Dairy Declaration of Rotterdam](#)” by the International Dairy Federation (IDF) and Food & Agriculture Organization of the United Nations (FAO). In order to realise a large scale transition, significant efforts from across the value chain are necessary. At the same time, the sector is restricted in its ability to work towards long-term goals by the immediate challenges in the economic, social, environmental and climate spheres. Volatile product prices and pressure to increase and intensify production, driven by export markets coupled with consumer expectations for more environment and climate-friendly products, high animal welfare and local production systems have put increasing pressure on the sector.

There is a pressing need to adopt a new approach towards the future and it is time for industry leaders to step up and set out an ambitious vision for the agri-food sector and – importantly – help deliver it.



**The future will favour first movers, the key question is which direction to take and how far and fast to go.**

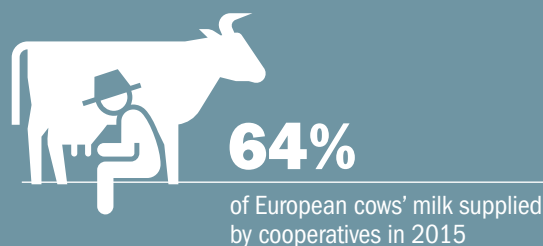
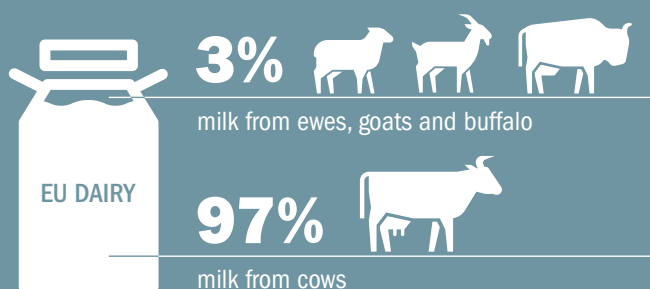
The vision set out in this report provides suggestions on the direction to take and a call to action for the EU dairy sector to achieve these commitments. It outlines how the sector could benefit from the transition once completed, but also during the process itself. It sets out the enabling conditions necessary to achieve success, central to which will be working together, in partnership and across the supply chain.

<sup>1</sup> According to the FAO, food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life. The four pillars of food security are therefore availability, access, utilization (use and misuse) and stability.

<sup>2</sup> More than 45,000 jobs in dairies are directly linked to export (In 2016, the top 10 importers of EU dairy products accounted for just under 50 per cent of total EU exports (16,842,787 tonnes in milk equivalent) – the EU dairy sector has developed a true global and diversified export strategy making EU dairy available in all regions of the world).

# The EU dairy sector

The EU dairy sector is the second biggest agricultural sector in the EU (after the vegetable and horticultural plant sector and before cereals), representing more than 12 per cent of total agricultural output. Farm and herd size, yields and types of farming vary widely across Europe, from free-range farming in Alpine areas to large specialised dairy farms in the north-west and central Europe. Alpine areas are particularly important for milk production in the EU, accounting for around 10 per cent of overall EU milk production – ranging as high as > 60 per cent production in Austria, Finland and Slovenia. In the EU, organic milk production represents only a small share of the total production, around 3 per cent in 2016 (EC, 2018).<sup>3</sup>



In 2016, 97 per cent of all milk produced in the EU came from cows.<sup>4</sup> In a 30 year period between 1983 and 2013, the number of farms with dairy cows decreased in the EU-10 by 81 per cent – a reduction of 1.2 million dairy farms. Despite these large declines, the overall production of milk volumes remained relatively constant as farms became more specialised in nature.<sup>5</sup> Initial capping of milk production introduced under the CAP in 1985 as one of the tools to overcome structural surpluses was lifted in 2015 as international demand for milk and milk products increased and farmers were able to sell into a growing international market. Added-value product markets, such as cheese, grew as a result (EPRS, 2018).<sup>6</sup>

Within the EU, there are an estimated two million people employed within the dairy sector, including 300,000 direct jobs in the milk processing sector alone and over 1.7 million farms that keep dairy cattle (EDA, 2018).<sup>7</sup> Cooperatives are particularly prevalent in the sector, with around 64 per cent of all European cows' milk supplied by cooperatives in 2015. Cooperatives have an important market share, owing partly to the perishable nature of the product, which entails high transaction costs in trading, and also to the instability of markets.

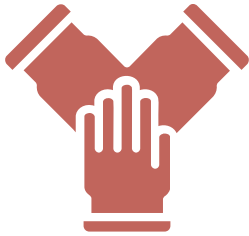
<sup>3</sup> European Commission (2018) - EU agricultural outlook 2018-30.  
<sup>4</sup> The remaining 3 per cent of milk came from ewes, goats and buffalo.  
<sup>5</sup> Changing from dairy cows on mixed farms, to specialist dairy production.  
<sup>6</sup> European Parliament Research Service (2018) – The EU dairy sector: main features, challenges and prospects.  
<sup>7</sup> European Dairy Association economic report 2017/18.

# Challenges and opportunities

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The sector faces numerous interlinked challenges across all three pillars of sustainability – economic, social and environmental – yet addressing these challenges should realise opportunities for the sector and society as a whole. Public awareness and sense of urgency around the environment and climate action are growing; meanwhile, economic considerations are still a key driving factor in many decisions (public and private). Realising these opportunities means moving forward within a development space that is together ‘acceptable’, ‘viable’ and ‘equitable’. Responses to one sustainability challenge, for example, climate may lead to opportunities for another, for example, economic – and vice versa. Similarly, responses to one may lead to damaging another, and these trade-offs should be minimised.

Doing so will underpin the future of a sustainable and resilient sector.

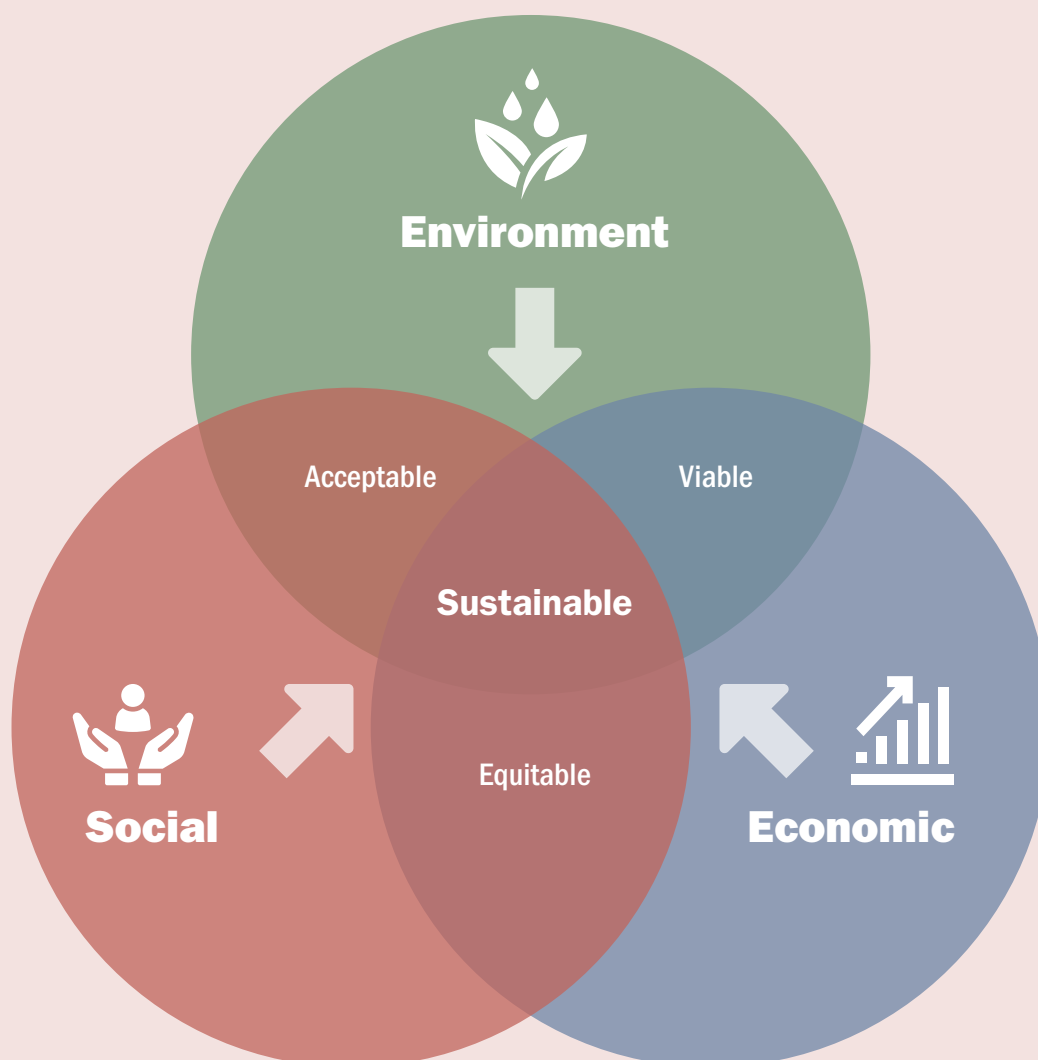


**Action needs to be taken in partnership with industry (across the value chain), policy makers and a broad range of stakeholders, including consumers.**

Some responses can and should be taken now – improving the way the sector operates in the short term. **These should be no-regret options that do not lead to system lock-in and should allow change in the future.**

Yet, some responses will take more time, and imply greater systemic change, further research and understanding, alongside transitional support. That does not mean, however, that they should slow down the necessary transition; the transition, indeed needs to be enacted now. The responses should run in parallel to short-term actions and be supported as part of an overall transition.

**The three pillars of sustainability should, therefore, be pursued together, in an integrated way.**



# Challenges and opportunities



## Socio-economic

**Dairy farming and the dairy value chain are an important business sector in the EU farming economy.**

The EU dairy sector is faced with several socio-economic challenges, including fluctuating market prices, high labour costs and aging demographics. The number of dairy farms has declined across Europe (a decrease of 1.2 million farms between 1983 and 2013 in the EU-10), as fewer farms are passed on to the next generation – small-scale farms are particularly affected. Raw milk and dairy price volatility have both increased significantly during the last decade. Since 2007, the magnitude of price variation has increased with most years seeing strongly fluctuating raw milk and dairy prices between 0.40 and 0.25 EUR/litre (EC, 2016).<sup>8</sup>

<sup>8</sup> European Commission (2016) - EU dairy farms report based on 2016 FADN data

Farm income instability and insecurity are exacerbated by the relatively weak position of dairy farmers in the supply chain and the specialisation in dairy production, leading to a lack of income diversity. Addressing imbalances in market power is, therefore, a central challenge. Embedding sustainability into the 'value' of dairy products, coupled with greater connection with consumers and awareness raising, should help to boost and stabilise product prices, as they are in part decoupled from output volume. This will be aided as retailers begin to pay a fair price for dairy products. Precarious financial situations create the need for investment support, including investment in efficiency and environmental measures, as well as insurance measures to protect against fluctuating markets, and environmental and climate shocks. Diversification of income streams on farms – through product variety, higher value products as well as on-farm diversification, renewables generation, and rural tourism, for example – can lead to greater stability, separate from market prices.

Agriculture is a traditionally labour-demanding sector, which relates to the annual workload, unusual working hours and the physical demands of the work. Yet, whilst dairy production in the EU is rising and expected to continue to 2030 (from 167.3 mt of dairy cow milk in 2020 to 180.6 mt in 2030), the EU dairy herd continues to decline (22.8 million cattle in 2020 down to 21.9 million in 2030) along with workforce resources, leading to fewer but larger farms (EC, 2018).<sup>9</sup> For future employment, the sector faces difficulties with attracting young entrants into the field. In 2016, in the EU agriculture sector as a whole, one third of farm managers were older than 65, and only 11 per cent were under 40. Among young farmers, access to land to buy or to rent is a considerable concern. Bringing in new and younger entrants to the sector – at all stages in the supply chain – can bring new skills, ideas and a revitalisation of the sector overall.



**Addressing imbalances  
in market power is, therefore,  
a central challenge.**

<sup>9</sup> European Commission (2018) - EU agricultural outlook 2018-30

# Challenges and opportunities

## Environment, climate and animal welfare

**All farming systems are intrinsically tied to the climate and functioning of a healthy natural environment.**

The EU dairy sector is both a victim of and contributes to climate change. Farming in the EU is responsible for just over 10 per cent of economy-wide greenhouse gas (GHG) emissions.

Most emissions of non-CO<sub>2</sub> greenhouse gases (i.e. methane and nitrous oxide) in agriculture originate directly or indirectly from animal production; in a business as usual scenario, this sector would be directly responsible for 72 per cent of economy-wide non-CO<sub>2</sub> emissions in 2030 (EC, 2018).<sup>10</sup>

Yet, the sector is also one of the first victims of climate change and, indeed, changing weather and climate patterns leading to disease outbreaks, animal heat stress, worsened reproductive performance, decline in water resource availability and reduction of soil fertility. Addressing the mitigation challenge correctly, should enable greater resilience in the sector and across the supply chain, providing longer-term sustainability as well as improved efficiency and cost-saving on farms and in the production process.

Climate change challenges also exacerbate the degradation of many ecosystems that happened over the last decades. Whilst some farming practices are essential to the maintenance of certain types of habitats, farming remains among the most significant contributors to biodiversity decline in the EU. Conventional production and processing practices can impact water availability, as well as water and soil quality. Given the great reliance of farming on healthy and productive natural resources, this degradation is a direct threat to long-term food security and future production.

<sup>10</sup> European Commission (2018) - EU agricultural outlook 2018-30





First movers to address these issues will benefit from emerging markets, through improved brand image and reception from informed consumers. Increased product value built on sustainability, should also help to stabilise price volatility.

### **Animals are at the centre of the whole dairy supply chain.**

Resilient dairy farming also means taking good care of herds and meeting health requirements. The second worst animal welfare problem in Europe today is the poor welfare of dairy cows, resulting from leg disorders, mastitis and reproductive problems. Taking more concerted action on improving animal welfare should be communicated clearly to customers and actors in the supply chain, receiving recognition for dairy products. Healthy and happy animals may also be more productive and deliver better quality products, attracting higher value.

# Challenges and opportunities



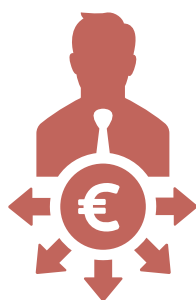
## Societal

**Consumers and citizens form the markets to which the dairy sector has to respond, and into which it sell its products.**

Social understanding and recognition of environmental impacts, animal welfare and health issues are growing, resulting in increasing demand from consumers for healthy, sustainable products and high animal welfare standards.

In a recent Eurobarometer survey, the majority of Europeans (94 per cent) viewed the protection and welfare of farmed animals as important.<sup>11</sup> This will be reflected in a growing market segment based on sustainability. Consumers and citizens form the markets to which the dairy sector has to respond, and into which it sells its products. Coupled with that, there is growing concern that the consumption of meat and dairy products in Europe exceeds recommended levels set out in national dietary guidelines.<sup>12</sup>

There is a growing trend in some segments of society towards a reduction of animal protein consumption (reduced meat and dairy consumption), especially amongst younger generations. Diversification in products could again lead to the opening of new markets, supporting the dairy sector's sustainability transition. This is coupled with a growing world demand for meat and dairy products driven by population and income growth outside of Europe, with increasing meat and dairy demand taking place in Asia, Africa and South America. Greater clarity on sustainable and nutritious diets, as well as the role of dairy products in these diets, will again provide assurance to the sector and investors whilst helping to prioritise the production of high quality, nutritious and sustainable products.



**Consumers and citizens form the markets to which the dairy sector has to respond, and into which it sells its products.**

<sup>11</sup> Special Eurobarometer 442 on attitudes of Europeans towards animal welfare (2016). 82 per cent of respondents said that animals should have better protection than they currently have.

<sup>12</sup> Nutritional guidelines for healthy and sustainable diets remain fragmented across the EU and globally. There is also no EU wide definition of a sustainable or low-carbon diet.

## A path less clear

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There are some challenges that arise in the debate around the future of the livestock sector, but consensus on the response is unclear. Highlighting these issues is to recognise them as important and seek collaboration or further research in their response. The vision and actions proposed aim to be technology neutral – and instead articulate what needs to change without necessarily prescribing how that change should happen, especially if some of the changes proposed rely on certain types of technologies.

There is **growing public pressure to reduce livestock numbers** as a response to their association with high greenhouse gas (GHG) emissions alongside other detrimental impacts on the environment. This is more the case now, than before as public environmental consciousness around climate and biodiversity threats begin to focus on specific sectors. Yet reducing animal numbers is only one possible response to this complex challenge. Livestock numbers may reduce as a result of different development trajectories, through gains in efficiency, changes in demand, and other factors, and the negative impacts from livestock production could be addressed in part through other means. The response to the climate challenge needs to be rapid and include all mechanisms that lead to reduced GHG emissions and improved environment whilst enabling the sector to adapt – both to climate and the sector's new place in society. A partnership response will be necessary, with consumers, industry, policy makers and other stakeholders all playing a role. What is certain though, is that any response needs to consider the long-term future of the sector, avoid system lock-in and minimise any environmental or animal welfare impacts.

**Dairy products are seen as part of the ‘overconsumption of livestock products’ challenge.**

This challenge is global in nature with varying degrees of over- and underconsumption at all levels. The pressure on consumption comes in part from the growing number of climate conscious consumers (see above), but also for health reasons. Whilst milk and dairy products can be a component of nutritious and sustainable diets, the research into what is a sustainable, nutritious and healthy diet remains unclear, not aided by the lack of an EU wide definition. The overconsumption of any dietary component can be problematic, and to compare one component to another is impractical. Humans require a balance of nutrients, fats, carbohydrates and proteins in their diets. How these are delivered is a result of cultural, economic and contextually influenced decisions. Yet it must be recognised that the EU dairy sector will continue to respond to the global market, and this, therefore, means that addressing consumption will require efforts on a global level.

Responding to these – and other – pressures, the dairy sector will increasingly need to justify its role in diets and demonstrate its relevance and importance in a sustainable future in order to be supported and recognised in the transition.



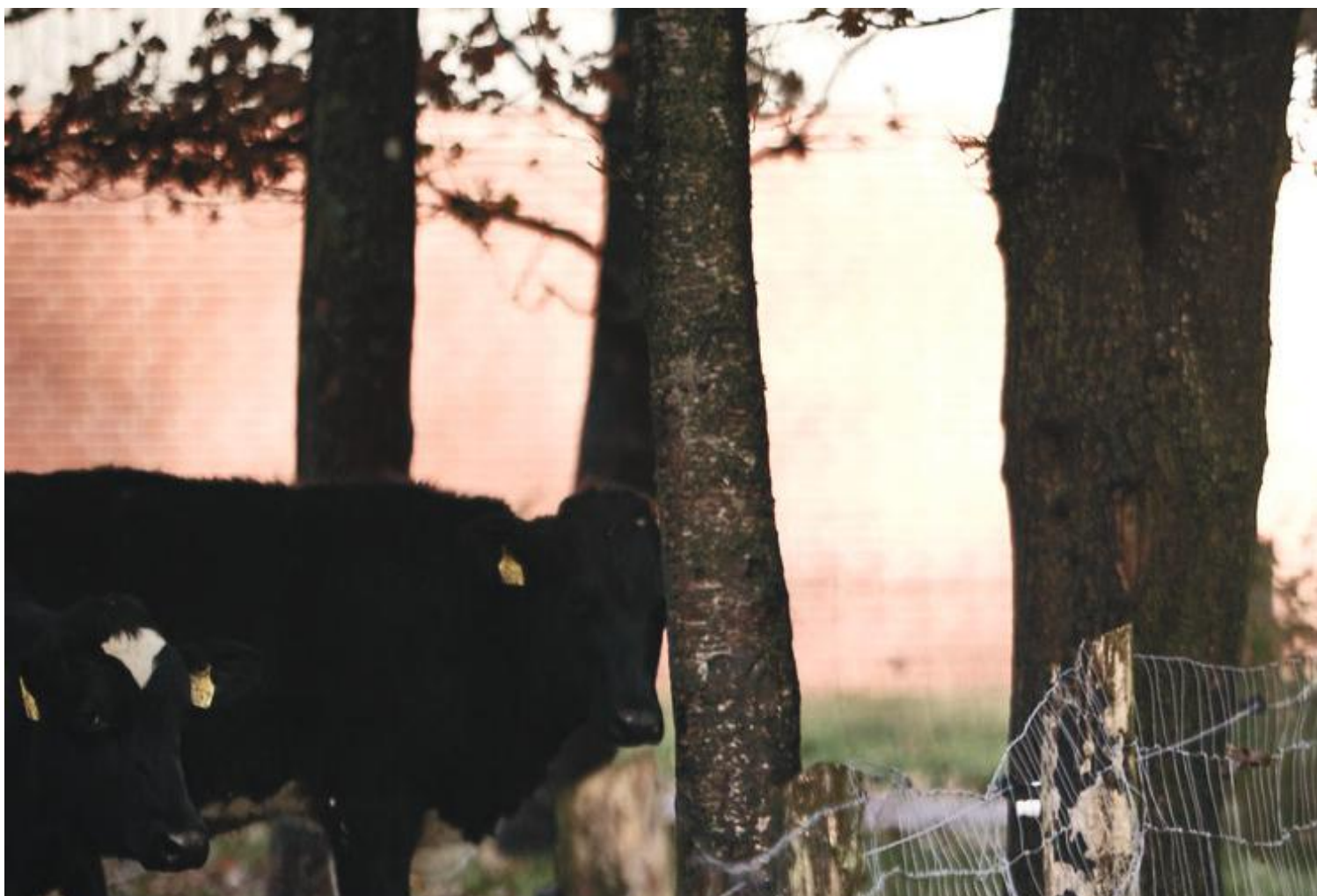
**A partnership response will be necessary, with consumers, industry, policy makers and other stakeholders all playing a role.**



# A vision

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## Vision 2050

*In 2050, the EU dairy sector will have found balance between the three pillars of sustainability: environmental, economic and social. This will allow the sector to operate safely within planetary boundaries, whilst meeting consumer demands for healthy and sustainable products supported by high animal welfare standards. The sector will be profitable with equity distributed across supply and value chains and a major employer from a diverse range of backgrounds in society who seek jobs within an attractive, equitable and desirable sector.*





## Action 2030

*In 2030, the EU dairy sector will have taken decisive steps to implement actions across the supply chain to address the three pillars of sustainability. Collaboration with other stakeholders will have seen decisive changes allowing the sector to move towards a safe operating space. Increasing recognition from and connection with consumers will be generating market pull allowing greater investment in the transition whilst continuing to be profitable as a business. An improving, transparent and coherent policy environment will be enabling the transition.*

# What the **future looks like**



## For the **environment**

- The EU dairy sector becomes **carbon net zero**, diversified away from fossil energy and materials, and the supply chain is free of deforestation.
- All actions within the sector contribute to **reversing the decline of biodiversity** on dairy farms and safeguard global biodiversity (for example through outdoor grazing and the maintenance of semi natural habitats).
- The shift to a circular bio-economy leads to the recapturing and reutilisation of sustainable levels of nutrients and water within the production process – **minimising pollution and the demand on natural resources**.



## For the **economy**

- The efforts of the sector towards climate, environment and welfare are recognised and understood by consumers leading to a **positive image of the sector**.
- **Consumers have the tools to make more informed decisions** about the products they buy and feel more connected to farmers and producers. They seek **sustainable products** and therefore create a growing sustainability-focussed market for the sector.
- **Workers across the supply chain are more satisfied with their jobs**, the products they help produce and the value this brings to society.



## For **animal welfare**

- **Animal health and welfare is integrated centrally into** decision making, beyond the EU's basic standards.
- Animals are not just healthy, their **welfare is enhanced** notably through practices that respect their natural behaviour and they are more naturally resilient to diseases.



## For **society**

- **Consumers are healthier** due to greater awareness around healthy and nutritious diets and sustainable consumption (reduction in non-communicable diseases).
- The development of the sector and the outputs it generates across the supply chain (including dairy products, biodiversity, circular bio-based products, energy, etc.) leads to a **greater range and diversity of secure jobs within an attractive sector that is more economically resilient**.
- **Value added is equitably distributed** across the supply chain.

# Realising the vision

The interlinkages between the environment, social and economic elements of society are intrinsic to the viability of the sector. Farming relies on the productive and resilient capacity of land, and forms part of the fabric of rural economies. Despite the continuing concentration of populations in cities, the connection with farming and the food we consume is strong. Therefore, the development of the agriculture sector must work to balance the three pillars of sustainability and only move forwards within a development space that is acceptable, viable and equitable for farmers, consumers, workers across the value chain and citizens as a whole – the ultimate goal of centralising efforts towards sustainability.

**The sector can lead, but only in partnership** can the vision be achieved and sustained. In some places, the dairy sector is already operating within this central space, with viable farm businesses that deliver quality goods to consumers that are produced sustainably.



Yet moving the whole of the dairy sector in this direction must take account of the differences in society and within the sector itself. Making this shift therefore requires a **'just transition'** in which those affected within the sector are supported in the change to greater sustainability – they must be enabled to be part of the change.

Action is required from the industry (producers, processors and retailers), accompanied by changes in policy, and a response from consumers. Yet the responses to some challenges are unclear, and opinion between key stakeholders is divided, necessitating greater research and understanding to balance or avoid trade-offs.

The following recommendations identify the changes that are needed within the EU context. While they recognise that the EU dairy sector operates globally, across the value chain, the recommendations focus on actions within the EU, from EU consumers and stakeholders, as enabled through EU policy.



# Realising the vision through **policy**



## 1. EU decision makers

The **CAP should provide a new contract between farmers and society** and support farmers in the transition towards greater sustainability through systemic change whilst increasing the quality and value of the products delivered (such as through transitional support and financing). It should move towards a genuine focus on results and a change in mindset within the managing authorities with a strong involvement of environmental authorities alongside the agricultural ones. National plans should be based on actual needs and environmental, climate and other legislation, their drafting process should be participatory, transparent and inclusive and the approval process from the European Commission needs to be sound and robust allowing for necessary changes and fixes to be made, as dictated by evidence.



## 2. EU decision makers

Support the development of **financial mechanisms** (such as taxes) **to internalise the costs of unsustainable production into the retail price of food**. The revenue generated could be well-used to promote healthy, nutritious and sustainable eating patterns and balanced diets, and subsidise investments towards sustainable production including transitional support, whilst new markets develop.



## 3. Member States

Member states are encouraged to use **financial mechanisms for sustainable food** as a tool for keeping the purchase of healthy and sustainable food affordable for all Europeans.



## 4. EU decision makers

The **EU should phase out the current reduced VAT rates** for unsustainable fertilisers and pesticides and maintain and incentivise those for more sustainable options whilst supporting more targeted application methods.



## 5. The EU and Member States

The **EU should develop harmonised product standards, labelling and quality schemes** to inform consumers, including health information and the method of production.



## 6. EU decision makers

**Green and Public Procurement** guidelines should be harmonised and focus only on the purchasing of sustainably produced dairy products that work towards the delivery of the vision.



## 7. EU decision makers

**Improved animal welfare legislation** should be introduced consistently across the EU, identifying conditions for specific species (bovine, ovine, etc.), to create clarity amongst producers, a level playing field in the market and to improve consumer confidence. This should be developed in partnership with the sector and wider stakeholders.



## 8. Member States

**Implementation and enforcement of existing EU law** including (but not limited to) the Fertiliser Directive, Nitrates Directive, EU Directive on unfair trading practices (2019/633).



## 9. The EU and Member States

Make available **better climate adaptation support** through greater predictive planning, risk reduction as well as insurance and other risk financing options, where risk reduction is not cost-effective. This should build on the [ClimateADAPT](#) EU platform.



## 10. The EU and Member States

Provide **greater support and advisory services** in Member States to provide advice to farmers and rural businesses on environmental improvements to production and processing – avoiding trade-offs.



# Realising the vision through producers and processors



## 1. Primary producers

must **lead the way on animal welfare standards** (beyond the basic EU level) to trigger changes in legislation, leading to a level playing field.



## 2. Primary producers and processors



must **become champions of climate, biodiversity, soil and water protection**, going beyond basic compliance with EU standards and delivering on objectives.



## 3. Primary producers and processors



should **respond to increasing consumer demand** for high-quality, nutritious, high animal welfare and environmentally sustainable products, for example, by increasing the share of organic product lines.



## 4. Supply chain actors

work together to provide **greater transparency and traceability on the production methods** for different products through, for example, labelling from breeding to processing – providing consumer confidence and therefore accessing new market segments.





## 5. Industry

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builds **awareness raising of its sustainability efforts into its business model and supply chains** to build trust with and inform consumers as part of the transition.



## 6. Supply chain actors

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deliver **investment and collaboration in the development of technology and systems** to enable greater sustainability whilst maintaining production and profitability, and minimising trade-offs.



## 7. Supply chain actors

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working with Member States develop **pathways to enable younger farmers** to enter the industry, for example, through training, transition and mentoring partnerships and programmes.



## 8. Primary producers

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**set up open farm days** and leadership within flagship, demonstration and innovation farms – focussing on peer to peer learning.

# Realising the vision through retailers and consumers

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## 1. Retailers

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should promote **more sustainable and nutritious products** at good prices through, for example, product placement and advertising, over unsustainable and unhealthy products.



## 2. Consumers

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become **more knowledgeable of the role of animal protein in diets** and adjust their consumption accordingly.



## 3. Greater connection between consumers and primary producers

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should be enabled through, for example, short supply chains, open farm days, education in schools.

Consumers understand the role of production and processing in a sustainable diet and become **willing to pay for or choose sustainable products** – creating growing markets in these areas.



# Research & innovation priorities to realise the vision

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1. Development of an **EU-wide definition of sustainable food and diets**.



2. **Development of ‘apps’ and tools** to connect primary producers and consumers enabling greater understanding of sustainability practices and choices.



3. Greater research on **animal welfare, not just animal health as a proxy**.



4. Greater understanding of the **trade-offs within environment and climate**, as well as between other objectives and how they can be minimised.



5. Greater understanding of **antibiotic use and best practices** in livestock management to reduce the prevalence of antibiotic resistance and address new and changing disease patterns as a result of climate change.



6. Improved **carbon measurement and audit tools** to ensure mitigation actions can be measured, and improved, with greater potential to be rewarded through results-based carbon farming schemes.



7. **Enabling research to be adopted and utilised by those in the supply chain is essential:**
- **Agricultural and technical schools and colleges** should increase their outreach to bring in new entrants, with innovative courses/modules focussing on new technologies and systemic approaches to improving production and processing sustainability
  - **Technology and practice transfer systems**, including financing, advice and review, should be developed for enabling the dairy sector supply chain to realise the benefits of new or tailored approaches delivering sustainability. On-farm **research and innovation farms/supply chains/case studies** are developed with the relevant supply chain actors and stakeholders showcasing sustainable and economically viable businesses



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