



Policy Paper

# Transforming EU land use and the CAP: a post-2024 vision

Institute for European Environmental Policy



The Institute for European Environmental Policy (IEEP) is a sustainability think tank. Working with stakeholders across EU institutions, international bodies, academia, civil society and industry, our team of economists, scientists and lawyers produce evidence-based research and policy insight.

Our work spans five research areas and covers both short-term policy issues and long-term strategic studies. As a not-forprofit organisation with over 40 years of experience, we are committed to advancing impact-driven sustainability policy across the EU and the world.

For more information about IEEP, visit <u>www.ieep.eu</u> or follow us on Twitter <u>@IEEP\_eu</u> and <u>LinkedIn</u>.

#### DISCLAIMER

The arguments expressed in this paper are solely those of the authors, and do not reflect the opinion of any other party.

#### THE PAPER SHOULD BE CITED AS FOLLOWS

Baldock, D. and Bradley, H. (2023) 'Transforming EU land use and the CAP: a post-2024 vision', Policy Paper, Institute for European Environmental Policy

#### CORRESPONDING AUTHORS

David Baldock (dbaldock@ieep.eu) & Harriet Bradley (hbradley@ieep.eu)

#### ACKNOWLEDGEMENTS

We gratefully acknowledge helpful contributions from Dr Inmaculada Batalla (BC3), Anna Bach Johansen (CONCITO), Martin Birk Rasmussen (CONCITO), Simone Højte (CONCITO), Dr Ana Frelih Larsen (Ecologic Institute), Aaron Scheid (Ecologic Institute), Dr María José Sanz (BC3), Dr Artur Runge-Metzger (Mercator Research Institute), Alan Matthews (Trinity College Dublin, Ireland - Professor Emeritus of European Agricultural Policy). We also thank the following reviewers Dr Pierre-Marie Aubert (IDDRI), Aurélie Catallo (IDDRI), Dr Jeroen Candel (Wageningen University), Michaela Kožmínová (AMO), Prof. Dr Martin Scheele (Humboldt University Berlin).

This paper has been supported by the European Climate Foundation. Responsibility for the information and views set out in this paper lies with the authors. The European Climate Foundation cannot be held responsible for any use which may be made of the information contained or expressed therein.

Photo by Gautier Pfeiffer on Unsplash



This work has been produced with the financial support of the LIFE Programme of the European Union. The paper reflects only the views of its authors and not the donors.

**IEEP office** Rue Joseph II 36-38, 1000 Brussels, Belgium Tel: +32 (0) 2738 7482 Fax: +32 (0) 2732 4004 Special thanks to the Think Sustainable Europe members











## CONTENTS

1.	Executive summary1
2.	Introduction
3.	Context for the 2027-34 funding period
Son	ne anticipated trends and developing issues8
Sustainability goals for the land sectors are being put into place	
4.	Shortcomings in the current agricultural policy framework14
The	need to repurpose CAP direct income support14
Insu	ufficient delivery on sustainability16
The	new delivery model – incremental but insufficient improvements
5.	Developing a new rural policy framework and more defined transition post 2024 20
Where should EU funding for sustainability in rural areas be focused?	
1.	Transitional aid to support viable and sustainable future business models23
2.	Funding for ongoing provision of environmental services and public goods25
3.	Advice, training, and stakeholder engagement26
4.	Research and innovation27
The	scale of funding needs27
6.	Implications for the next CAP and the EU budget
An	ew Sustainable Land Management and Fair Transition Fund
Rur	al development and socio-economic aspects of agriculture
Gov	vernance of the two funds35
7.	Conclusion
8.	Reference list
9.	Annex

### **1. EXECUTIVE SUMMARY**

**Discussions are getting underway on the post-2027 Common Agricultural Policy (CAP)**—covering the period 2028-2034—with the Commission's proposals expected in July 2025. These will be drawn up by a new European Union (EU) administration following the 2024 EU elections. It is in this context that **this paper makes a proposal for how** future policy and particularly **funding structures should evolve** to better reflect sustainability challenges whilst supporting farmers and other land managers in a transition that also ensures viable businesses and vibrant rural areas. This is intended as a contribution to a wider debate on the future of EU food systems.

The sustainability challenges facing agriculture and rural land use in Europe are urgent. Action needs to be stepped up to significantly reduce impacts on climate, biodiversity and natural resources like water and soil. At the same time, climate change is already having severe impacts in Europe, including on agricultural yields and the continent's forests, making adaptation a key and urgent challenge.

A transition to sustainable and resilient agriculture and land use should therefore be a key priority for European policy in the years to come and hence for the current and next European Commission. At the same time, agriculture is a key sector that is also essential for food production and supports rural livelihoods. The sustainability transition in agriculture and land use will therefore have to encompass the need to also produce sufficient food, support rural livelihoods, and link into the wider transition of the EU food system.

Guiding this **there is a need for a clearer consensus** among decision makers and wider society **around the direction of travel**: what the transition means concretely in terms of land uses, land management and food consumption. **To support this, the European Commission should launch a participatory process for a "grand débat"** on the future EU agriculture, food and land use system, that also incorporates the related questions of demand side changes, public health and the EU's global footprint.

Implementing a transition guided by such a vision will require the use of several policy tools, including regulation, knowledge exchange, innovation, and investment in research. However, there is **also a clear need to provide incentives for farmers and land managers, to support them in implementing sustainable practices and systems and to compensate vulnerable groups from negative shocks as part of a just transition**. Changes to the current CAP and the reform of the CAP in the next EU budget cycle (2028-2034) will be critical

pieces of the puzzle. It is in this context that this paper asks whether we are making the best use of CAP funds, and how they might be better allocated.

This paper outlines the **core priorities for funding in the agriculture and land use sectors in the coming decade**, along with a proposed option for how this could translate more concretely in terms of changes to the CAP and the EU budget. In terms of the funding priorities, we suggest **four main categories**: 1) **far greater transitional aid**, both to support farmers and other land managers in meeting new environmental requirements or targets and adopting sustainable business models, 2) **ongoing public financing for environmental services and public goods**, 3) **funding for advice, training and engagement, and 4) funding for innovation and research** geared to this transition.

Whilst the amounts needed cannot be calculated precisely—and quality of spending is equally important—there are different estimates that can give a sense of the level of funding in question. One study relating to the previous EU budget to 2020 estimated the funding needs for sustainable management of agriculture and forested land (including investment support and advice, but not just transition-related finance) at EUR 43 billion/year (+/- €8.5 billion), including EU and national co-financing. The CAP budget 2021-27 is on average EUR 55 billion/year in current prices (European Commission, 2023d).

The estimates of environmental needs are far higher than the sums mobilised for sustainability to date from the CAP, both in terms of quantity and ambition. There is flexibility in the current CAP to direct funding towards the sustainability transition, environmental services and rural development. However, agriculture ministers who preside over CAP spending decisions have to date not chosen to focus sufficient funding here, and there is a tendency for them to weaken environmental requirements or request derogations from important ones. Instead, most funding still goes to direct or other forms of income support, despite overwhelming evidence that these payments are highly inefficient in relation to income and other CAP objectives and not linked to actual needs. There is strong political pressure to maintain these by agriculture ministers and much of the farming sector, who have been reluctant to accept better targeting of direct payments, or their repurposing for more pressing societal goals.

The **EU needs to adopt a more multi-dimensional approach** than the CAP currently provides, focusing on managing land and natural resources to benefit society as a whole. **Attempts to reform the CAP have led to incremental changes that are insufficient to address the urgent challenges that society faces** and support farmers and land managers on a more sustainable and resilient business path for the long term. **Reorienting support to environmental** 

services and transition at the scale required will need more significant changes to governance, policy frameworks and instruments to break path dependencies and the influence of special interests in agricultural policy making.

There are various ways that this could be achieved. This paper puts forward one option, which involves redirecting the large EU budget (multiannual financial framework (MFF)) allocation for direct payments by the end of the next programming period (2034) towards a new sustainable land management and transition fund which would be directed at investments, training and advice for transition, along with payments for environmental services and leveraging of additional private finance. Other forms of support for the environment currently integrated into the CAP, such as agri-environmental payments, also could go into this new fund. Several current CAP instruments would therefore continue under this new fund, but with higher budgetary allocations and there would be increased focus on assessing and improving the effectiveness of schemes, monitoring of performance and results. Most of the MFF allocation currently allocated to the EAGF<sup>1</sup> for direct payments and the environmental spending within the EAFRD<sup>2</sup> could be allocated to the new fund. Based on current financing figures, this would amount to approximately EUR 270 billion over 7 years, though lower if funds are gradually transferred from the EAGF. This is significantly lower than the available assessments of funding needs for sustainable land management, so the new fund would need to be complemented by other funding sources.

Authorities directly responsible for the implementation of EU climate and environmental goals could be made primarily responsible for the new fund. This would mean environmental/climate/transition authorities at national level, with a lead role in policy conception and fund management in the hands of DG Environment and DG Climate Action at EU level. There would need to be a collaborative process with the involvement of agricultural and rural stakeholders and authorities in the design of the funds and measures, from farmers and land managers on the ground to DG Agriculture and Rural Development and DG Regional and Urban Policy at the Commission level.

A slimmer version of the CAP could be maintained alongside the new fund, focusing on a more targeted version of rural socio-economic support where there is genuine need, at least for a transitional period, along with other rural development interventions including those that require a more bottom-up, or territorial approach. This would be managed both at EU and Member State level

<sup>&</sup>lt;sup>1</sup> European Agricultural Guarantee Fund

<sup>&</sup>lt;sup>2</sup> European Agricultural Fund for Rural Development

by institutional bodies competent for agriculture and rural development. The two funds would still constitute a substantial EU spending programme devoted to issues related to land management, agriculture and rural development that could be planned coherently at a territorial level.

This option is not intended as a blueprint, but to illustrate the possibility of a deeper change than has been attempted in the past. Such options need to be given serious consideration in the upcoming policy discussions and included amongst the options for impact assessment in proposals for the future of the CAP in the 2027-34 period.

### **2.INTRODUCTION**

Recent evidence of escalating climate change, biodiversity loss, soil degradation and competition for water and land has underlined the importance of achieving more rapid progress to a sustainable and resilient agriculture and land use sector. A very significant contribution from these sectors will be essential for meeting a range of European Union (hereafter, EU) sustainability goals and commitments between 2030 and 2050–including those on climate, biodiversity, and natural resource use. At the same time climate change is already having severe impacts in Europe, including on agricultural yields and the continent's forests, making adaptation a key and increasingly urgent challenge.

Agriculture of course is a key sector essential for food production and, together with other land uses, supports rural livelihoods over a large area of Europe. Consequently, strategies involving transition in agriculture and land management for sustainability will need to be coherent with other goals, including food security, sustainable rural business models and social welfare as a whole. In addition, the health and environmental agendas need to be linked, so that the healthiness and sustainability of European diets and consumption patterns are increased in parallel with production shifts. Coordinated action in the food and land use system is therefore needed to reduce pressure on resources, land and biodiversity and increase public health and wellbeing, whilst ensuring a resilient and productive EU agriculture (see Box 1).

# Box 1: IS SUSTAINABLE FARMING COMPATIBLE WITH THE NEED TO ENSURE FOOD SECURITY?

There are studies that suggest the move to a sustainable agri-food model is compatible with both providing adequate food and nutrition at a European and global scale and improving public health outcomes (Poux and Aubert, 2018; Willett et al, 2019). In general, sustainable systems are lower yielding, so moving to these requires coordinated shifts in both production and demand in order to ensure sufficient food supply. If implemented successfully, shifts including cutting food waste, moving to more plant-based diets and reducing the area of land used to produce bioenergy, could ensure that food systems deliver a significant contribution to reaching the global climate objective of limiting global warming to well below 2°C and striving for 1.5° (Clark et al, 2020; UNEP, 2022). Certain sustainable practices, e.g. improving soil health and water management can also boost resilience in the face of increasing climate and other environmental stressors (European Commission, 2023a; Midler, 2022; Nadeu, 2022). In addition, the scientific community is in agreement that such a transformation of the EU food system will not happen if left up to individual choice and the market alone, but rather it needs to be guided and supported by public policy (SAPEA, 2020).

Addressing these challenges will require the use of a range of policy levers acting coherently on food and land use systems, such as: regulation, financial incentives and disincentives, advice and training, new responsibilities for processors, retailers and others in the food chain, support for generational renewal, enhanced exchange at farm level, greater application of knowledge and investment in research. Within these, there is a critical need to provide incentives for farmers and land managers, to support them in implementing sustainable practices and systems and to compensate vulnerable groups from negative shocks as part of a just transition.

With the post-2023 Common Agricultural Policy (hereafter, CAP) Regulation now in force, the European Commission along with national governments such as in Germany (Dahm, 2023) are already initiating a discussion about the orientation of the CAP in the next EU budget period from 2027-2034 (known as the 'multiannual financial framework', hereafter MFF). There are key questions about what the next CAP should be aiming to support and helping to deliver, and whether the apparent bottlenecks and path dependency in the existing policy framework prevent the CAP from being geared to new challenges, in particular addressing pressing environmental and climate needs at the scale required. This paper argues that because of these bottlenecks, policymakers need to give serious consideration to deeper change to the CAP for the post-2027 period, as has occurred in the United Kingdom following its withdrawal from the EU (see Hart and Baldock (2023)).

It is in this context that this paper offers a critical examination of some core elements of the CAP and the use of its funds by Member States and suggests how they might be better allocated. It is divided into five sections:

- An overview of the wider context affecting agriculture and land use policy making up to and during the next CAP period from 2028-34;
- A review of the shortcomings in the CAP framework;
- A discussion identifying the priorities for policy action, especially regarding funding, to advance sustainability in the sector in the post-2024 period;

- The outline of an option to establish a new funding architecture post-2027, with a dedicated new fund focusing solely on sustainability objectives, including aid for the transition process;
- Conclusions, including steps to be prioritised now and by the next Commission and other actors within the EU to prepare for the post-2027 budget implementation period.

### 3. CONTEXT FOR THE 2027-34 FUNDING PERIOD

#### Some anticipated trends and developing issues

Relative to the period when the present CAP was designed, there are a number of exogenous factors that are likely to mean a significantly different context for agricultural and rural policy making in the next EU budget period and the lead up to it. Whilst it is not within the scope of this paper to provide an in-depth or exhaustive foresight exercise, we outline in Box 2 below some of the already visible dynamics and trends that seem relevant.

# Box 2: some external conditions and trends in the coming decade relevant to the new EU budget and CAP reform debate

#### Macro level factors

**Market conditions.** In the coming decade, a significant slowdown in growth of global food demand, and reduced EU demand for most livestock products is forecast (European Commission, 2022b; OECD and FAO, 2023). Growth in Western European output will be particularly small (less than 2% by 2032 compared to current levels (OECD and FAO, 2023)). Global trade in agri-foods is projected to increase, with its role in managing shocks to supply chains growing too. OECD-FAO predict relatively flat global prices for most agricultural commodities, despite higher energy and input costs. This could increase the acceptance or impetus for reductions in input use and structural changes for the livestock sector, but also suggests attention on how to boost the economic viability of farms and high nature value livestock systems.

**The prospect of EU enlargement**, especially the accession of Ukraine<sup>3</sup>, would, if realised, have significant implications for the EU agriculture sector and the CAP. Ukraine is a major agricultural producer with around 41 million hectares devoted to agriculture (FAOSTAT, 2023), against 157 million hectares in the EU (EUROSTAT, 2022). This could mean large transfers going to Ukraine (and other new Member States), which is likely to diminish the enthusiasm for EU budget net contributors to continue

<sup>&</sup>lt;sup>3</sup> European Council President Charles Michel recently called for the process to be accelerated (Foy, 2023)

support for direct payments—distributed according to agricultural land area—or the CAP budget in general.

**Geopolitical instability**. This is difficult to predict but could cause recurring disruptions to global food supply chains including inputs like synthetic fertilisers, supporting the need to reduce dependence on these inputs. It could also mean greater pressure to reduce the budget for traditional EU policies like the CAP in favour of security or defense, and counter-pressure for more innovative agriculture related proposals with an appeal beyond the traditional farm sector.

**Accelerated technological change.** Advances in digital technology and artificial intelligence are likely to generate a proliferation of new tools for farming more efficiently and precisely while boosting productivity. Novel protein production methods conceivably could grow in variety and achieve a greater market share, with the range including, for example algal/fungal/cell culture and bacterial fermentation, and also contained production of high value crops. Use of lower cost technologies (alongside existing tools) may improve the monitoring and measuring impacts of land management practices (see e.g. European Commission, 2022a).

**Increasing requirements on farmers from other food chain actors**, including food processors, retailers and traders, not least to help them to meet their own commitments, such as on climate and reducing their Scope three emissions. Tighter produce specifications, including on animal welfare, health and pressure to keep prices down can also be expected. Incentives in the CAP need to be informed by these market pressures, to complement the more welcome ones and help to balance those that reduce the sustainability and viability of farms.

**Socio-demographic change** is likely to continue, with further rural depopulation, an aging farm population but also a new generation of farmers taking over. Further land concentration is also likely, with fewer farms overall and fewer family farms (see e.g. Détang-Dessendre, Depeyrot and Piet, 2023). Generational renewal may allow progress towards gender balance and an enhanced openness and capacity to adopt sustainable methods. Conversely, there could be greater pressures for intensification and abandonment of environmentally beneficial traditional systems in some cases. Consequently, this is an area where better tuning CAP incentives to sustainability goals could be helpful.

Also, more explicitly **environmental factors** are likely to increase, including:

**New EU and Member State legislation** coming into force bearing on agriculture, notably environmental and animal welfare requirements derived from the Farm to Fork Strategy and evolving climate policy.

**Increased climate instability**. A range of extreme weather (droughts, floods, wildfires) is likely to become more frequent and intense in Europe, creating a strong impetus for adaptation and measures to address water scarcity, including increased support for resilient land management systems.

**Demand for land as a carbon sink** is likely to increase in order to reduce or offset greenhouse gases (GHGs) in the atmosphere. If properly priced, this can lead to new market opportunities for foresters and farmers to adopt climate-friendly practices, which often can be simultaneously beneficial for productivity and adaptation. There are also attendant risks, related to issues of impermanence, variable transparency, perverse incentives to change sustainable forest management practices.

**Growing demand for land** for biomaterials, food, renewable energy and bioenergy (like biomethane, or 'sustainable' aviation fuels). The use of biomass could more than double by 2050 if biomass regulation in the EU remains unchanged (Birk Rasmussen and Gammelgaard Bøttcher, 2023). This would further increase pressure on carbon stocks and risk large-scale conversion of high biodiversity habitat like semi-natural grasslands (European Commission, 2020). The EU's selective bioenergy incentives are also economically inefficient (Material Economics, 2021). Better policy coherence is needed to avoid bioenergy and bioeconomy policies undermining efforts at sustainability and food security.

Together, these suggest a changing mix of both major challenges and new opportunities for addressing environmental, social and economic sustainability within European agriculture and some of the factors that will need to be taken into account in shaping policy beyond the present CAP. Of course, future conditions and trends will have to be examined in detail and potential scenarios assessed in advance of elaborating proposals on the next EU budget.

#### Sustainability goals for the land sectors are being put into place

Many sectors of the European economy are in the process of adjusting to more demanding requirements for both environmental and social sustainability. Agriculture is not an exception although the process is less complete than in some other sectors and several elements are contentious. One of the main drivers is a range of ambitious EU climate and environmental policies and laws that require some level of implementation before 2030, with many involving significant action in the food and land use sector. Generally, the goals of these measures are underpinned by the EU Green Deal, and its associated Farm to Fork and Biodiversity Strategies, whose targets are shown in the Annex.

There is also a growing focus on social issues, including unacceptable labour conditions in parts of the food chain (made more apparent during the covid epidemic), the use of poorly paid migrant and transitory workers in some agricultural operations and unfair contractual conditions for certain farmers. Farm animal welfare is due to be improved by a range of interventions at both the EU and Member State levels, including a major initiative to bring an end to the use of cages, which are still widespread in poultry and pig systems in many parts of Europe.

The direction of change is clear in the market as well as in the regulatory sphere, even though, at the time of writing, many of the key legislative proposals from the Commission have yet to be enshrined in law and are still subject to amendment.<sup>4</sup> Some of the most specific and binding objectives are embodied in the EU Climate Law which requires the bloc to reach climate neutrality by 2050, and a 55% reduction in emissions by 2030, with new targets for 2040 due to be proposed in 2024. Member States must dramatically increase their net carbon sinks to -310 MtCO2e by 2030 according to the revised Land-use, Land use Change and Forestry (LULUCF) Regulation. Some Member States, such as Denmark, Germany, and Ireland, have set specific emission reduction targets for the agricultural sector, although this is not yet required by EU legislation. More concrete binding targets of this kind can be expected in future.

However, most trends are still not on track to meet the current targets. Whilst some positive trends have occurred, like increasing levels of total factor productivity (6% from 2013 to 2019 (European Commission, 2021c)) the available indicators for Europe's farmland biodiversity, soil health, quality of waters and carbon sinks show either stagnating or worsening trends. On the climate front,

<sup>&</sup>lt;sup>4</sup> A few, notably the envisaged framework law on sustainable food systems, have not yet been proposed by the Commission.

although emissions decreased strongly in the 1990s, they have hardly decreased at the EU level in the past 15 years and stronger reductions are now needed in the sector for the bloc to reach its goal of climate neutrality by 2050<sup>5</sup>. The implementation of new EU post-2030 climate targets could be an opportunity to establish more concrete emissions reduction targets for the agriculture and land use sector (plus the rest of the food chain) so that it can make a larger contribution that is more proportionate to its impact.

Given this picture, it follows that what is being asked of significant numbers of farmers and land managers in order to address sustainability issues is a fundamental change. For many this could involve opportunities, for example early adopters can benefit from assisted transformation and possible market advantages, while those that delay could suffer from competitive disadvantages if standards become mandatory and they are behind the curve. For others reducing reliance on technologies with a limited future lifespan would be a way of increasing resilience and reducing risks. However, there are also risks for early movers and potentially negative financial consequences, especially in the short term; particularly if yields fall in the initial period of switching practices, aid schemes cover fewer costs than expected or markets for distinctive products have yet to emerge. This can help to explain the resistance to this agenda by many farmers and other land managers. It underlines the importance of directing public and private finance to support them on a sufficient scale, to mitigate the shorter-term costs and risks they face in a period of transition.

There is therefore a need for a renewed commitment to dialogue, to identify a way forward that significantly increases action on sustainability when it comes to food, farming and land use, and at the same time helps to address the sectors' concerns and supports them to change. There are some signs of increased dialogue and progress in some Member States, for example Germany, where the coalition government agreement includes a commitment to come with a concept on how direct payments can be replaced by a reward system for climate and environmental services in the CAP after 2027. This followed an official 'Stakeholder Dialogue on the Future of Agriculture', which proposed that the CAP should support a transition to sustainable food and agriculture, including

<sup>&</sup>lt;sup>5</sup> On a business-as-usual basis agricultural emissions are only expected to reduce by a small amount given very cautious current national policies and measures; a recent analysis by the EEA estimates that greenhouse gas emissions from agriculture are only expected to decrease by approximately 1.5 per cent between 2020 and 2040 with existing measures, or by 5 per cent if additional measures are implemented (ETC/CME, 2021).

replacing direct payments with those that reward services linked to societal objectives (ZKL, 2021).

## 4. SHORTCOMINGS IN THE CURRENT AGRICULTURAL POLICY FRAMEWORK

The 60-year-old CAP is currently the main EU funding source not only for agricultural objectives but also for rural land management and for contributing to the biodiversity and climate goals that require action in the agriculture and land use sectors. However, the delivery of the CAP in relation to sustainability goals has been widely criticised. Despite the broadening of the CAP's objectives to include environmental and social ones, agriculture ministers have failed to give sufficient priority to these, supporting short term needs or 'robustness', rather than helping to gear the whole sector to a new agenda based on sustainability, resilience and transformability (Buitenhuis, Candel et al. 2020). Some Member States have chosen to go faster than the mainstream, but this is made more difficult by a structure that enables others to make limited efforts to prioritise sustainability and may disadvantage some of their own producers within the European single market.

This section explores how the relevant CAP funds are spent, including following the most recent reform, and outlines the bottlenecks that appear to prevent the CAP from moving from a sectoral policy focused on economic objectives, to one that can deliver a wider range of societal needs and goals, not least regarding sustainability.

#### The need to repurpose CAP direct income support

Basic income support remains the most generously funded CAP measure, the distribution of which is mostly unrelated to sustainability considerations (or indeed economic needs). There are numerous issues with the rationale for these payments, at least in their current, largely untargeted form. First, there are significant data gaps concerning the income position of the agriculture sector, especially in relation to farm household income in the EU, which is a more relevant indicator than agricultural income in assessing living standards (European Court of Auditors, 2016; Hill and Bradley, 2015). There is evidence that many farms have significant income from non-agricultural sources: at least a third fall in this category according to (Hill and Bradley, 2015). Further, there is wide variation between and within Member States in terms of the standards of living of the highly diverse farming sector (Ibid). Therefore, where income support is provided, this should be targeted to areas or households based on demonstrated need.

Moreover, the main form of CAP income support is in the form of decoupled direct payments, which are subject to relatively weak environmental conditions and are ill-designed in relation to improving standards of living where this is needed. Recent analysis for cereal production also suggests they may not increase productivity either (Biagini, Antonioli and Severini, 2023). Decoupled direct payments are paid per-hectare, meaning that the distribution reflects agricultural land concentration: in 2019, 80% of these payments went to the top fifth percentile of farms (with strong variation between Member States) (European Commission, 2023c). The largest 0.5% of farms in terms of size received 16.4% of direct payments in claim year 2021 (Ibid).

The direct payments are therefore widely regarded by experts as an 'ineffective, inefficient and inequitable' instrument for supporting income (Buckwell et al, 2017) that have significant leakage e.g. in the form of increased input costs, especially for land (Pe'er et al, 2017). For example, one analysis found that most CAP payments go to the most productive, profitable and also polluting farming regions (Scown, Brady and Nicholas, 2020), and a recent national level analysis in Italy found that reducing payments to the largest farms who receive most support would have limited impact on their income (Ciliberti et al, 2022).

However, the concentration of payments has generated significant vested interests in the status quo. Agriculture Ministers, and the largest farming representative bodies that have a significant influence over agricultural policy making at EU and Member State level, have been extremely reluctant to redistribute the funds.<sup>6</sup> Initiatives have been proposed over many CAP reforms by the Commission to limit payments to farms now receiving the most, including by modulation, capping, degressivity, and the redistributive payment, but on each occasion the proposals are watered down to the extent that no meaningful change in the distribution has been observed (Matthews, 2023).

At this point in the development of agriculture and land management in Europe, and for reasons summarised earlier, greater priority needs to be given to addressing pressing and under-funded environmental objectives and provide more support for transformation of farm and rural businesses. There is significant potential for repurposing a substantial portion of untargeted direct income payments to these ends. The remaining portion of the payments should be focused on delivering a fair standard of living for those farm holdings in the agriculture sector that are in need within a more targeted framework. The

<sup>&</sup>lt;sup>6</sup> For example COPA COGECA, the dominant EU body representing farmers, opposed capping of direct payments in their position on the most recent CAP reform (COPA-COGECA, 2018).

following section looks at the CAP's record regarding sustainability and some of the factors that seem to impede greater ambition.

#### Insufficient delivery on sustainability

Over time there has been a succession of changes to different elements of the CAP designed to improve its environmental performance, including various forms of conditionality, a greater range of better funded environmental measures offering incentives for environmentally motivated management and ring-fencing rules to underpin the deployment of these measures by Member States. This has helped to curtail some of the most environmentally damaging practices like over stocking of livestock in some areas and excessive use of inputs in others and supported the maintenance or spread of more beneficial ones, including organic farming to varying degrees. However, the conclusions of various studies, including the European Commission evaluations of the 2014-2020 CAP<sup>7</sup>, suggest that the impact on environmental objectives has been limited in a number of ways:

- The amounts allocated to the supply of environmental public goods and services remain insufficient;
- In many cases the sustainability schemes receiving the biggest budgets within Member States have relatively light environmental requirements with low additionality, especially within the largest CAP fund, the European Agricultural Guarantee Fund (hereafter, EAGF);
- Very often the allocation given by Member State authorities to the most ambitious and for authorities generally most costly to operate agrienvironment schemes is relatively low and participation by farmers can be hampered by insufficient payments;
- Investment in advice and other forms of support to complement the payments themselves has been insufficient to obtain the best results and there has been a widespread lack of appropriate training and education for farmers;
- Some interventions badged as having significantly environmental objectives, in practice are driven by other concerns. Payments for Areas of Natural Constraint (ANC)<sup>8</sup>, for example essentially are a form of direct payment rather than a means of targeting aid towards adopting the most sustainable forms of production in the large areas concerned;

<sup>&</sup>lt;sup>7</sup> For further analysis, including an overview of the results of the environmental evaluations of the 2014-2020 CAP, see (Bradley and Pagnon, 2023).

<sup>&</sup>lt;sup>8</sup> Primarily in hilly and more mountainous areas.

 Further, some of the CAP payments focused on production and competitiveness, such as coupled support and investment aid, can be actively damaging for the environment, for example by supporting unsustainable livestock systems or expansion of systems based on unsustainable levels of irrigation.

#### The new delivery model – incremental but insufficient improvements

The latest CAP reform for the 2023-27 period introduced a 'New Delivery Model'. This requires Member States to programme CAP funds in national 'Strategic Plans' according to a set of ten objectives (spanning economic, social and environmental goals). This new approach grants significant flexibility to Member States to use the funding according to their 'needs' for these objectives, which should be established clearly at the outset in the Strategic Plans. A significant share (roughly a quarter) of EAGF funding is ringfenced for new 'eco-schemes', and over one third of the European Agricultural Fund for Rural Development (hereafter, EAFRD) is to be programmed for agri-environmental/climate/animal welfare schemes (DG AGRI, 2023), although the latter also includes a share of ANC payments which should not be included in this category for the reasons noted above.

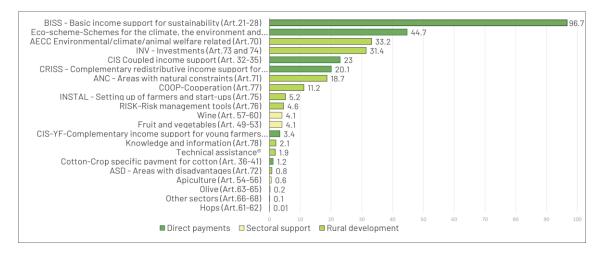
This approach gives the Member States greater flexibility and in principle is a better framework for addressing changing needs, such as the transition to sustainability. In practice, however, Member States' implementation choices have generally prioritised economic objectives, despite claims that the new CAP is 'fairer' and 'greener' (European Commission, 2021b). Although it has decreased, the single greatest share of payments is still planned to go to basic income support, as shown in Figure 1, and there is an increased share of coupled support in the EAGF<sup>9</sup> compared with the previous period (DG AGRI, 2023).

Environmental improvements are insufficient in relation to the challenges (Midler et al, 2023; Münch et al, 2023). Whilst eco-schemes have a significant share of the EAGF budget, their environmental ambition does not generally correspond to that required for driving the kind of transition being set out in the Farm to Fork Strategy (Guyomard et al, 2023). Further, Agriculture Ministers have negotiated derogations to new environmental conditions (crop rotation and on farm wildlife habitat) that apply to most EAGF payments and some EAFRD payments, which

<sup>&</sup>lt;sup>9</sup> Most coupled income support is attached to livestock production, effectively increasing livestock numbers above the counterfactual level and increasing corresponding emissions as well so is open to criticism on environmental grounds, even if in some cases the beneficiaries practice sustainable extensive grazing and respect animal welfare concerns. Other more targeted approaches would be preferable.

most but not all Member States have applied for 2023. A majority of Agriculture Ministers have now called for these to be maintained in future years<sup>10</sup>.

# Figure 1 – Planned expenditure from Member States' CAP Strategic Plans by category 2023-2027, including national co-financing, (in EUR billion). Source (DG AGRI, 2023)



This initial evidence from the Strategic Plans points to a number of continuing design and governance flaws that make a significant departure from the status quo hard to bring about in practice. In terms of design, the co-existence of a range of potentially competing objectives along with the option to continue to deploy direct income payments without strong justification creates a tendency for Member States to maximise the funding allocated to these, especially given the strong pressure from beneficiaries to do so. Consequently, the opportunity to put more funding into ambitious climate and environmental interventions has not been widely taken up by agricu

lture ministers, rather they have sought to weaken environmental requirements in the basic legal texts and subsequently via derogations. In effect, the system relies too much on the political will of agriculture ministers, who have not yet been committed to addressing environmental and climate challenges at the level required.

In summary, as long as the largest element in CAP expenditure continues to be the direct payments there will be a natural tendency for agriculture authorities to defend these over instruments with more concrete and demanding objectives. This analysis suggests at least three main needs:

<sup>&</sup>lt;sup>10</sup> See https://data.consilium.europa.eu/doc/document/ST-10837-2023-REV-1/en/pdf, supported by 17 Member States at the June agriculture council (Agrafacts, No.58-23).

- Repurposing direct payments in their present form;
- A stronger priority for environment and climate goals, and removing tensions with competing or conflicting priorities;
- A stronger role for environmental and climate authorities, which are directly responsible for delivering climate and biodiversity goals and consequently motivated to deliver policies designed to deliver the required outcomes effectively.

This forms an agenda for CAP reform, within an overall approach which gives priority to more targeted interventions across the board. This would allow repurposing a substantial portion of direct payments to address pressing and under-funded environmental objectives that also increase agricultural resilience and longer-term sustainability, framed more as transformational rather than short term support (see e.g. Buitenhuis et al, 2020). At the same time, it could focus socio-economic aid more sharply on delivering a fair standard of living for those farm holdings and rural regions that are in need, rather than concentrating resources on the largest holdings.

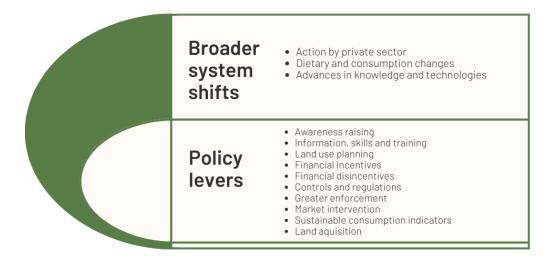
Such departures from the status quo will require significant political will at both EU and national level. However, outside the Agriculture and Fisheries Council, the credibility of the CAP as a worthwhile means of funding contemporary European priorities has been weakened by the persistence of per-hectare income support and demands to shift funds to other uses are likely to intensify ahead of the 2027 negotiations on the MFF. If rural Europe is to benefit from a significant flow of EU support after this date a proposition for a more focused funding regime with a stronger rationale needs to be put on the table. The impetus for change could be increased if new states, especially Ukraine, were to join or to be expected to join the EU before the mid-2030s since the cost of extending direct payments over a significant area would be unappealing, both for Member States which are already net contributors to the budget and those that would become so in an enlarged EU.

## 5. DEVELOPING A NEW RURAL POLICY FRAMEWORK AND MORE DEFINED TRANSITION POST 2024

The provision of targeted financial incentives has a pivotal role in a developing policy framework, but of course is not the sole form of intervention needed. A coherent set of complementary initiatives will be required, covering the demand side as well as the supply side, progressively putting into place both a whole food systems approach and a more holistic perspective on land use, embracing action by the private sector as well as public policy. The EU Green Deal and the increased regulatory baseline flowing from it forms a key foundation for this but other initiatives by public and private actors throughout the food chain will be needed (EEA, 2023; SAPEA, 2023).

Figure 2 below outlines the spectrum of different policy interventions (alongside broader system shifts) that are relevant to this paper's focus of how to bring about sustainable rural land use and land management. This is therefore not comprehensive and does not include a variety of measures that could be used to promote healthy and sustainable diets, revisions to public procurement rules, interventions to reduce food waste, initiatives to promote a more circular economy or any measures necessary to revise trade policy for example. However, it does show that a range of policy levers need to be used together concerning rural land use change and need to be deployed both at the national and the European levels.

# Figure 2 – Ten main fields of policy intervention to bring about sustainable rural land use and land management, from (Buckwell, Baldock and Allen, 2020)



The system shifts required are increasingly the subject of scientific and broader academic analysis, contributions from formal advisory bodies such as SAPEA, analysis at the Member State level, such as the aforementioned German *Zukunftskommission Landwirtschaft* and inputs from industry, NGOs and other stakeholders. They are being joined by major investors, 32 of which recently joined together to call for governments of G20 countries to align their agricultural subsidies to their objectives for managing the climate and conserving biodiversity by the end of the decade (Jessop, 2023).

Amongst this vanguard of specialists there is considerable agreement about many of the broad changes required within the agriculture and land use component of the food chain. Prominent themes include changes in land and farm business management, reductions in the use of many inputs, including water and feed crops for livestock, reduced emissions from agricultural production, much enlarged adoption of regenerative, organic and other systems, changes in the composition of outputs in some sectors, for example to favour plant proteins and reduce livestock numbers, generally improved efficiency in resource use and increased uptake in precision methods, changes in soil management, the extensive re-wetting of peatlands and restoration of habitats, parallel improvements in farm animal welfare and improved conditions for farm workers and farming families. At the same time changes in land use will occur as a result of the focus on carbon sequestration and nature restoration.

What is now needed is to broaden this dialogue to include a wider circle in the food chain and involve much more fully farmers and the wider agricultural community. There are considerable political tensions and polarised views around what the transition should look like. There is a need for a clearer consensus among stakeholders and wider society as well as EU and national decisionmakers around the direction of travel and what the transition means concretely in terms of land uses, land management and consumption, acknowledging that there will be significant variations between localities, different food systems and groups of consumers with distinctive cultures. Getting to grips with the detail and resolving where possible conflicting ideas, for example over the role of livestock, would help to unblock progress. A more common understanding of timescales is needed too so that the pace and timing of the transition needed is more widely appreciated and the sequence of steps required planned more efficiently with less resistance. A process to encourage this exchange at the EU as well as the Member State levels is required.

For these reasons the next European Commission should launch a participatory process for a "grand débat" on the future of the EU agriculture, food and land use

system, that also incorporates the related question of demand side changes, public health and the EU's global footprint.

Notwithstanding the outcome of such a process, it is clear that a shortage of funding for a transition is impeding progress, with the successor to the current CAP a major opportunity to address this. The setting and implementing of new regulatory requirements and targets that will put new demands on the sector needs to be matched by an adequate level of external funding as well as adjustments in the market. The remainder of the paper turns to this question, starting with consideration of where funding is most needed.

#### Where should EU funding for sustainability in rural areas be focused?

There is a spectrum of different funding needs in rural areas and within them on farms in particular. For example, some of the priorities were spelled out in the recent Long-Term Vision for Rural Areas (LTVRA) (European Commission, 2021a). The particular focus in this paper is the question of funding the sustainability transition and the longer-term management of land in Europe but this needs to be complementary with other priorities including the need for viable farms and rewarding employment both to sustain food production and to allow appropriate forms of management to be achieved.

We identify four broad priorities for funding in the coming decade and the next EU budget period that would support land managers, notably farmers, economically in the shift to sustainable and resilient business models and land management practices.



#### Figure 3 – Priorities for EU funding in the agriculture and land use sectors

Some categories, especially funding for provision of environmental services would eventually be the core basis for long-run EU support. Nevertheless, there is still a continued need for funding for other aspects of agricultural and rural development policy. On this model it would include a new, more targeted, socio-economic support scheme, as noted in Section 4 above.

# 1. Transitional aid to support resilient and sustainable future business models

The extent of the transition required on many farms in order to meet new sustainability requirements arising both from both legislation and changing market expectations is considerable. Often changes in practices are involved, alongside investments such as: equipment, structures, skills, input supplies and management regimes. Changes in production systems and established enterprises may also be required. For example, livestock numbers may need to be reduced on a range of holdings while on arable farms modified and longer crop rotations with greatly reduced herbicide use may become the requirement, as well as the adoption of no-till methods and greatly improving the efficiency of water use. To varying degrees, changes in this direction involve additional costs such as specific investments in machinery, technology, infrastructure and often training, as well as costs stemming from the necessity for accompanying work such as new monitoring and management regimes. Certain changes are likely to involve a significant drop in revenue, including switching away from conventional arable production on organic soils for the purpose of rewetting peatlands.<sup>11</sup>

Given the timetable laid out in EU environmental and climate legislation and many of the Farm to Fork measures, many such changes are needed relatively soon and there is a good case for providing significant aid for a limited-term period that is available for a variety of measures where costs are a major barrier to progress. There need to be clear principles guiding what can be paid for with public funds and what costs rural land managers and farm or forest businesses should be expected to internalise as part of the 'social licence to operate'. Whilst in the long run the polluter pays principle should apply, time-limited subsidies (such as governments are providing to households e.g. to switch to electric vehicles) could support farmers and other land managers with the investments and knowledge needed to bring them up to compliance with new environmental and animal welfare standards that are expected in the coming years<sup>12</sup> and could be provided in the form of both grants and loans. This aid should sit alongside and be coordinated with support for the provision of environmental services, discussed further below.

<sup>&</sup>lt;sup>11</sup> Approximately half of Europe's peatlands are degraded by drainage and agricultural management (Tanneberger et al, 2021). Cropland emissions from organic soils emit approximately net 31.8 MtCO2 per annum (EEA, 2022). Stopping their drainage and rewetting the land is an important action for reducing carbon emissions, water quality and flood management, and supporting mire-based biodiversity.

<sup>&</sup>lt;sup>12</sup> For example, restrictions on the use of pesticides, water use and ammonia emissions (including through reduced livestock numbers).

Priorities would need to be developed depending on the regional circumstances but might include aid for new investments and for de-risking management changes. Aid for de-risking could be relevant to many farms and has some parallels to organic conversion aid. Switching to more sustainable forms of agriculture, such as regenerative systems, can involve a period in which yields may drop, trial and error experiments may be needed, the right equipment identified and acquired, and new skills developed. There may be a higher risk adjustment period of several years which can deter farmers from making management changes but could be addressed by targeted aid. Whilst this is possible within the CAP, it is not well covered by existing schemes at present.

This time limited relief would support farmers in a period of transition whilst market prices adjust to the new common baselines, banks become more accustomed to the new types of investment required, new systems and technologies bed in, more chances arise to share costs with other farmers and certain risks associated with innovation diminish. Aid would need to be tuned to the cycle of innovation, for example being phased out as technologies become widely adopted and affordable, as occurs in other sections of the economy. This would be part of a wider emphasis on fairness for the farming community and could help to reduce their resistance to the progressive increase in mandatory requirements that lies ahead. One specific application could be in supporting young farmers and new entrants who commit to certain sustainable practices and forms of management and who have generally higher needs for finance (ficompass, 2020).

A second, important, element would be support for 'just transition' to provide reskilling, retraining and diversification opportunities for farmers and land managers where production needs to be significantly reduced or stopped entirely, or where land use change is required. Elements of the livestock sector including unsustainable intensive units provide one example, as illustrated in the Netherlands. Another might be the need to cease cultivation of organic soils in some former wetland areas where land use may need to be significantly changed following rewetting, with a move to paludiculture the environmentally viable option. Farming systems in some drought prone areas also will need a significant change in management and production patterns. Appropriate programmes developed by Member States to address specific problems of this kind would be eligible for part funding from the EU.

# 2. Funding for ongoing provision of environmental services and public goods

There is a need to move progressively to a system of public support for land management that provides environmental services and public goods, so meeting environmental and other societal goals. This should constitute the predominant element of EU funding for rural land management in the long run; rewarding the delivery of services that go beyond mandatory requirements (such as for nutrient management, animal welfare or working conditions), reflecting the polluter pays and provider gets principles. Proposals to move the CAP to a system of support for public goods have been around for some time, and remain valid, but need to be accompanied by the transitional aid detailed above (which has received less attention in CAP reform debates and from environmental stakeholders up to now).

On the environmental side, amongst the key objectives of such payments would be climate mitigation<sup>13</sup> and climate adaptation, protection and enhancement of biodiversity, and protection of natural resources (going beyond legal baselines and where it is not in the self-interest of land managers to do so). Examples include support for very low intensity systems, such as on rewetted peatland or high biodiversity value grasslands, conservation agriculture, agroforestry, organic and high-nature value systems. As nearly all the land in question is managed by farmers, they would in practice continue as the principal recipients of funding, but other land managers offering services would be eligible as well.

These payments could build on the current generation of agri-environment and climate schemes in CAP, but with increased requirements to base them on the best available science to maximise effectiveness, efficiency and uptake. The types of schemes funded could include more traditional action/practice-based schemes along with alternative approaches such as result-based schemes for biodiversity<sup>14</sup> and landscape level approaches.

Ongoing payments for environmental services could provide farmers and land managers with a secure long-term source of public funding. Many will be able to

<sup>&</sup>lt;sup>13</sup> This would include carbon removals and storage, including the possibility of funding for a robust carbon credit system, however there are still important controversies around 'carbon farming' when it comes to removals. There are significant concerns about permanence (not least because of the risk of reversals e.g. through droughts or forest fires), additionality and monitoring (including lack of quality data and difficulties establishing trustworthy baselines), as well as risks of carbon leakage and in some circumstances, damage to biodiversity.

<sup>&</sup>lt;sup>14</sup> For example based on the achievement of a given level of species diversity. For a recent review of biodiversity indicators for result-based schemes see (Elmiger et al, 2023).

meet the requirements at a lower cost than the payment offered and so the income generated would contribute to the overall viability of their farms.

In addition, such support can potentially play a role in leveraging private finance. For example, banks may be more likely to provide finance if they know farmers have access to ongoing payments that stabilise their cash flow and loan repayment capacity, in the same way that CAP basic payments now provide some security in this regard (see e.g. fi-compass (2020)).

As noted above, the scale of funding just for provision of environmental services of this kind will need to be considerable, even to meet currently agreed goals. Estimates developed for the European Commission in the previous MFF period for 'the costs of undertaking environmentally beneficial land management on agricultural and forested land in 2020', were 34 billion euro per year (Hart et al, 2011). To maximise synergies and efficiency in the use of payments for environmental services, they should be designed where the science supports this to deliver simultaneously on several environmental goals, including for example those concerned with animal welfare, biodiversity, climate mitigation and adaptation.

#### 3. Advice, training, and stakeholder engagement

The requirements of a transition in agriculture and land use in the EU will necessitate far greater resources going to the provision of advice, training, education, technical assistance and knowledge transfer. There is strong evidence from the scientific literature that inappropriate or inadequate advisory services and training have hampered uptake of and engagement with environmental schemes in the CAP (see e.g. Alliance Environnement, 2019). Increasing the funding going to these services would support both (1) and (2) above, strengthening both transitional measures, (including those for just transition), and land managers' implementation of environmental and other societal services.

Amongst the measures in scope would be tailored farm-level transition plans, enhanced business advice about how to diversify and increase business and environmental resilience and technical advice on the best means of selecting and implementing sustainability practices. They could also support peer-to-peer learning and knowledge exchange amongst farmers and land managers on a larger scale than currently. Examples include farmer-exchange programmes under the EU's Erasmus+ scheme. Increased funding could also be provided for advisors to accompany the adoption of landscape level and collective approaches and to give technical advice/support to facilitate funding procedures for applicants. A complementary policy intervention at national level would be curriculum reform at agricultural and forestry educational establishments, so that land managers are educated in sustainable methods and systems.

In this and the other three funding areas, policy goals and designs need to be developed not only on the basis of strong evidence but also within a participatory approach as much as possible. Enhanced engagement between policy makers and farmers and other stakeholders, both in the food chain and in the environmental community, needs to begin early and be maintained at different levels from the local to the European. An element of EU funding to assist participation could be built into a new model from the beginning and would be additional to established support for Technical Assistance.

#### 4. Research and innovation

As now, ongoing improvements in sustainable agriculture, land management and broader resilience to climatic changes will require research and innovation in a range of areas, with a significant applied element, as already embodied within the European Innovation Partnership (EIP), the EU Horizon programme and elsewhere. These would continue under the approach sketched here. Whilst some research will be privately funded and market driven, there is an important role for public funds to support research and innovation aiming to further the achievement of public benefits, including sustainability goals, and that may not otherwise be undertaken. This may include work that makes it possible to accelerate the development and deployment of alternatives to production methods and technologies that need to be phased out, including the use of certain pesticides for example, and development of those approaches that need to be deployed more widely in future, including those associated with lower GHG emissions, higher animal welfare, new crop varieties, alternative proteins and better working conditions on farms. Longer-term innovations also need due attention, for example research on the selection and development of tree crops (e.g. nut trees) suitable for agroforestry in temperate regions.

#### The scale of funding needs

Given the range of objectives and absence of research to quantify the variety of management changes needed within Europe, the costs involved and the incentives required to ensure action on a sufficient scale, the overall amounts required are difficult to estimate at this stage. Nonetheless, there are different published estimates that can give some sense of the level of funding in question. For example, one study has suggested that implementing the EU's biodiversity

goals would require EUR 48 billion annually over 2021-2030<sup>15</sup>, around EUR 19 billion more per year than the estimate of what is currently mobilised (European Commission Directorate-General for Environment et al, 2022). Another study prepared for the European Commission for the previous EU budget to 2020 estimated the funding needs for environmental management on agriculture and forested land along with associated expenditure on investments and training at EUR 27 billion/year from EU funds and EUR 43 billion/year (+/- €8.5 billion) in total, including the share contributed by national authorities (Hart et al, 2011). This figure utilises data from several years ago and does not cover for example the Just Transition element that is proposed here. Nonetheless, it is interesting to compare with the current total CAP expenditure for all interventions, which is around EUR 53 billion/year from EU funds, and around EUR 61 billion/year with national co-financing. These estimates imply that even with the great majority of the direct payments being repurposed and contributing to the sums available, there will likely be a shortfall in the financing that is needed to finance both a just transition and sustainable land management on an ongoing basis.

There is therefore a need for researchers to dedicate more work to deliver up-todate estimates of the costs of the sustainability transition for the rural land use sector. Assuming that the costs will be higher than what is currently available, further costing analysis should include examination of how additional funds could be drawn from a range of sources, including, if possible, enhanced resources at the EU level. However, as public funds are limited and will come under increased pressure for other priorities in the next EU budget, it will be important to look to mobilise additional support from other sources, such as private finance. The actual and potential forms of private funding for the transition are increasing. Included amongst them are income streams stemming from voluntary and mandatory requirements introduced by the food sector and wider industry to pay for carbon storage and biodiversity protection by farmers and land managers. For example, there are recent examples of processors giving higher premiums to producers for reductions in their climate emissions, amounting to an estimated EUR 2.2. billion to 2030 (Arla, 2023).

There is also the need to use public funds to leverage private finance, for example via public-private partnerships which are able to underwrite private financing (e.g. by banks) for farmers and land managers planning to invest in sustainable production methods. For example, the European Commission's latest strategic foresight report underlines the need for the European Investment Bank (EIB) to

<sup>&</sup>lt;sup>15</sup> N.B. this refers to all interventions, i.e. not only rural land based, including marine.

provide more support for strategic investments and catalysing private financial flows (European Commission, 2023b).

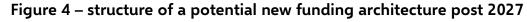
Of course, the amount of funding required is also a function of how efficiently and effectively it is used. Beyond the level of funding, the quality of the spending in terms of policy design and effective implementation are also critical factors in the cost of achieving the desired results.

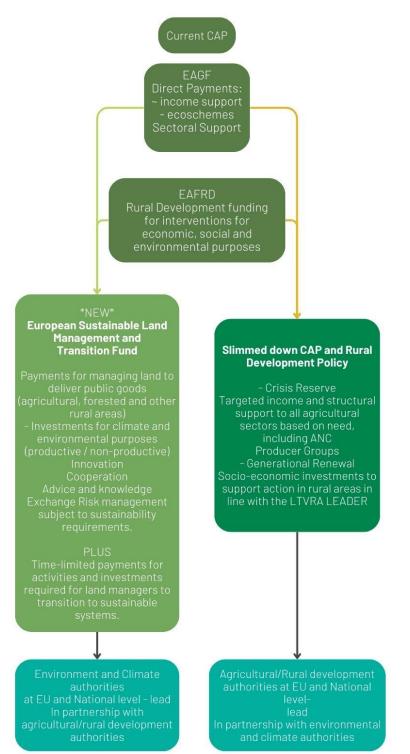
## 6. IMPLICATIONS FOR THE NEXT CAP AND THE EU BUDGET

To address land use challenges and manage resources for the benefit of all, there is a need to move from the CAP's agri-centric framing to a more multidimensional rural policy that addresses land use and management as a whole. As discussed in section 4, the attempts to mainstream environmental and rural development concerns into a sectoral policy dominated by agricultural interests has significant limits that have over time only allowed incremental improvements, whereas as indicated in section 5, a much more major repurposing of support is required.

There is a need for new thinking and consideration of fresh ideas on how to break out of this cycle and design a funding framework that concentrates public funds where they are most needed in both environmental and socio-economic terms and prioritises their efficient use. For this reason, significant departures from the status quo need to be worked up as policy and governance options and given due attention within the political and technical discussions that will lead to alternatives being presented by the European Commission (and others) in advance of the 2028-34 MFF negotiations. As a contribution to this debate, we sketch out here one option involving a potential shift in the funding structures and governance of the kind that could break away from the path dependency and vested interests in the CAP and create a new more sustainability and resilience focused frame for the post-2027 funding arrangements.

The ensuing proposal is not designed as a blueprint but rather as a basis for further discussion. This option would involve phasing out direct payments and the creation of a new fund focused on sustainability and resilience for the long term managed by environmental and climate authorities, alongside a slimmeddown version of the CAP that could include more targeted socio-economic support where required along with maintenance of support for rural development. This is depicted in outline in Figure 4 below.





Institute for European Environmental Policy (2023)

#### A new Sustainable Land Management and Fair Transition Fund

A new fund within the architecture of EU rural policies could form the basis for a longer-term shift to a reward system based on ecosystem services. The fund would address the first three of the four funding priorities set out in section 5, with research funded separately, as now. The rationale for having these different funding streams together would be that they could be explicitly linked, with beneficiaries able to receive support as a coherent package, linking more immediate adjustments to longer-term conditions and income flows. The great majority of the land that would be eligible for support is managed by farmers and therefore they would be the recipients of the overwhelming share of the budget, although other land managers would also be eligible.

Key reasons for creating a new fund in order to deliver the priorities in section 5, rather than attempts to reform the existing CAP architecture, are:

- A critical difference from the current CAP funds would be a change of governance so that the authorities responsible for meeting environmental and climate targets would have a central role in steering the public expenditure assigned to support this goal, aligning responsibilities in a logical way. This would be a major factor in creating the motivation for a more ambitious approach to sustainability than occurs now. Nevertheless, given the rural focus, they would need to involve agricultural, regional and established delivery agencies in Member States and regions as appropriate;
- The objectives would be restricted purely to the delivery of more sustainable and resilient land management and gearing business models towards this. This would require the fresh presentation by Member States of schemes meeting new criteria in a new frame with supporting indicators of impact, preventing the tendency to simply roll over long standing but under performing schemes. It could reduce tension with other objectives for funding, and tilt the balance away from broad spectrum multi-objective schemes with limited environmental value added;
- There would be a clear linkage between the funding available to Member States via eligible schemes and the delivery of targets set out in environmental and climate legislation. These would be at the core of the objectives, rather than more peripheral as they often are now. This could enable the principles underlying this allocation to be considered afresh and based on future need rather than historical political negotiations. This would be a potentially big break from current practice, necessitating significant discussion about how it might work in practice;

- There would be a stronger focus on evidence-based scheme design that delivers results and measurable impacts wherever possible (see Hart, (forthcoming)). Progress can be made, for example: by strengthening scientific monitoring and evaluation regimes, investing more in advice, training and facilitation and adopting more landscape scale and multi-farm approaches where appropriate;
- Mechanisms to facilitate the best use of both public and private funds at regional and specific farm levels would be included in the design of the fund and its component measures where possible. Examples could be the provision of free advice, coordinated scheme admission requirements and alignment of performance metrics.

Aside from these core changes, the new fund's design could build on the current New Delivery Model or a development of it. Namely, a multi-year programming approach could be retained with the use of agreed indicators, a process of needs assessment and analysis prior to the commencement of programmes and the adoption of a territorial framework for delivery where this was selected by the Member States. Support to farmers and other land managers would be delivered by the most effective and efficient interventions available, retaining relevant measures in the present CAP but also adding to these. Those that could be built on would be agri-environmental and climate commitments (AECCs), eco-schemes and support for "non-productive" investments but at a higher level of environmental ambition in relation to needs and supplemented by additional funding that would grow over time.<sup>16</sup> Both short- and longer-term schemes could be part of a mix and incentives would be offered for cooperative approaches. Cofinancing rates could vary between Member States and regions, taking into account cohesion criteria, and between types of support where appropriate.

Central to freeing up funds for this purpose and to a more targeted and multidimensional system of support would be the phasing out of decoupled (and coupled) direct income payments over the next MFF period (the same timescale as the UK's phase out or direct payments) and the transfer of the resources made available to the new fund. There is scope for Member States doing this faster where appropriate (and which could already begin in the current CAP period). A relatively small element of socio-economic support could be retained in a more

<sup>&</sup>lt;sup>16</sup> It would be necessary to select the measures most suited to the objectives of the Fund, drawing on the interventions currently included within the two Pillars of the CAP and others that might be developed for specific purposes, including the promotion of public/private finance partnerships. Amongst the existing CAP measures that could be included or developed into counterpart measures to those in the remaining CAP would be Eco-schemes, AECCs, organic farming schemes, Natura 2000 and WFD related payments, non-productive investment aid, cooperation measures, advisory services and training for advisors and forest-environment related measures.

limited and targeted form in selected regions with specific needs. These would be localities with low farm incomes, limited alternative employment and relatively small farms. An independent assessment would be made of the areas and farm types where income support of this kind was justified based on agreed data sets so that a well-founded case would need to be made.

To give a sense of the level of funding that this could generate and how this compares to the estimates of needs, we simulate how funds could be repurposed. On the assumption of taking 85% of basic income support into the new fund, along with 100% of expenditure on coupled support, investment aid and risk management, as well as the environmental interventions listed in Figure 4, one arrives at a total of approximately EUR 270 billion for a 7-year period (EUR 38 billion/year). However, this is the end point once the seven-year process of largely phasing out existing schemes is completed. To allow for this, if initially it is only the budgets for the current eco-schemes and relevant EAFRD intervention budgets that are taken across then the starting point for the new fund would be in the region of EUR 87 billion, or EUR 17 billion/year. As allocations for direct payments and other measures were moved across over time this total would progressively increase to the higher figure, within seven years or sooner. In practice, the new fund would therefore supersede the EAGF, creating a new durable long-run funding model for rural land management.

These estimates suggest that such a phased transfer would not generate a sufficient flow of funding in the early years in particular. This would be the period during which demands for transition funding would be especially acute given the scale of change needed in the late 2020s and early 2030s. For this reason, there is a need for more detailed, and prompt, examination and assessment of options to raise supplementary funding for this period of adjustment, including sources outside the MFF.<sup>17</sup> Those based on some form of blended finance merit particular consideration. If a new emissions trading scheme for the agri-food sector were to be introduced by this time, which is conceivable, some of the revenue could be used to contribute to new green transition element of the fund—with some parallels to the Social Climate Fund—to address impact of emissions trading on farmers and consumers as well as supporting mitigation measures in the sector. Additional funds from private sources and other parts of the agri-food chain could also help to spread the costs of adjustment more fairly beyond the farm

<sup>&</sup>lt;sup>17</sup> Given that more novel approaches take time to develop, as demonstrated by initiatives in the Member States, such as the food chain fund for the livestock sector in Germany, an early start on the identification of the best options is desirable, especially as there is a strong case for such an initiative independently from the creation of a new fund of the kind sketched here.

sector, for example for carbon storage, habitat management and restoration and the management of sensitive water catchments.

Many aspects would need to be considered in finer detail, including levels of funding, details of policy design and precise scope. For example, there would be good grounds for including appropriate support for higher farm animal welfare, not least given the linkages to enhancing land management in more circular systems and reducing climate impacts.

# Rural development and socio-economic aspects of agriculture

Alongside the new fund would be a slimmed down version of the CAP with a sizeable rural development component as shown in Figure 4. This would have clear rural development and continuing agricultural goals that are not strictly environmental, for example regarding rural business startups and the crisis reserve. It would include retained income support payments on the basis of established needs, including support for Areas of Natural Constraint (ANC), subject to appropriate environmental safeguards. Those targeted socio-economic payments that continued would be programmed more closely with other measures, including rural development programmes. As now, the governance arrangements would be in the hands of administrative bodies competent for agriculture and rural development, with a supporting role for other authorities.

The simulations of funding allocated to these priorities after the transition to the new fund had been completed, would amount to around EUR 65 billion for the entire period, or EUR 9 billion per year, and include support for young farmers and generational renewal, along with the budgets now allocated to redistributive income support and areas of natural constraint payments.

#### Governance of the two funds

As outlined above, the first fund superseding the EAGF would be led by environmental and climate authorities, and the slimmed down CAP by agriculture/rural ministries. As the role of the environmental bodies would increase over time they would need to build up capacity, bringing in their own specialists but also bringing across staff from agricultural authorities where a lot of relevant expertise would be found.

Whilst the funds would have different objectives and governance regimes, they would still constitute a substantial spending programme in rural areas, taking over elements of funds now allocated to the EAFRD and the EAGF. They would be programmed separately but it would be desirable for Member States to plan

action at the territorial level in a way that is coherent, looking at socio-economic and environmental needs, drawing on multiple funding sources. Consequently, they can be seen together as a substantive component of the EU budget devoted to issues related to land management, agriculture and rural development.

The merits of developing mixed or 'post-exceptionalist' forms of governance rather than the concentration of powers in this field in agricultural bodies, particularly the Agriculture and Fisheries Council, have been debated for some time (see e.g Daugbjerg and Feindt, 2017; Greer, 2017). Prior to the last CAP reform Buckwell et al. (2017) argued that the three Commission directorates covering agriculture and rural development, climate and environment should be tasked with working together to produce the next CAP proposals in a novel cooperative structure that would then apply to the Council and European Parliament as well. There is already some experience with post-exceptionalism in the case of the Farm to Fork Strategy and the proposal for a legislative framework on food systems, where the responsibility was given primarily to DG Health and Food Safety (DG SANTE). There will be an opportunity to consider new arrangements for the next CAP and the development of a new fund, and the proposal here for different leads (at Commission, Council and Parliament level) on independent but related new funds is one starting point to be considered.

### 7. CONCLUSION

As the debate begins on the future CAP-post 2027 and the next EU budget, there needs to be a fundamental debate about how sustainability goals can be met whilst supporting farmers to be more economically resilient.

This paper has argued that a step change in action to deliver sustainability and resilience in the agriculture and land use sectors is a matter of urgency and that this requires amongst other things a new policy framework at the EU level. Realistic funding for accelerated action on the ground, primarily for farmers, will be a critical element to unlock the transition combined with the application of the polluter pays principle. Repurposing large portions of CAP support, currently focused on a relatively small group of larger farms, could unlock funds which could help a larger number of farmers and land managers to adjust to changing conditions.

The paper suggests one possible model of how a fresh vision might be translated into a workable approach, with a particular focus on repurposing the EAGF, and moving support to a new sustainable land management and transition fund with a new governance model, building on and adding to existing sustainability measures. Whilst this paper relates to discussions on the post-2027 CAP, this is only the start of a process; there are both strategic questions to confront and many issues to explore in further detail. For example, elements of the vision outlined here could fit into a range of different MFF models, the relative merits, drawbacks and impacts of which will have to be debated.

Many steps can be taken before 2027. Member States can amend their CAP Strategic Plans once a year and should therefore strengthen them in the current MFF period. Following the 'New Delivery Model', this could involve a revised and updated needs assessment, taking account a range of pressing goals like climate adaptation and specific requirements, such as *inter alia* measures to help meet their LULUCF and ESR targets for 2030. There is a clear opportunity to make farreaching changes in a range of areas to step up action on sustainability and this should be taken.

Further, significant preparation for the successor to this CAP is required. Changes of any magnitude to the EU's funds and to major policies of the kind discussed in this paper would require close examination and consideration of potential impacts before detailed proposals could be tabled. As part of the preparatory process there will be evaluations of how the current CAP is being implemented, notably a first performance review of CAP Strategic Plans in 2025 and an interim evaluation of the CAP in 2026 (European Commission, 2023e). This will provide a key input for the design of future policy and to make it as valuable as possible it is important to incorporate the insights of stakeholders and experts outside the more technical agricultural community so that results can be viewed against the criteria of wider society.

Debates on the next stage of policy at both EU and Member State level need to be informed by robust analysis that clarifies the challenges and spells out the costs of inaction as well as the implications of adopting a new agenda. The Commission has a key part to play in leading the necessary programme of work by initiating studies, undertaking impact analysis, spelling out potential pathways for meeting agreed objectives and helping to provide a clear picture of how support could be provided not only at EU but also at more local levels.

Four areas for preparatory analysis arising from this paper, that would inform the preparation of the next CAP are:

- Elaborating in more detail what the sustainability transition means in much more concrete terms for the food system as a whole and for agriculture and land use in particular;
- Incentivising researchers to devote more attention to the costs of transition and how these might be allocated;
- Deeper analysis of the range of barriers to change for individual farmers and land managers in different contexts, drawing on insights from multiple disciplines including social and political sciences, economics, agronomy and behavioural change studies;
- Rigorous analysis of the socio-economic support needs in rural areas of Europe, allowing for much more efficient and targeted deployment of EU funds for this purpose.

Beyond this more technical work there is the need for a much wider and more participatory set of exchanges on the future of agriculture, food, health, land use and the environment in Europe, taking account of the EU's global footprint. This could aim to enrich understanding and open up avenues for progress that have been narrowed by bipartisan debate over the last year in particular. For these reasons the time has come for a "grand débat" on the future of the EU agro-food sector and all the related dimensions, ideally led by the European Commission. This should form part of a participatory process leading up to the next generation of policies, involving EU institutions, foundations, academics and civil society including farmers, food and environmental organisations.

### 8. REFERENCE LIST

Alliance Environnement (2019) Evaluation of the impact of the CAP on habitats, landscapes, biodiversity. Alliance Environnement (IEEP and Oréade-Brèche), Brussels.

Arla (2023) 2.2 billion EUR to sustainability efforts: As of today millions are being paid to Arla farmers to reward and motivate climate initiatives. Press release issued on https://www.arla.com/company/news-andpress/2023/pressrelease/more-than-2-billion-eur-to-sustainability-efforts/

Biagini, L, Antonioli, F and Severini, S (2023) The impact of CAP subsidies on the productivity of cereal farms in six European countries: A historical perspective (2008–2018). Food Policy No 119, 102473.

Birk Rasmussen, M and Gammelgaard Bøttcher, J (2023) The potential and risks of carbon dioxide removal based on carbon capture and storage in the EU. CONCITO.

Bradley, H and Pagnon, J (2023) EU budget review – is the CAP delivering the 'transition towards a more sustainable agriculture'? Institute for European Enviornmental Policy.

Buckwell, A, Baldock, D and Allen, B (2020) Enabling Transformative Change in Rural Land Use. Paper 2 of the 'CAP Unchained Series'. Institute for European Environmental Policy, AISBL.

Buckwell, A, Matthews, A, Baldock, D and Mathijs, E (2017) CAP: Thinking Out of the Box, Further modernisation of the CAP - why, what and how? RISE Foundation, Brussels.

Buitenhuis, Y, Candel, J J L, Termeer, K J A M and Feindt, P H (2020) Does the Common Agricultural Policy enhance farming systems' resilience? Applying the Resilience Assessment Tool (ResAT) to a farming system case study in the Netherlands. Journal of Rural Studies No 80, 314-327.

Ciliberti, S, Severini, S, Ranalli, M G, Biagini, L and Frascarelli, A (2022) Do direct payments efficiently support incomes of small and large farms? European Review of Agricultural Economics No 49 (4), 796-831.

Clark, M A, Domingo, N G G, Colgan, K, Thakrar, S K, Tilman, D, Lynch, J, Azevedo, I L and Hill, J D (2020) Global food system emissions could preclude achieving the 1.5° and 2°C climate change targets. Science No 370 (6517), 705-708.

COPA-COGECA (2018) Copa and Cogeca position on the CAP post 2020 Brussels.

Dahm, J (2023) Berlin gears up to leave its mark on future EU farm funds. Euractiv.com.

Daugbjerg, C and Feindt, P H (2017) Post-exceptionalism in public policy: transforming food and agricultural policy. Journal of European Public Policy No 24 (11), 1565-1584.

Détang-Dessendre, C, Depeyrot, J-N and Piet, L (2023) The CAP and Agricultural Employment, in Détang-Dessendre, C, Guyomard, H (eds), Evolving the Common Agricultural Policy for Tomorrow's Challenges, pp61-81. Éditions Quae

DG AGRI (2023) Approved 28 CAP Strategic Plans (2023-2027). Summary overview for 27 Member States - Facts and figures, European Commission Directorate-General Agriculture, Brussels.

EEA (2022) Soil Carbon. Briefing no. 14/2022, European Environment Agency.

EEA (2023) Transforming Europe's Food System - assessing the EU policy mix. EEA Report no 14/2022, European Environment Agency.

Elmiger, B N, Finger, R, Ghazoul, J and Schaub, S (2023) Biodiversity indicators for result-based agri-environmental schemes – Current state and future prospects. Agricultural Systems No 204, 103538.

ETC/CME (2021) Agricultural climate mitigation policies and measures: good practice, challenges, and future perspectives. European Topic Centre on Climate Change Mitigation and Energy.

European Commission (2020) Impact Assessment, Accompanying the document COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS Stepping up Europe's 2030 climate ambition Investing in a climate-neutral future for the benefit of our people. COMMISSION STAFF WORKING DOCUMENT, {SWD(2020) 176 final} and {SWD(2020) 177 final}, European Commission, Brussels.

European Commission (2021a) COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS - A long-term Vision for the EU's Rural Areas - Towards stronger, connected, resilient and prosperous rural areas by 2040, Brussels. European Commission (2021b) A greener and fairer CAP. Factsheet, European Commission, Brussels.

European Commission (2021c) REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL - on the implementation of the common monitoring and evaluation framework including an assessment of the performance of the common agricultural policy 2014-2020 Brussels, COM(2021) 815 final, European Commission.

European Commission (2022a) COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL 2022 Strategic Foresight Report Twinning the green and digital transitions in the new geopolitical context, Brussels.

European Commission (2022b) EU agricultural outlook for markets, income and environment, 2022-2032. European Commission, DG Agriculture and Rural Development, Brussels.

European Commission (2023a) COMMISSION STAFF WORKING DOCUMENT: Drivers of food security, Brussels.

European Commission (2023b) COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL, 2023 Strategic Foresight Report: Sustainability and people's wellbeing at the heart of Europe's Open Strategic Autonomy, Brussels.

European Commission (2023c) Direct payments to agricultural producers: graphs and figures, financial year 2021. DG Agriculture and Rural Development.

European Commission (2023d) Common agricultural policy funds. https://agriculture.ec.europa.eu/common-agricultural-policy/financing-cap/capfunds\_en Accessed 11/09/2023

European Commission (2023e) The common agricultural policy: 2023-27. CAP reform timeline. https://agriculture.ec.europa.eu/common-agricultural-policy/cap-overview/cap-2023-27\_en Accessed 02/09/2023

European Commission Directorate-General for Environment, Nesbit, M, Whiteoak, K, Underwood, E, Rayment, M, Hart, K, Aubert, G, Kollenda, E, Lóránt, A, Kopsieker, L, Cziesielski, M, Petsinaris, F, Gerritsen, E, Beznea, A, Cihlarova, P, Frapaise, L, Finesso, A, Forestier, O and Nicholls, G (2022) Biodiversity financing and tracking: final report. pp. European Court of Auditors (2016) Is the Commission's system for performance measurement in relation to farmers' incomes well designed and based on sound data? Special report No 1/2016, Publications Office of the European Union, Luxembourg.

EUROSTAT (2022) Farms and farmland in the European Union - statistics. Farms and farmland in the European Union - statistics Accessed 29/08/2023

FAOSTAT (2023) Country profiles - Ukraine. https://www.fao.org/faostat/en/#country/230 Accessed 29/08/2023

fi-compass (2020) Financial needs in the agriculture and agri-food sectors in the European Union. Summary report.

Foy, H (2023) EU must be ready to accept new members by 2030, Michel to propose. Financial Times, 28/8/2023.

Greer, A (2017) Post-exceptional politics in agriculture: an examination of the 2013 CAP reform. Journal of European Public Policy No 24 (11), 1585-1603.

Guyomard, H, Détang-Dessendre, C, Dupraz, P, Delaby, L, Huyghe, C, Peyraud, J-L, Reboud, X and Sirami, C (2023) How the Green Architecture of the 2023–2027 Common Agricultural Policy could have been greener. Ambio No 52 (8), 1327-1338.

Hart, K (forthcoming) Briefing: Securing greater environmental and climate performance from the CAP. Institute for European Environmental Policy, Brussels.

Hart, K and Baldock, D (2023) Looking ahead to the next CAP Reform – are there lessons to be learned from the UK experience? Institute for European Environmental Policy.

Hart, K, Baldock, D, Tucker, G M, Allen, B, Calatrava, J, Black, H, Newman, S, Baulcomb, C, McCracken, D and Gantioler, S (2011) Costing the Environmental Needs Related to Rural Land Management. Report prepared for DG Environment, Contract No ENV.F.1/ETU/2010/0019r, Institute for European Environmental Policy, London.

Hill, B and Bradley, D (2015) Comparison of farmers' incomes in the EU Member States. European Parliament Policy Department B: Structural and Cohesion Policies, Brussels. Jessop, S (2023) Investor pressure group urges G20 to reform agricultural subsidies. Reuters, 22/8/2023.

Material Economics (2021) EU Biomass Use In A Net-Zero Economy - A Course Correction for EU Biomass.

Matthews, A (2023) The changing distribution of CAP direct payments over time.

Midler, E (2022) Environmental degradation: impacts on agricultural production. Institute for European Environmental Policy, Brussels.

Midler, E, Pagnon, J, Nadeu, E and Scheid, A (2023) Environmental and climate assessments of CAP Strategic Plans: Summary of impact based on four key Member States. Institute for European Environmental Policy.

Münch, A, Badouix, M, Gorny, H, Messinger, I, Schuh, B, ADE, S A, Beck, M, Bodart, S and Van Bunnen, P (2023) Research for AGRI Committee – Comparative analysis of the CAP Strategic Plans and their effective contribution to the achievement of the EU objectives. European Parliament, Policy Department for Structural and Cohesion Policies, Brussels.

Nadeu, E (2022) Nature restoration as a driver for resilient food systems. Institute for European Environmental Policy, Brussels.

OECD and FAO (2023) OECD-FAO Agricultural Outlook 2023-2032. pp.

Pe'er, G, Lakner, S, Müller, R, Passoni, G, Bontzorlos, V, Clough, D, Moreira, F, Azam, C, Berger, J, Bezak, P, Bonn, A, Hansjürgens, B, Hartmann, L, Kleemann, J, Lomba, A, Sahrbacher, A, Schindler, S, Schleyer, C, Schmidt, J, Schüler, S, Sirami, C, von Meyer-Höfer, M and Zinngrebe, Y (2017) Is the CAP Fit for purpose? An evidence-based fitness-check assessment. Commissioned by Stichting BirdLife Europe and the European Environmental Bureau (EEB), Leipzig.

Poux, X and Aubert, P-M (2018) An agroecological Europe in 2050: multifunctional agriculture for healthy eating. Findings from the Ten Years For Agroecology (TYFA) modelling exercise, IDDRI-AScA Study No 9, France.

SAPEA (2020) A Sustainable Food System for the European Union. Berlin.

SAPEA (2023) Towards sustainable food consumption. SAPEA, Science Advice for Policy by European Academies., Berlin.

Scown, M W, Brady, M V and Nicholas, K A (2020) Billions in misspent EU agricultural subsidies could support the Sustainable Development Goals. One Earth No 3 (2), 237-250.

Tanneberger, F, Appulo, L, Ewert, S, Lakner, S, Ó Brolcháin, N, Peters, J and Wichtmann, W (2021) The power of nature-based solutions: how peatlands can help us to achieve key EU sustainability objectives. Advanced Sustainable Systems No 5 (1).

UNEP (2022) Emissions Gap Report 2022: The Closing Window — Climate crisis calls for rapid transformation of societies. United Nations Environment Programme, Nairobi.

Willett, W, Rockström, J, Loken, B, Springmann, M, Lang, T, Vermeulen, S, Garnett, T, Tilman, D, DeClerck, F, Wood, A, Jonell, M, Clark, M, Gordon, L J, Fanzo, J, Hawkes, C, Zurayk, R, Rivera, J A, De Vries, W, Majele Sibanda, L, Afshin, A, Chaudhary, A, Herrero, M, Agustina, R, Branca, F, Lartey, A, Fan, S, Crona, B, Fox, E, Bignet, V, Troell, M, Lindahl, T, Singh, S, Cornell, S E, Srinath Reddy, K, Narain, S, Nishtar, S and Murray, C J L (2019) Food in the Anthropocene: the EAT–Lancet Commission on healthy diets from sustainable food systems. The Lancet No 393 (10170), 447-492.

ZKL (2021) The Future of Agriculture - A common agenda: Recommendations of the Commission on the Future of Agriculture (ZKL).

## 9. ANNEX

EU Green Deal and REPowerEU targets relevant to agriculture, food and land use. In **bold** are those that have been enshrined into binding EU legislation at the time of writing.

	Climate law/ Fit for 55	REpowerEU	Farm to Fork Strategy	Biodiversity Strategy
Climate neutrality by 2050	Х			
57% net emissions reductions by 2030 (compared to 1990)	Х			
Land sector net climate neutrality by 2035 <sup>18</sup>	Х			
40% emission reduction in ESR sectors by 2030 (buildings, transport, agriculture)	Х			
LULUCF -310 MtCO2e net carbon sink	Х			
At least 42.5% renewable energy by 2030	Х	Х		
35 billion cubic metres biomethane per year by 2030		Х		
Reducing nutrient losses by at least 50%, and use of mineral fertilizers by 20%			Х	Х
Reducing the use and risk of chemical pesticides and use of more hazardous pesticides by 50%			Х	X

<sup>&</sup>lt;sup>18</sup> However, the Council, Parliament and Commission could not come to an agreement on targets for post-2030 during trilogues, and therefore agreed to discuss the post-2030 framework at a later time. Therefore, the implementation of the LULUCF Regulation does not have an agreed-upon target for 2035 nor have the institutions yet agreed upon to merge agricultural non-CO2 emissions with LULUCF emissions and removals.

Reducing the sales of antimicrobials in animal farming and aquaculture by 50%		Х	
Increasing the share of agricultural land under organic farming to least 25%		Х	
Halving per capita food waste at retail and consumer levels by 2030 (SDG Target 12.3)		Х	
Protecting 30% of EU land, and strict protection of one third of existing protected areas, including all remaining EU primary and old-growth forests			Х
Planting 3 billion trees by 2030			Х
Restoring at least 25,000 km of free- flowing rivers			Х
Legally binding EU nature restoration targets <sup>19</sup>			Х
At least 10% of agricultural area under high-diversity landscape features			Х
Halting and reversing the decline of pollinators			Х

<sup>&</sup>lt;sup>19</sup> The Commission published its EU nature restoration law proposal in June 2022, which includes various legally binding targets related to: protected areas, reversing the decline of pollinators and farmland birds, improving soil organic carbon, increasing landscape features, and protecting and restoring peatlands and wetlands. At the time of publication, the proposal is in 'trilogue' negotiations between the European Commission, Council and Parliament.



www.ieep.eu

