A CAP for Healthy Living

Mainstreaming Health into the EU Common Agricultural Policy

european public health alliance

With special thanks to reviewers:

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Strategic Objectives

Agriculture and health are intimately connected. Good food is essential for a healthy life. The Common Agricultural Policy (CAP) was successful in tackling food insufficiency in post-war Europe. However, despite numerous reforms, it fails to meet the public health challenges of today. Unhealthy diets, smoking and harmful alcohol consumption are key causes of chronic diseases, responsible for the overwhelming majority of Europe's burden of mortality (86%) and disease (77%). Environmental degradation, antibiotic resistance and climate change endanger the last century's significant gains in health. Agriculture is implicated in all of these.

This report presents observations and recommendations for ways to enhance coherence between the CAP and public health, expressed through five strategic objectives:

Ensure full application of the Health in All Policies obligation
See sections: "Include public health as a CAP objective"; "Market organisation must not restrict health"

Align the CAP with promoting sustainable diets
See sections: "No cheap sugar"; "Rebalance the supply of livestock products"; "Boost vegetables and fruit production & consumption"; "Promote products for diverse and healthy diets"; "There is no such thing as cheap food"

Make the CAP consistent with reducing harmful alcohol consumption
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Build a CAP that enhances delivery of public goods
See sections: "Transition towards forward-looking direct payments"; "Support transformative rural development"

At the same time, this paper realises the limits of the CAP as an instrument to improve public health outcomes. The food and beverage processing and retail industries, in the context of international supply chains, are now the key actors in shaping people's diets, farmers' incomes and production decisions. Therefore, while grounding its analysis and recommendations in the CAP, this paper draws attention to the need to address the food system as a whole – from farm to plate – in a coherent, health-sensitive and sustainable European food and agricultural policy.

A CAP for Healthy Living

"The Common Agricultural Policy of the European Union is not about farmers. It is about food and it is about nutrition – it's about healthy living."
Phil Hogan, EU Commissioner for Agriculture[1]

The Common Agricultural Policy (CAP) was largely introduced as a public health measure. Conceived during post-war reconstruction while Europeans still feared food shortages and disruptions in supply, the CAP's original focus was to increase food sufficiency, which, it was assumed, would automatically lead to health[2]. The policy's preoccupation with increased production and productivity was a logical outcome of this vision,[3] and judged by this measure the CAP succeeded remarkably well.

Contemporary public health concerns are very different from the ones the CAP encountered during its inception and its original approach is unsuitable for the challenges of today. Admittedly, the CAP went through a wave of reforms from the 1990s onwards, gradually shifting the policy away from production subsidies to producer support, a transition that helped reduce some of the marked health inconsistencies. Public health considerations however never drove these policy changes, which can explain why various measures in the CAP are still incompatible with public health and the "Health in All Policies" obligation enshrined in the European Union Treaty.[4]

Just as the European Commissioner for Agriculture Phil Hogan suggested in the opening quote above, public health should regain its place at the heart of European Union (EU) agricultural policy. An ecological public health approach to the CAP will not only help reduce preventable chronic diseases and their vast societal consequences, but will also alleviate the economic and ecological challenges that the agricultural sector faces. It will furthermore justify the survival of the CAP, which is under constant pressure.

EPHA recognises that the CAP is only the first step to address the health impacts of the food system at large. The food and beverage processing and retail industries, unlike when the CAP was instituted, are now the key actors in shaping people's diets, farmers' incomes and production decisions. Therefore today, public policy based on good governance and budgetary responsibility can be achieved only when the food system is addressed as a whole – from farm to plate – in a coherent, health-sensitive and sustainable European food and agricultural policy.[5]

Agriculture and health

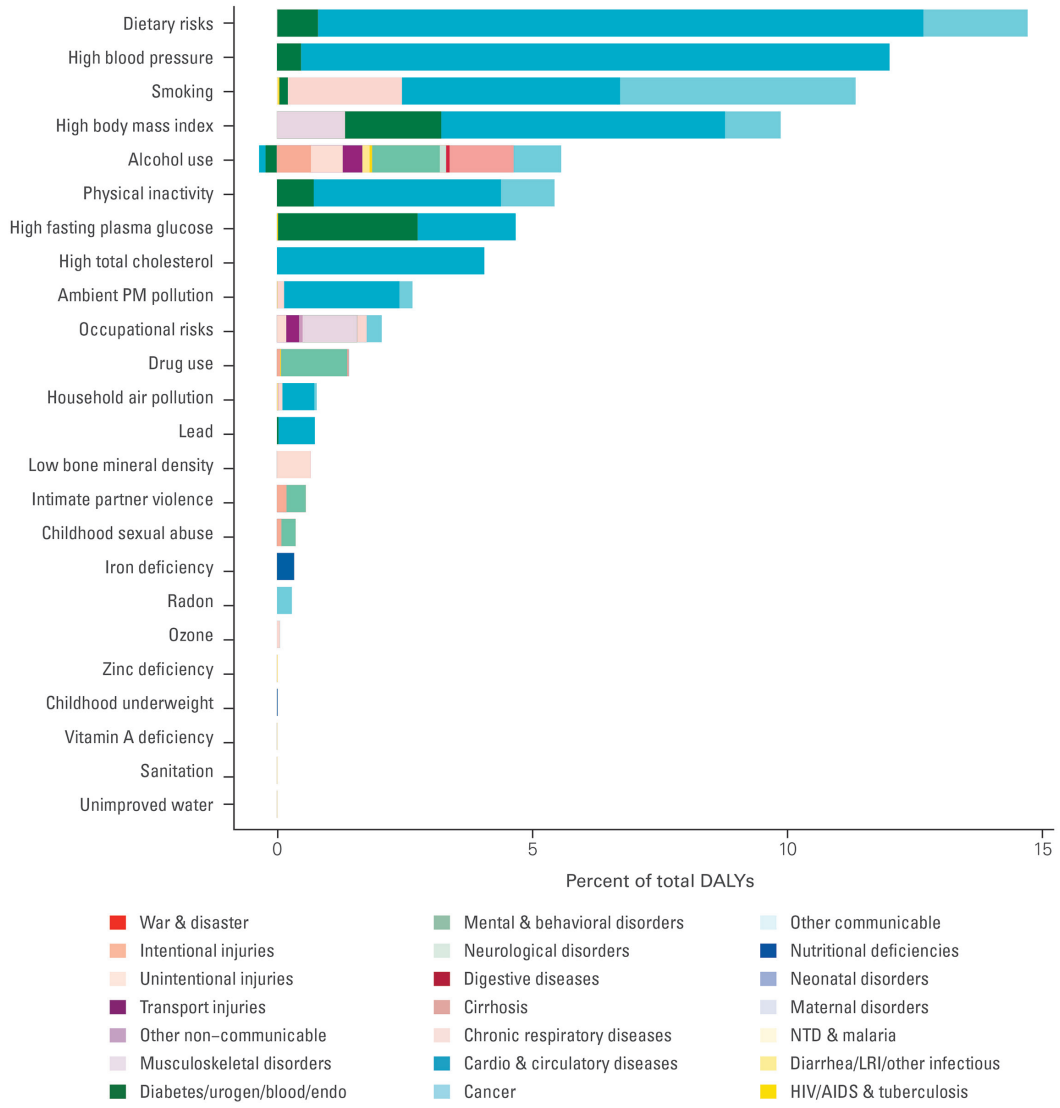
Agriculture is linked to all the major causes of mortality and disease in the EU. Together with smoking, harmful alcohol consumption and physical inactivity, diets are responsible for the overwhelming majority of ill-health in Europe.[6] [7] Unhealthy diets are, in fact, the single biggest risk factors for "disability adjusted

[1] Phil Hogan EU Commissioner for Agriculture (2015) Interview at the Forum for the Future of Agriculture by Views.eu, [online]. While using this quote EPHA however disagrees that the CAP should not be about farmers.
[2] Tim Lang (2004) European agricultural policy: Is health the missing link? In: London School of Economics and Political Science, Eurohealth issue: Integrating Public Health with European food and agricultural policy. [online] Of course the policy also aimed to provide economic security for the farming population, which is visible in the CAP's mission statement.
[3] Also, in the past nutrient recommendation for protein intake, especially animal protein, was around twice as high as it is today, see for instance: J. Périssé (1981) Joint FAO/WHO/UNU Expert Consultation on Energy and Protein Requirements. [online]
[4] Art 168 Treaty on the Functioning of the European Union (TFEU). [online]
[5] The concept 'from farm to fork' does in fact not adequately reflect the challenge of moving towards a circular economy or the significant impacts of input use and the inputs sector on farming.
[6] WHO Europe (2012) Action plan for implementation of the European strategy for the Prevention and Control of Noncommunicable Diseases 2012-2016, p. 5. [online]
[7] WHO Europe (2015) European Health Report 2015. [online]

life years lost" (DALYs) in the EU.[8] [9] Although average rates have decreased, the incidence of smoking and alcohol consumption are still far too high. The share of Europeans who are overweight or obese has, on the contrary, steadily increased between 2010 and 2014 in all EU countries. Childhood obesity has risen as well: a quarter to a third of 11-year-old children is now overweight or obese.[10] [11]

For an overview of the diverse health impacts of agriculture, please refer to the Annex.

Figure 1: Disability adjusted life years lost by risk factors, EU & EFTA, 2010 (The Global Burden of Disease)



[8] Institute for Health Metrics and Evaluation. University of Washington (2013) The global burden of disease. Generating evidence, guiding policy. European Union and European Free Trade Association Regional Edition. [online]
The "Global Burden of Disease" study is a collaboration between seven leading international scientific institutes to systematically quantify the main causes of health loss. Dietary risk includes high salt intake and lack of vegetables, fruits, nuts and whole grains in the diets.

[9] The Disability Adjusted Life Year (DALY) is a measure of overall disease burden expressed as the number of years lost due to ill-health, disability or early death. The measure combines mortality and disease into one indicator.

[10] WHO Europe (2015) European Health Report 2015. [online]

[11] WHO European Childhood Obesity Surveillance Initiative (COSI). [online]

Agriculture and burden of disease

The graph above shows the main risk factors for DALYs in the EU. The top risk factors are easily linked to agriculture. Alcohol and tobacco are based on agricultural raw materials. Dietary risk, high blood pressure, high body mass index, high blood glucose and high cholesterol are all directly linked to food and dietary practices, which are influenced by factors like food availability and relative prices. In addition to the impacts on the food chain, agriculture also influences health through the farming methods employed. Livestock raising is for instance an important contributor to ambient particulate matter (PM) pollution. Even physical activity levels can be partly related to urbanisation and changes in agricultural production technology.

Health sensitive products

Agriculture is not 'just' another sector of the economy producing 'mere' commodities. Agriculture produces food, a basic human need and key determinant of life quality. But agriculture also produces more than that. The socio-economic and technological structures of the agricultural sector shape rural communities, urbanisation rates, employment opportunities, farming cultures, the quality of landscapes, nature and biodiversity, ecosystem services, animal welfare and the climate.

From a health perspective not all kinds of agricultural products are the same and neither are all production methods. Some agricultural products are more 'health sensitive' than others. The clearest example is the tobacco crop whose sole widespread use is to be transformed into tobacco products, which kill 700,000 people in Europe every year.[12] Several other products can similarly be categorized as health-sensitive, like wine grapes, sugar, some livestock products, hops and vegetables and fruits.

This report focuses on health-sensitive products and production practices and will discuss the CAP's provisions from the perspective of health-based strategic aims. This report is the first within a series of papers exploring the links between different parts of the food system and health.

Sustainable diets

One of the strategic aims of this paper is to align the CAP with efforts to promote sustainable diets. What are sustainable diets and why should sustainability matter to public health?

The Food and Agricultural Organisation of the United Nations (FAO) defines sustainable diets as:[13]

> *"Sustainable Diets are those diets with low environmental impacts which contribute to food and nutrition security and to healthy life for present and future generations. Sustainable diets are protective and respectful of biodiversity and ecosystems, culturally acceptable, accessible, economically fair and affordable; nutritionally adequate, safe and healthy; while optimizing natural and human resources."*

The links between public health and the environment are as old as the discipline of public health itself.[14] The validity of this association is confirmed by a growing body of evidence showing that human health is intrinsically linked to the health of the environment. On this basis The Lancet Commission on Planetary Health concludes that *"the continuing degradation of natural systems*

[12] European Commission. Infographic: Tobacco in the EU. [online]
[13] FAO (2012) Sustainable diets and biodiversity. Directions and solutions for policy research and action. Proceedings of International Scientific Symposium. [online]
[14] Tim Lang et al. (2012) Ecological public health: the 21st century's big idea? The BMJ. [online]

threatens to reverse the health gains seen over the last century".[15] Similarly, The Lancet Commission on Health and Climate Change says:

> *"The implications of climate change for a global population of 9 billion people threatens to undermine the last half century of gains in development and global health."* [16]

This link is starting to be addressed as well in practice. For instance, the Dutch, Swedish, Finnish and possibly in the future UK nutritional guidelines include sustainability considerations in their dietary recommendations.[17] [18] [19] [20] In the US this inclusion was recently considered as well but, presumably due to pressure from influence groups, subsequently dropped.[21]

The CAP matters

The CAP is one of the most important EU policies, responsible for around 40% of the EU budget or approximately €55 billion per year.[22] Expenditure of such considerable resources has repeatedly come under scrutiny and calls are voiced for the policy to enhance delivery of public goods. The lion's share of ill-health and death are attributable to preventable diseases with diet, alcohol consumption and tobacco as core risk factors. Healthcare costs amount to 9% of European GDP. [23] [24] In a recent statement by the European Commissioner for Health and Food Safety Dr. Vytenis Andriukaitis, it is however the risk factors, most importantly diet, alcohol and tobacco use, rather than investments in healthcare services that result in the *real* economic costs to society.[25]

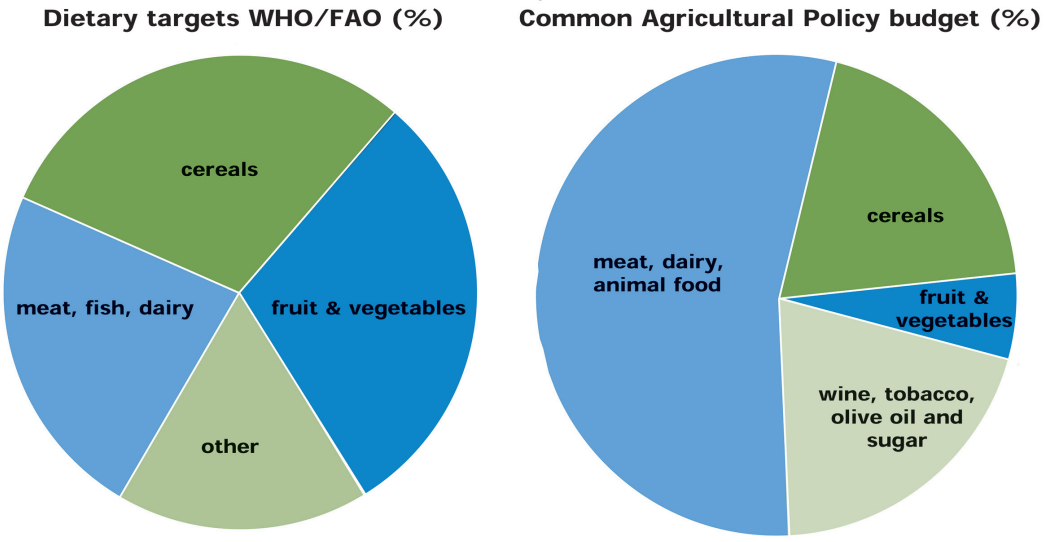
In this light, public policy matters. Incentives provided by policies should signal a coherent vision of societal priorities. Expenditure in one sector of the economy, such as agriculture, should not result in external costs borne by other parts of the economy, such as the environment or public health. This basic principle is essential for maintaining the credibility of EU public governance in general and a support system like the CAP, whose very existence is called into question.

CAP and diets

But to what extent is the CAP responsible for dietary outcomes? This question is difficult to quantify given sparse research in the field.[26] Several reports, starting with the ground-breaking study by the Swedish National Institute of Public Health, have argued that there is a close link between the CAP and dietary choice.[27] A report by the Faculty of Public Health in the UK also eloquently argues for a direct connection between CAP budgetary priorities and diets.[28]

[15] Lancet Commission on planetary health (2015) Safeguarding human health in the Anthropocene epoch. The Lancet. [online]
[16] Nick Watts et al. (2015) Health and climate change: policy responses to protect public health. The Lancet. [online]
[17] Health Council of the Netherlands (2011) Guidelines for a healthy diet: the ecological perspective. [online]
[18] Sweden National Food Agency (2015) Find your way to eat greener, not too much and be active. [online]
[19] National Nutrition Council of Finland (2014) Finnish Nutrition Recommendations 2014. [online]
[20] Tara Garnett et al. (2015) The principles of healthy and sustainable eating patterns. Green Food Project [online]
[21] Global Meat News (2015) Latest US dietary advice to avoid limiting meat. [online]
[22] European Commission (2013) Overview of CAP Reform 2014-2020. [online]
[23] OECD (2015) Focus on Health Spending. Health Statistics 2015. [online]
[24] OECD iLibrary, Health at a Glance: Europe 2012. [online]
[25] Vytenis Andriukaitis (16 July 2015) Speech outlining priorities for health until 2019 at European Policy Centre, [online]
[26] Sophie Hawkesworth et al. (2010) Feeding the world healthily: the challenge of measuring the effects of agriculture on health. Philosophical Transactions B of The Royal Society. [online]
[27] Schäfer Elinder (2003) Public health aspects of the EU Common Agricultural Policy. Developments and recommendations for change in four sectors: Fruit and vegetables, dairy, wine and tobacco. National Institute of Public Health, Sweden
[28] Christopher Birt et al. (2007) A CAP on Health? The impact of the EU Common Agricultural Policy on public health. Faculty of Public Health. [online]

Figure 2: Dietary targets and CAP budget spending, 2005 (Faculty of Public Health)

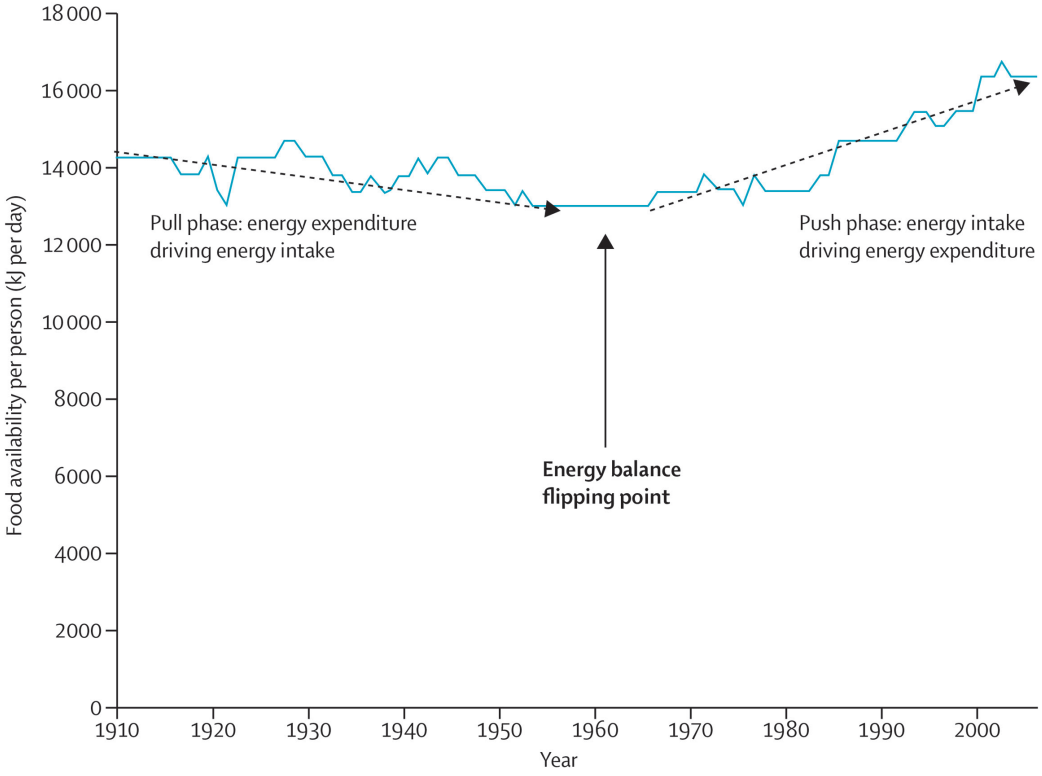


These reports are supported by research which concludes that increases in food energy supply, in other words food availability, are the dominant drivers of weight gain in populations.[29] Investigations have shown that the rise in food energy supply can help explain increases in body weight in high income countries,[30] as well as the surge in overweight and obesity in the USA from the 1970s onwards[31] and in the UK since the 1980s.[32] At the moment, nearly 60% of the European population is overweight and between 25-30% is obese.[33] Based on past trends, overweight and obesity could increase to 67-91% of the population by 2030 in some EU Member States.[34]

A related hypothesis poses that increased food supply pushes up population energy intake once an 'energy balance tipping point' is reached. Food consumption is then no longer driven by energy expenditure, but by the availability of food. This is another strong argument for reconsidering the imperative of production and productivity growth in agriculture. It rather invites to shift focus to the question of *which* production should increase and *where*.[35]

[29] Boyd Swinburn et al. (2011) The global obesity pandemic: shaped by global drivers and local environments. The Lancet. [online]
[30] Stefanie Vandevijvere et al. (2015) Increased food energy supply as a major driver of the obesity epidemic: a global perspective. Bulletin of the World Health Organisation. [online]
[31] Boyd Swinburn et al. (2009) Increased food energy supply is more than sufficient to explain the US epidemic of obesity. Am J Clin Nutr. [online]
[32] P. Scarborough et al. (2011) Increased energy intake entirely accounts for increase in body weight in women but not in men in the UK between 1968 and 2000. Br J Nutr. [online]
[33] WHO Europe (2015) European Health Report 2015. [online]
[34] João Breda (2015) Media Release "Proportion of overweight and obese males and females to increase in most European countries by 2030, say latest projections by WHO". WHO Europe. [online]
[35] T. Rawe et al. (2015) Cultivating equality: delivering just and sustainable food systems in a changing climate. CGIAR. [online]

Figure 3: Food availability for the USA, 1910-2006 (Boyd Swinburn et al., The Lancet)



At the same time, other authors maintain that the CAP and dietary intakes are only faintly interconnected and that the CAP has effectively 'taxed' consumption of products like sugar, meat and milk by keeping European prices above the world market.[36] This is an important observation from agricultural economics. It misses the point however that from a consumers' perspective food affordability is more usefully measured against income than world prices. Besides, studies have shown that EU export subsidies helped to keep world prices artificially low for a number of key products.[37] Over recent decades the share of disposable income spent on food by consumers has fallen significantly, now at an average of less than 15% of total expenditure.[38] According to the OECD, increased affordability of food is one of the factors responsible for the rise of obesity.[39] Falling relative prices and increased affordability of food have contributed to up to 40% of the increase in body mass index in the United States in the period 1976 to 1994.[40]

This report is predicated on the evidence that a link between the CAP and dietary outcomes does exist. The policy's payment schemes and market organisation rules provide incentives to producers who react by adjusting production decisions, thereby influencing food availability and the general 'food environment' in Europe. Although trade in agricultural products is important from an economic perspective, only 11% of the total supply of primary agricultural products is imported from outside the EU and only 7% of the total output of the EU food, drink and tobacco sectors is exported.[41] This means that roughly 85-90% of the food Europe produces remains within the EU and is consumed or withdrawn in some way internally.

[36] Josef Schmidhuber (2007) The EU Diet – Evolution, Evaluation and Impacts of the CAP. FAO. [online]
[37] Ralf Peters (2006) Roadblock to reform: the persistence of agricultural export subsidies. UNCTAD. [online]
[38] Eurostat. Cross-country comparison of final consumption expenditures on food and housing in 2011. [online]
[39] Franco Sassi (2010) Obesity and the Economics of Prevention – Fit not fat. OECD. [online]
[40] D. Lakdawalla et al. (2002) The Growth of Obesity and Technological Change: A theoretical and Empirical Examination. National Bureau for Economic Research. Working Paper W8946. [online]
[41] Alan Matthews (2015) Forum for the Future of Agriculture 2015 – Remarks on EU agricultural trade policy. CAPreform.eu. [online]

Yet it is also clear that the CAP, given the powerful position of the food processing and retail industries, is an imprecise and insufficient instrument alone to steer consumption patterns.[42] This underlines the need to take a Health in All Policies approach to the entire food system by integrating production, processing, wholesaling, retailing, trade, marketing and consumption into a consistent policy framework: a sustainable food and agricultural policy.[43]

[42] Corinna Hawkes et al. (2012) Linking agricultureal policies with obesity and noncommunicable diseases: A new perspective for a globalising world. Food Policy. [online]

[43] A similar case was made by: The Netherlands Scientific Council for Government Policy (2014) Towards a food policy. English synopsis. [online]

Mainstreaming Health into the CAP: Observations & Recommendations

"Growing, buying and eating the right kinds of food can reduce the risk of disease and simultaneously promote a sustainable environment."
WHO Europe[44]

This report presents observations and preliminary recommendations on ways to achieve coherence between agricultural policy and strategic public health objectives. The report addresses the new CAP, which entered into force in 2015, and aims to create a dialogue ahead of the mid-term review and the next CAP reform in 2020 to ensure EU policy instruments and funding priorities are better able to deliver health for European citizens.

Realising the multifunctional nature and socio-cultural value of agriculture, EPHA is not calling for an abolition of farm support or the slashing of all market regulations.[45] 'The market' without a proper regulatory framework would inevitably undervalue the key public goods that farmers can produce and reduce food to a commodity. In contrast, Europe needs a sustainable agricultural sector and vibrant rural communities supported by a policy environment that explicitly promotes health and overcomes the 'lock-ins' and path dependencies created by decades of 'productivist' incentives.[46]

While taking the CAP as starting point, EPHA in no way implies the CAP must necessarily 'outlive' the next reforms and favours a fundamental assessment on the added value of this policy.

The report focuses on the CAP's three core instruments:

Regulation 1307/2013	- Direct Payments Regulation[47]	Pillar I
Regulation 1308/2013	- CMO Regulation[48]	Pillar I
Regulation 1305/2013	- Rural Development Regulation[49]	Pillar II

[44] WHO Europe (2000) The First Action Plan for Food and Nutrition Policy (2000-2005). [online]
[45] EPHA (2010) Response to the "The Future of the Common Agricultural Policy" consultation. [online]
European Public Health & Agriculture Consortium (2011) Response to the "Reform of the CAP towards 2020 – impact assessment". [online]
[46] Olivier de Schutter (2014) Report of the Special Rapporteur on the right to food, Final report: The transformative potential of the right to food. UN. [online]
[47] Regulation (EU) No 1307/2013 establishing rules for direct payments to farmers under support schemes within the framework of the common agricultural policy. [online]
[48] Regulation (EU) No 1308/2013 establishing a common organisation of the markets in agricultural products. [online]
[49] Regulation (EU) No 1305/2013 on support for rural development. [online]

Promote Public Health as a CAP Objective

Strategic aim: Ensure full application of the Health in All Policies obligation

In any assessment of EU policy it is worthwhile recalling what the EU stands for. The EU's basics are codified in its two founding treaties: the Treaty on European Union (TEU) and the Treaty on the Functioning of the European Union (TFEU).[50] Both are explicit in the primacy accorded to public health and well-being.

In the first paragraph of Article 3 TEU, which is the very core of EU's objectives, we find:

> *"The Union's aim is to promote peace, its values and the well-being of its peoples"*

Article 9 TFEU states:

> *"In defining and implementing its policies and activities, the Union shall take into account requirements linked to the promotion of a high level … of human health."*

Article 168 TFEU, containing the explicit 'Health in All Policies' obligation, reads:

> *"A high level of human health protection shall be ensured in the definition and implementation of all Union policies and activities."*

Article 35 of the EU Charter of Fundamental Rights says:[51]

> *"A high level of human health protection shall be ensured in the definition and implementation of all Union policies and activities"*

The Treaty is clear on the obligation to ensure that *all* EU policy actions (and inactions) are based on public health as a core determinant. Unfortunately, this is not the case in practice. The CAP, as one of EU's most 'dominant' and oldest policies was established prior to the inclusion of the Health in All Policies provision into the Treaties. To ensure its application in practice, more legal incentives are required to guarantee proper attention to public health. Public health should be included among the CAP's explicit objectives, which are set out in Article 39 TFEU.

> **Recommendation: Include the promotion of public health as one of the CAP's core objectives, with a special focus on the attainment of sustainable diets.**

The inclusion of public health could be phrased along the lines of: *"The objectives of the common agricultural policy shall be: … (f) To facilitate and not to counteract the attainment of high levels of human health within the Union as well as beyond its borders and in particular to promote the attainment of healthy sustainable diets."*

Health impact assessment

Including a public health impact assessment at each stage of policy development, starting with the European Commission but also covering significant changes brought during the co-legislative process involving the European Parliament and Council, would be a significant progress towards operationalising public health within the CAP. The experience from one of the first national health impact assessments (HIA) of agricultural policy conducted in Slovenia showed that the HIA is a useful mechanism for raising

[50] Treaty on the European Union. [online]
Treaty on the Functioning of the European Union. [online]
[51] EU Charter of Fundamental Rights. [online]

broader public health issues onto the agricultural agenda.[52] Currently, the main public health priority in agriculture remains food safety. However, food security and nutrition and other production-related health concerns are more important in terms of the burden of disease and cost to society. While HIA of agricultural policy is a complex task, methodologies for such assessments exist and implementation could be carried out by qualified public health experts.[53]

Recommendation: Conduct a thorough public health impact assessment of the CAP including at each relevant stage of agricultural policy development. The scope and methodology of assessment should be established in coordination with public health experts.

[52] Karen Lock et al. (2003) Health impact assessment of agriculture and food policies: lessons learnt from the Republic of Slovenia. Bulletin of the World Health Organisation. [online]

[53] Karen Lock et al. (2003) Health Impact Assessment of Food and Agriculture Policies in Slovenia and the potential effect of accession to the European Union. Report for the Ministry of Health of the Republic Slovenia Health. [online]

Market organisation must not restrict health

Strategic aim: Ensure full application of the Health in All Policies obligation

The Common Market Organisation (CMO) Regulation lays down market organisation and intervention rules for most agricultural subsectors. The Regulation does not explicitly address public health, although health is mentioned in several non-core provisions. Market rules have however been abused to restrict Member State's action to protect and improve public health. This undermines efforts to address the negative societal effects of health problems, including the vast economic and social burden placed on Member States' economies and health systems due to chronic diseases, for which the European Commission is developing a political action framework.[54]

A recent court case illustrates this incoherence. The Scotch Whisky Association, together with other alcohol industry groups,[55] have sought to abolish a Scottish law on minimum unit pricing (MUP) of alcohol on the grounds that they claim it undermines the market organisation of wine and particularly the principle of free price formation. The alcohol industries launched legal proceedings against the law after its adoption, arguing there is no place for national legislation once market organisation rules are fully harmonised at EU level.[56]

In its submission to the ECJ the European Commission also argued that if MUP were to be adopted in various Member States it would undermine the legislative assumptions on which the CMO Regulation is based.[57] This shows a major inconsistency within the Commission and is in stark contradiction to the Commission's declarations regarding the primacy of national decision-making powers on health and to Commissioner Andriukaitis' recent remarks in support of minimum unit pricing of alcohol.[58]

In his Opinion on the case, ECJ Advocate General Yves Bot quite interestingly concluded that the *"objectives of the CAP 'cannot disregard' requirements relating to the public interest … and that the protection of health 'contributes to the attainment of objectives of the [CAP]'"*.[59] In its final judgment of 23 December 2015, the European Court of Justice (ECJ) also ruled that the CMO Regulation does not *a priori* preclude national authorities introducing price setting measures when the objective is the protection of human life and health:

> *"the establishment of a CMO does not prevent the Member States from applying national rules intended to attain an objective relating to the general interest other than those covered by that CMO even if those rules are likely to have an effect on the functioning of the common market in the sector concerned"* [60]

The ECJ, as expected, did find the MUP to be in breach with the free movement of goods on the internal market (Article 34 TFEU), but left it to the national courts to decide whether the measure qualifies for a public health exception or not (Article 36 TFEU). The latter involves the 'proportionality test' where the Scottish government would have to prove that the aims pursued with MUP could not be fulfilled with less restrictive measures, like an increase in alcohol taxation.

While the final ruling was hailed as positive for public health, the possibility that internal market rules such as those contained in the CMO Regulation could be abused to threaten or delay legitimate, democratically approved public health measures is very much present. The European Union, and the European Commission in particular, should facilitate Member States in achieving their public health

[54] Vytenis Andriukaitis. EU Commissioner for Health (2015) Letter to the EU Ministers of Health. [online]
[55] Scotch Whisky Association, the European Spirits Association and the Comité Européen des Entreprises Vins.
[56] Scottish Court of Session (2013) Opinion by Lord Doherty. [online]
Judiciary of Scotland (2013) Petition for Judicial Review by Scotch Whisky Association & Others, [online]
[57] Opinion of Advocate General Yves Bot (2015) In the case: The Scotch Whisky Association and others against The Lord Advocate, The Advocate General for Scotland. [online]
[58] Politico (2015) Health chief blasts alcohol lobbyists. [online]
[59] Opinion of Advocate General Yves Bot (2015) In the case: The Scotch Whisky Association and others against The Lord Advocate, The Advocate General for Scotland. [online]
[60] Case C-333/14: Judgment of the Court 23 December 2015. Reference for a preliminary ruling from Court of Session, Scotland (United Kingdom) made on 8 July 2014 — The Scotch Whisky Association and others against The Lord Advocate, The Advocate General for Scotland. [online]

commitments laid out, for instance, in the WHO "European Food and Nutrition Action Plan 2015–2020", a document adopted by the governments of all EU countries. The first objective of this plan is to *"Create healthy food and drink environments"* which may require measures affecting the flow of goods on the internal market.[61]

Recommendation: Reiterate the status of public health in the EU Treaties and stipulate that nothing may prevent national public authorities from taking legislative or other policy measures, including fiscal and economic instruments, marketing policies, labelling requirements, point of sale measures and nutritional standards, to protect and improve public health.

[61] WHO Europe (2015) European Food and Nutrition Action Plan 2015–2020. [online]

No public money for wine overproduction

Strategic aim: Make the CAP consistent with reducing harmful alcohol consumption

Europe is the heaviest drinking region in the world. Harmful alcohol use[62] is the fifth leading cause of death and disability worldwide,[63] representing a monetary cost of €155.8 billion in 2010 in the EU.[64] Any policy that directly or indirectly contributes to harmful alcohol consumption is counterproductive for public health. The CAP has for decades intervened in the wine market, both stimulating and trying to limit structural oversupply.[65] [66] Today, while we no longer speak of wine lakes, overproduction still haunts the sector: the EU produces around 158 million hl of wine per year with an annual average consumption of 124 million hl.[67] The persisting imbalance between EU demand versus supply urges the expansion into international markets.[68]

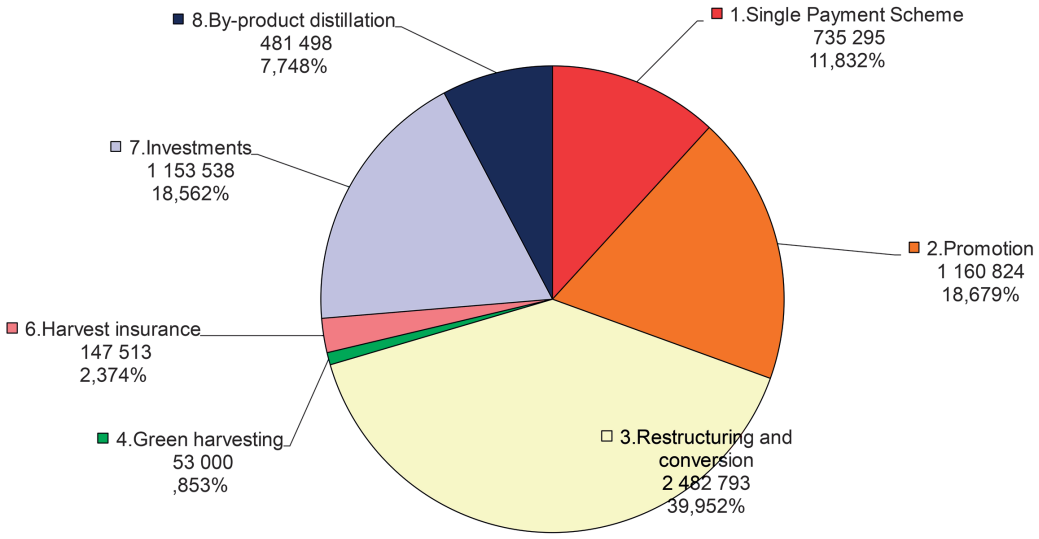
Vine planting authorisation

Despite this imbalance, new rules for vine planting require Member States to authorise a 1% increase in the total area planted annually, which could result in a 16% increase in wine production area by 2030.[69] Even more perplexingly, the bulk of support focuses on increasing productivity rather than, as recommended by the European Court of Auditors, finding *"an appropriate policy mix"* to reduce the imbalance between supply and demand.[70] Given the effects of harmful alcohol consumption on human health and resulting economic costs, many of the wine sector support provisions are inconsistent with public health objectives.

The CMO Regulation enables the attribution of EU funds to Member States *"to finance specific support measure to assist the wine sector"*.[71] Subsequent provisions spell out the measures eligible for support, including product promotion activities, vineyard conversion, grape destruction, insurance, investment and innovation assistance and by-product distillation support.[72] The EU budget for these support measures in the new CMO Regulation is set at €1.1 billion per year.[73] The chart below shows the expected national allocations per support measure for the years 2014-2018, amounting to a total of €6.2 billion of funding.[74]

[62] EPHA targets 'harmful' alcohol consumption, not alcohol consumption per se. There is still scientific debate about safe levels of alcohol intake and potential benefits associated with low levels of alcohol consumption.
[63] WHO (2014) Global Status Report on Alcohol and Health 2014. [online]
[64] OECD (2015) Tackling harmful alcohol use. [online]
OECD (2015) Policy Brief. Tackling harmful alcohol use. [online]
[65] Giulia Meloni et al. (2012) The Political Economy of European Wine Regulation. Centre for Institutions and Economic Performance. Catholic University of Leuven. [online]
[66] European Commission (2006) Towards a sustainable European wine sector. [online]
[67] European Court of Auditors (2014) Is the EU investment and promotion support to the wine sector well managed and are its results on the competitiveness of EU wines demonstrated?. [online]
[68] European Court of Auditors (2012) The reform of the common organisation of the market in wine: progress to date. [online]
[69] Article 63 CMO Regulation. Member States may also choose to authorise less, but it may not be 0% or lower.
[70] European Court of Auditors (2014) Is the EU investment and promotion support to the wine sector well managed and are its results on the competitiveness of EU wines demonstrated? [online]
[71] Article 39 CMO Regulation
[72] Articles 45 to 52 of the CMO Regulation
[73] Article 44 CMO Regulation referring to Annex VI
[74] European Commission (2013) Wine CMO: First submission of financial table of the national support programme. [online]. Submissions were made under the previous CMO for wine, reviewed national envelopes are forthcoming.

Figure 4: Wine National Envelopes 2014-2018 as reported in 2013 (European Commission)



Wine promotion

Any measure linked to wine promotion constitutes a (covert) way of promoting alcohol consumption and is incompatible with the notion of public funds for public goods. This also applies when promotion activities are formulated, as they currently are, in terms of campaigns to *"inform consumers about the responsible consumption of wine"* and foster the designation of origins and geographical indications schemes.[75] The European Court of Auditors found that promotional measures often constitute hidden operational subsidies to the wine sector as they replace the industry's own promotion activities.[76] If the EU is keen to enhance the visibility of its regional name protection schemes this should be carried out independently from wine promotion.

Recommendation: End support for wine promotion measures.

Investment support

Likewise, there is no justification to support the wine sector in making *"investments in processing facilities and winery infrastructure, as well as marketing structures and tools"* or *"investments aimed at the development of new products, processes and technologies"*.[77] The European Court of Auditors is also of the opinion that separate investment provisions for the wine sector are out of place as these measures are covered by the Rural Development Regulation.[78] These measures absorb valuable public money which could be better used for promoting the production of foods essential for health, such as vegetables, fruits, pulses and nuts which are currently under-consumed by many in Europe.

Insurance support

Similarly, there is no justification to single out wine growers to benefit from insurance support through mutual funds and harvest insurances.[79] These risk-reduction measures are inappropriate considering that the negative impacts of wine production are fully externalized, meaning that costs and risks are entirely passed on to health services, society and ultimately tax payers and patients.

[75] Article 45 CMO Regulation
[76] European Court of Auditors (2014) Is the EU investment and promotion support to the wine sector well managed and are its results on the competitiveness of EU wines demonstrated? [online]
[77] Articles 50 and 51 CMO Regulation
[78] European Court of Auditors (2014) Is the EU investment and promotion support to the wine sector well managed and are its results on the competitiveness of EU wines demonstrated? [online]
[79] Articles 48 and 49 CMO Regulation

Grape destruction

Support for the destruction or removal of grape vines in order to reduce yields to zero ('green harvesting') is not a structural measure but simply a way of managing oversupply.[80] Support for by-product distillation[81] (fortunately less damaging than the now abandoned support for the forced distillation of low quality wines)[82] aims to reduce operational costs of wine production and should have no place in a health-consistent agricultural policy. This measure's prime reason for existence was to have a positive effect on wine quality, which, according to a European Commission assessment, is no longer the case.[83]

Recommendation: End preferential treatment for the wine sector. Phase out support for investments, innovations, harvest insurances, mutual funds, "green harvesting" and by-product distillation of wine production.

Vineyard conversion

Support for vineyard conversion and restructuring largely aims at replacing older vineyards with newer, more productive ones in order to *"increase the competitiveness of wine producers"*.[84] The vineyard conversion measure should support conversion away from wine production or into the production of higher quality wines. This would allow some producers to exit the sector while improving the competitive position of those who remain. Such a measure would include assistance for small and medium-sized farm enterprises to diversify into new business models, like assistance in building local supply chains, enhancing wine quality, venturing into agro-tourism or cultivating other products. For instance, replacing vineyards with agroforestry systems could improve landscape quality and not impair environmental benefits, like carbon sequestration and erosion prevention, while offering a remunerative way of diversifying and 'greening' economic activity.

Recommendation: Transform the provisions for vineyard conversion away from quantitative productivity support towards qualitative assistance for producers to diversify into new business models.

The right policy mix

The EU is the largest wine producer, exporter and consumer in the world. This is a source of pride, while a gradual decline in European wine consumption is beneficial to health and public budgets but, paradoxically, considered threatening.[85] This institutional mindset appears to legitimise public investment in the competitiveness of wine producers so as to fend off competition from third countries and 'conquer' international markets. Europe should mature away from this vision. Contributing to increase alcohol availability on the world market in full knowledge of the impact is a dubious objective. Instituting minimum unit pricing policies could be suitable measures to ensure European wines are not undercut by low cost competitors, while maintaining a non-discriminatory and health-beneficial policy regime.[86]

The EU wine sector is heavily regulated and subsidised and while many commentators criticise this framework for being a waste of resources and creating vested interests, a right mix of regulatory incentives can achieve desired aims for the sector and society. Between 1953 and 1957 a package of

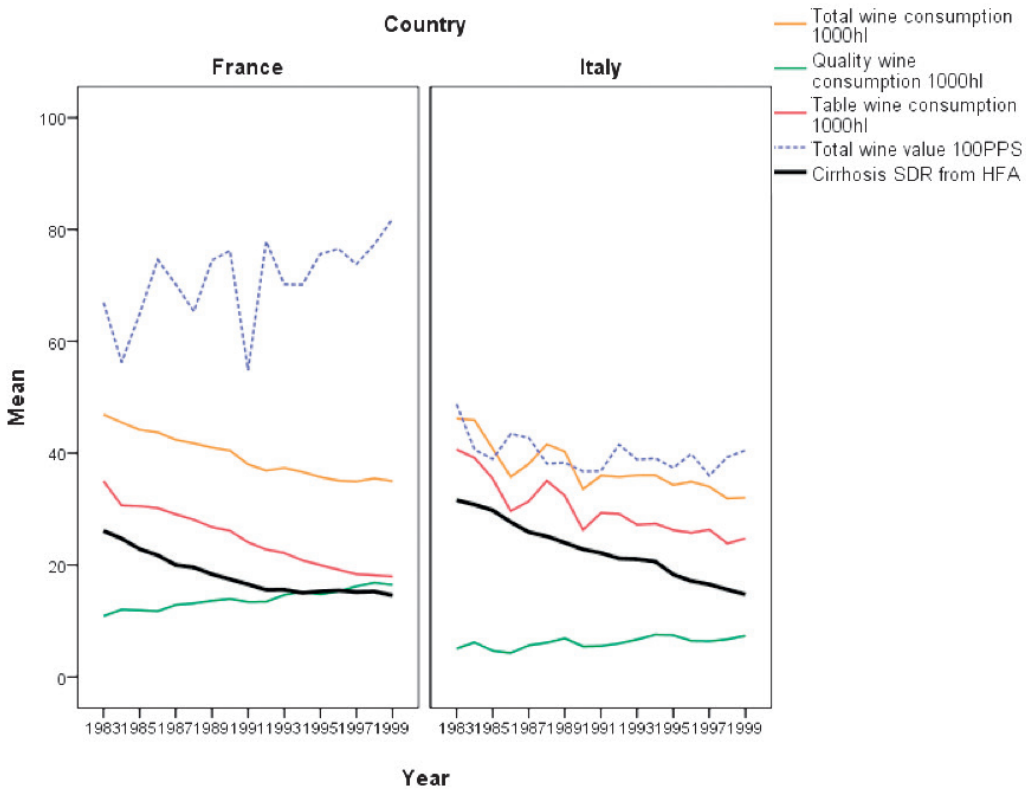
[80] Articles 47 CMO Regulation
[81] Articles 52 CMO Regulation
[82] For more on the effects of the previous distillation support regimes: Schäfer Elinder (2003) Public health aspects of the EU Common Agricultural Policy. Developments and recommendations for change in four sectors: Fruit and vegetables, dairy, wine and tobacco. National Institute of Public Health, Sweden.
[83] European Commission (2002) Ex-post evaluation of the CMO for wine, Chapter 5. Distillation. [online]
[84] Article 46 CMO Regulation
[85] European Court of Auditors (2012) The reform of the common organisation of the market in wine: progress to date. [online]
[86] Alan Brennan et al. (2014) Potential benefits of minimum unit pricing for alcohol versus a ban on below cost selling in England 2014: modelling study. BMJ. [online]

measures in France, covering planting restrictions, subsidized uprooting of vines and obligations to replant with higher quality varieties, lead to a production decline of about 10% and improved wine quality.[87] The grubbing-up measure introduced during the 2008 wine market reform delivered a reduction in supply of approximately 10 million hl. However, the support measure for restructuring of vineyards counterbalanced this decrease by enhancing yields.[88]

Shift in business models

Future policies should display a consistent mix of tools to ensure a sustainable supply-demand situation, pre-empting a health-compatible demand below the current level. Measures linked to (re)planting rights and vineyard conversions should again, as implemented successfully in the past, emphasise the transition from table wines towards higher quality produce.[89] More emphasis should also be put on maintaining the capacities of small- and medium scale wine growers who are far better equipped to take part in a quality and leisure-based wine consumption culture, which is more in line with public health policy. A shift in business model from cheap table wines towards higher quality, higher value wines accompanied with lower levels of consumption can maintain or even enhance the total value of the wine market, while contributing to a substantial decline in liver mortality from alcohol.[90]

Figure 5: Wine consumption, liver mortalityz and market value (Prof. Nick Sheron, Univ. of Southampton)



Recommendation: Foster a transition towards new business models in the wine sector, with a focus on higher quality wine production and income diversification.

[87] Giulia Meloni et al. (2015) L'Histoire se repete. Why the liberalization of the EU vineyard planting rights regime may require another French Revolution. Centre for Institutions and Economic Performance. Catholic University of Leuven. [online]
[88] European Court of Auditors (2012) The reform of the common organisation of the market in wine: progress to date. [online]
[89] Giulia Meloni et al. (2015) L'Histoire se repete. Why the liberalization of the EU vineyard planting rights regime may require another French Revolution. Centre for Institutions and Economic Performance. Catholic University of Leuven. [online]
[90] Nick Sheron, University of Southampton, unpublished graph. Values are measured in Purchasing Power Standard (PPS) based on data provided by DG AGRI, Eurostat and the WHO HFA database and analysed in SPSS(48, 78).

No need to support hops

Strategic aim: Make the CAP consistent with reducing harmful alcohol consumption

Hops is primarily used in beer production. The average EU citizen drinks 71 litres of beer per year, with country peaks at 144 litres and lows at 30 litres. Beer consumption decreased from an average 78 litres per person in 2008, but is still among the highest in the world. Beer exports are on the rise.[91] Europe produces 60% of the world's hops, with Germany responsible for 60% of European production and housing 1/3 of the global hops cultivated area. Germany is also a hub of the international hops trade.[92]

EU support for the hops sector was largely decoupled during the previous CAP reform,[93] but the Direct Payments Regulation makes hops eligible for the provision of voluntary coupled support.[94] Also, Article 58 of the CMO Regulation provides for EU aid to hops producer organisations in the hops sector, singling out Germany as recipient of €2,277,000 per year. Given the central role of Europe and particularly Germany in the hops sector, there is no justification to continue support. Reopening the possibility to apply coupled support to this health-sensitive product is a step in the wrong direction.

Recommendation: remove any specific support for the hops sector and remove hops from the voluntary coupled support option.

[91] The Brewers of Europe (2014) Beer Statistics 2014 edition. [online]
WHO (2014) Global Status Report on Alcohol and Health 2014. [online]
[92] European Commission. DG Agriculture and Rural Development. Hops. [online]
[93] Deloitte, LEI Wageningen, Arcadia International (2009) Evaluation of the CAP measures relating to hops. [online]
[94] Article 52 Direct Payments Regulation

End all subsidies for tobacco cultivation

Strategic aim: Make the CAP consistent with reducing tobacco use

Tobacco has no other widespread commercial use than to be processed into tobacco products which kill 700,000 people in Europe each year.[95] The EU has made significant progress on tobacco control policies and sizeable funds are now spent on smoking prevention and cessation throughout Europe. Any form of support to tobacco cultivation is a clear and unjustifiable inconsistency.

Coupled support for tobacco production was nevertheless widely applied in the EU. In 2000 2.3% of the CAP and 1.09% of the total EU budget was spent on tobacco subsidies.[96] Despite vast investments of resources, the policy failed in its objective to promote a transition away from the cultivation of low-quality tobacco.[97] In the 1990s around two-thirds of EU produced tobacco was of low commercial value and sold at minimum prices outside the European Community, while around 70% of EU's manufacturing needs were met by imports. With only about 55% of the subsidy granted being available as support for farm incomes, the remainder covering inputs purchases like seeds, fertilizers and other production factors, it would have been more cost-effective to simply grant income support to farmers without requiring them to produce an undesired and deadly product.[98] [99] [100] A profitability study suggested that without coupled support tobacco production would not be competitive compared to other crops, further questioning the subsidy policy.[101]

At present, tobacco production is decoupled and no voluntary coupled support is allowed.[102] However, in 2013 tobacco growers in five EU countries still received more than €83 million as additional support to improve crop quality. This scheme only expired in 2014.[103] Tobacco farming does remain part of the Direct Payments regime, which does not exclude the option that historical levels of support still partly determine current payments.[104] Tobacco farmers can furthermore benefit from support under the Rural Development pillar. For instance, the Spanish region of Extremadura in its rural development programme provides a €600 per hectare support to tobacco farmers for adopting 'integrated' farming practices, with quite weak conditions attached to it.[105] Such measure can be likened to a covered form of coupled support.

Given the special case of tobacco, the most consistent, transparent and responsible way forward is to definitely remove all European public funding for this crop. Instead, the freed-up resources should be earmarked to assist tobacco farmers to diversify into other types of production. This would be a fair deal for farmers, public health and public budgets alike.[106]

Recommendation: Definitively exclude tobacco cultivation from any form of direct support and exclude tobacco farming from participation in any rural development measures. Released funds should be earmarked to support farmers diversify into other types of production.

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[95] European Commission. Infographic: Tobacco in the EU. [online]
In the past tobacco was also quite widely used in medicinal applications. See: Anne Charlton (2004) Medicinal uses of tobacco in history, Journal of the Royal Society of Medicine, [online].

[96] Anna Gilmore et al. (2004) Tobacco-control policy in the European Union in: Eric Feldman et al. (ed) (2004) Unfiltered: Conflicts Over Tobacco Policy and Public Health. Harvard University Press.

[97] European Court of Auditors (1987) Special Report No 3/87. The common organisation of the market in raw tobacco accompanied by the Commission's replies. [online]

[98] Luk Joossens et al. (1996) Are tobacco subsidies a misuse of public funds? BMJ. [online]

[99] Anna Gilmore et al. (2004) Tobacco-control policy in the European Union in: Eric Feldman et al. (ed) (2004) Unfiltered: Conflicts Over Tobacco Policy and Public Health. Harvard University Press.

[100] Joy Townsend (1991) Tobacco and the European common agricultural policy. BMJ Clinical Research. [online]

[101] COGEA (2009) Evaluation of the CAP measures relating to the raw tobacco sector Synopsis. [online]

[102] Article 52 Direct Payments Regulation

[103] Under Article 68 of Council Regulation (EC) No 73/2009. The scheme runs until 2014. See: European Commission Answer to a written MEP question by Brian Hayes (E-005093-15). [online]

[104] See discussion below under the section: "Towards forward-looking direct payments".

[105] Junta de Extremadura (2014) Spain Rural Development Programme (Regional) – Extremadura. [online]

[106] As the principle of decoupled payments applies, it may no longer be possible to identify a tobacco farmer according to the documentation submitted to payment authorities. A separate question should therefore be included on whether the applicant cultivates tobacco. In case of fraud all granted support should be returned accompanied by an administrative penalty.

No cheap sugar

Strategic aim: Align the CAP with promoting sustainable diets

The average European eats too much sugar. European adults take between 7-17% of their dietary energy from sugar and children even more – up to 25% in some countries.[107] The WHO recommends reducing free sugars intake to a maximum of 10% of total energy intake and preferably to no more than 5% (roughly 25 grams or 6 teaspoons per day).[108] Excessive sugar consumption contributes to tooth decay, overweight and obesity and non-communicable diseases,[109] potentially hampers memory and learning[110] and may induce depression in adolescents.[111] [112] Sugar has no nutritional value apart from the energy it provides.

Similar to wine, the EU sugar sector has profited from a long history of protectionism which has induced significant levels of overproduction.[113] High sugar prices facilitated the growth, profitability and power of the European sugar industry.[114] In 2006 a substantial restructuring of the sugar sector saw an almost 25% decline in the volume of production quotas, the lowering of guaranteed prices and elimination of export subsidies.[115] The current system of quotas and market interventions, covering both sugar from sugar beet and isoglucose (also known as glucose-fructose syrup and made from either wheat or maize) is set to expire in 2017, which will largely liberalise the sugar market.[116]

The European Commission predicts a substantial decrease in the price of sugar after abolition of the current quota regime.[117] A detailed study carried out by the Joint Research Centre (JRC) into the post-quota future models a drop in beet sugar prices between 15-24%, with an 18-19% decrease considered most probable.[118] [119] Human sugar consumption – euphemistically called 'consumer surplus' – is estimated to somewhat increase. While this may not sound alarming, in reality it signals an unhealthy trend. In health terms, sugar consumption must be reduced and any increase will directly result in a higher disease burden and increased healthcare costs. Lower sugar prices may discourage current efforts to reduce the sugar content of processed foods though 'product reformulation'.

The JRC report is based on several scenarios reflecting different assumptions about the expansion of isoglucose on the market for sweeteners. Should isoglucose expand significantly, sugar consumption may actually decrease. Unfortunately, isoglucose has the same health disadvantages as sugar and therefore, whichever way the isoglucose market reacts to quota abolition, the results will be harmful to public health.[120]

Moreover, the abolition of quotas will probably be incoherent with EU international development policy objectives. The EU is a net importer of sugar. The main source of imports at the moment are the least

[107] WHO (2015) WHO calls on countries to reduce sugars intake among adults and children. [online]
[108] WHO (2015) Guideline: Sugars intake for adults and children. [online]
[109] For instance cardiovascular disease: Q. Yang et.al. (2014) Added sugar intake and cardiovascular disease mortality among US adults. JAMA Intern Med. [online]
[110] UCLA Newsroom (2012) This is your brain on sugar: UCLA study shows high-fructose diet sabotages learning, memory. [online]
[111] Arthur Westover et.al. (2002) A cross-national relationship between sugar consumption and major depression? Depression and Anxiety. [online]
[112] Emory Health Sciences (2014) High-fructose diet in adolescence may exacerbate depressive-like behaviour. Science Daily. [online]
[113] European Commission (1978), Commission Communication Future development of the Common Agricultural Policy. [online]
[114] Emilie Aguirre et al. (2015) Liberalising agricultural policy for sugar in Europe risks damaging public health. [online]
[115] Allison Burell et al. (2014) EU sugar policy: A sweet transition after 2015? Joint Research Centre. [online]
Restructuring of the sugar sector in 2006 also lead to a strong centralisation of sugar production and processing with many factory closings in countries like Poland and Italy. Much of the sugar processing is now concentrated, which drops a shadow over regional and rural development objectives.
[116] Article 124 and further and Article 232 CMO Regulation
[117] European Commission (2014) Prospects for EU agricultural markets and income 2014-2024. [online]
[118] Allison Burell et al. (2014) EU sugar policy: A sweet transition after 2015? Joint Research Centre. [online]
[119] Alan Mathews (2014) EU beet sugar prices to fall by 22-23% when quotas eliminated. CAPreform.eu. [online]
[120] Roya Kelishadi, et al. (2014) Association of fructose consumption and components of metabolic syndrome in human studies: A systematic review and meta-analysis, Nutrition. [online]

developed countries (LDCs) for whom raw sugar cane exports constitute a sizeable part of the economy and an important source of foreign exchange earnings.[121] [122] After quota abolition EU production is expected to substitute for much of these imports, while remaining import needs will be met by low-cost countries like Brazil.[123]

In the current CAP sugar production is, quite incompatible with EU Member States' health recommendations, eligible for voluntary coupled support.[124] During 2015 almost €200 million of support was coupled to maintain sugar production levels.[125] This apart from sugar production being entitled to general per hectare support under the direct payments regime.

Recommendation: As long as no EU-wide regulatory framework exists to internalise health costs into the price of artificially sweetened products, e.g. through fiscal measures, the sweetener market should not be fully liberalised if this is predicted to result in lower sugar prices.

Recommendation: Exclude sugar from voluntary coupled support.

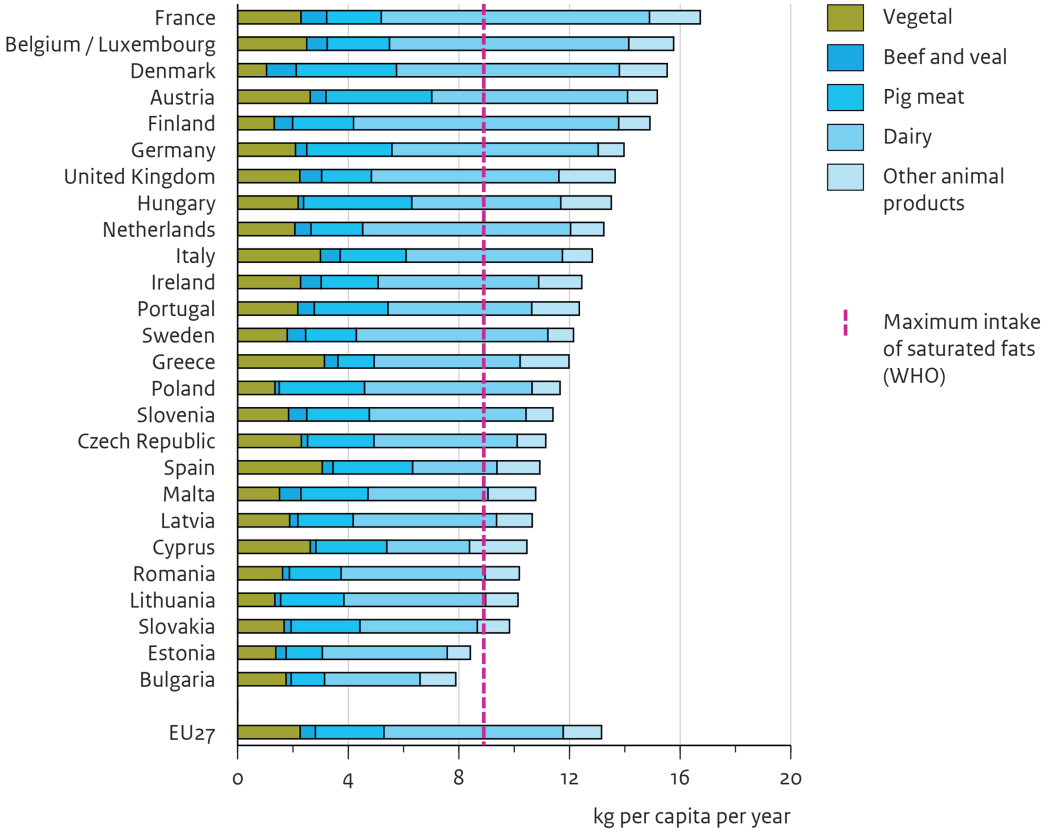
[121] Victoria Schoen et al. (2015) Should the UK be concerned about sugar? Food Research Collaboration. [online]
[122] Kawther Hashem et al. (2015) Does sugar pass the environmental and social test? Food Research Collaboration [online]
[123] Allison Burell et al. (2014) EU sugar policy: A sweet transition after 2015? Joint Research Centre. [online]
[124] Article 52 Direct payments Regulation
[125] European Commission (2014) The CAP towards 2020, Implementation of the new system of direct payments. MS notifications. [online]

Rebalance the supply of livestock products

Strategic aim: Align the CAP with promoting sustainable diets

Meat consumption in Europe is twice and dairy consumption three times the global average. To maintain a healthy diet, the WHO recommends reducing saturated fat intake to less than 10% of total energy intake.[126] The average European clearly exceeds this recommendation, primarily due to excessive consumption of animal products.[127]

Figure 6: Intake of saturated fats in the EU27, 2007 (Netherlands Environmental Assessment Agency)



It is widely recognised that high levels of intake of animal products can lead to obesity, diabetes and cardiovascular diseases, including by the European Commission.[128] The International Agency for Research on Cancer, an agency of the WHO, classified processed meat as carcinogenic to humans and red meat as probably carcinogenic.[129] The World Cancer Research Fund (WCRF) recommends limiting intake of processed meats including ham, salami, bacon and sausages.[130] [131] Animal farming is furthermore responsible for numerous negative ecological impacts (see annex).

[126] WHO (2015) Healthy Diet. Fact sheet No 394. [online]
[127] Henk Westhoek et al. (2011) The protein puzzle, the consumption and production of meat, dairy and fish in the European Union. Netherlands Environmental Assessment Agency. [online]
[128] European Commission (2012) Consultation paper: options for resource efficiency indicators. [online]
[129] International Agency for Research on Cancer (2015) Press release. IARC Monographs evaluate consumption of red meat and processed meat. [online] Red meat includes beef, pork, lamb and mutton, goat
[130] World Cancer Research Fund. Red and processed meat and cancer prevention. [online]
Referring to meats which are preserved through smoking, curing, salting or through addition of preservatives, including ham, salami, bacon, sausages, hot dogs etc.
[131] World Cancer Research Fund, American Institute of Cancer Research (2007) Second Expert Report: Food, Nutrition, Physical activity and the Prevention of Cancer: a Global Perspective. [online]

Benefits from lower animal products intake

Significant health and environmental benefits can be expected from lower meat and dairy intake. Investigators examined the effects of a 50% reduction in the intake of beef, dairy, pork, poultry and eggs, under the assumption that reduced consumption would proportionally decrease production.[132] The results of this modelling exercise showed:

- 40% reduction in saturated fat intake, bringing saturated fats closer to levels recommended by the WHO;
- Red meat consumption close to the maximum level recommended by the WCRF;
- Decrease in EU greenhouse gas emissions by 19-42% (dependent on the scenario and without capturing the substantial greenhouse gas reduction effects of decreased soya imports from South America which would drop by 75%);
- 23% fall in per capita use of cropland for food production, allowing among others for more extensive livestock farming;
- 40% drop in reactive nitrogen emissions. (Excess nitrogen emissions cost the EU €70-320 billion annually, of which 60% are related to health costs, averaging at €150-750 per person per year.[133])
- If energy intake is reduced as a whole and partly substituted by vegetables and fruits, rather than only cereals as projected in the study, the health benefits could be even higher.

A recent other study has concluded that large reductions in ruminant meat consumption (beef and mutton) are probably unavoidable if the EU climate targets are to be met.[134]

A historical perspective on meat and milk

Historically, the CAP employed various support measures geared at sustaining high prices for meat and milk products or making payments based on the number of animals kept on-farm.[135] Measures included floor prices, subsidized buying-up of surpluses (intervention buying), private storage aid, premiums per head and export subsidies. Even though such measures have ostensibly led to transfers from consumers to producers, suggesting that without subsidies consumers could have received animal products at a lower price, meat consumption in Europe more than doubled since 1961.[136] This jump in consumption of animal products was however insufficient to absorb the even more dramatic increases in supply.

Structural overproduction has resulted in much creative thinking about schemes to utilize surpluses at the least possible direct financial cost. A European Commission paper from 1980 addressing the *"intractable surplus problem"* in the milk sector gives a revealing insight into this thinking.[137]

> *"In the case of skimmed-milk powder, extra sales have been achieved at the expense of vegetable protein, requiring a subsidy that may go up to 85% of the price paid for the powder by the intervention agency. .... For butter the problem is more difficult. ... Nevertheless, the European Community has in recent years followed a policy of giving priority to its own consumers, and the quantities of butter to which subsidies have been paid to the internal market have been significantly greater than the quantities exported."*

Put bluntly – the CAP has been force-feeding European citizens with its fatty surpluses.

[132] Henk Westhoek et.al. (2014) Food choices, health and environment: Effects of cutting Europe's meat and dairy intake. Global Environmental Change. [online]
[133] Mark Sutton et al. (ed) (2011) The European Nitrogen Assessment. Sources, effects and policy perspectives. [online]
[134] David Bryngelsson et al. (2016) How can the EU climate targets be met? A combined analysis of technological and demand-side changes in food and agriculture. Food Policy. [online]
[135] European Commission (2004) The meat sector in the European Union. [online]
[136] See for instance: World Resource Institute. Data series: Meat consumption per capita. [online]
[137] European Commission (1980) Agriculture and the problem of surpluses. p. 18-19. [online]

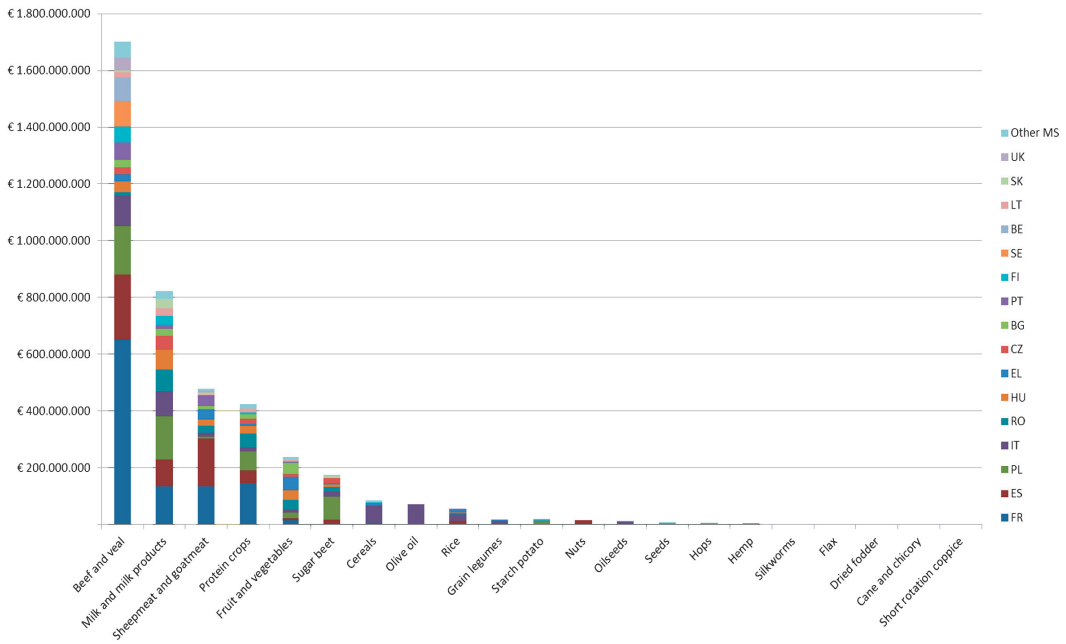
Voluntary coupled support

Recent CAP reforms have notably improved the situation compared with these historical excesses. However, greater opportunities remain to improve the CAP in terms of its livestock measures. The current CAP, in a regressive step, has allowed Member States to grant voluntary coupled support to milk and milk products, sheep meat, goat meat and beef and veal (but not pig meat).[138] In fact up to 8% of total direct payments may be granted as coupled support. By way of derogation, this share can go up to 13% plus an additional 2% if used for protein crop production.[139] As a result, up to €6.3 billion annually could be coupled to production,[140] while €4 billion is expected in the 2016 budget.[141]

The condition for granting coupled support is that the sector in question must be *"particularly important for economic, social or environmental reasons"* and that it undergoes *"certain difficulties"*. Support may only create an incentive *"to maintain current levels of production"*, suggesting the measure is there for targeted reasons only. However, although Member States need to notify the Commission of their decisions to apply coupled support, nobody will actually evaluate this. In fact, any sector can effectively be regarded as 'particularly important' for a specific region and considered to be undergoing 'certain' difficulties, especially as markets are volatile. Also it is quite difficult to establish beforehand whether the application of coupled support will not encourage production beyond current levels.[142]

Based on the notifications made to the European Commission in 2014 (see figure 7 below), around 75% of coupled support is directly earmarked for livestock (42% beef and veal, 20% milk and dairy, 12% sheep and goat meat) and an additional 10% for protein crops used in animal feed, totalling at around €3.3 billion in 2015.[143]

Figure 7: Voluntary coupled support: sectors supported (European Commission)



[138] Article 52 Direct payments Regulation
[139] Article 53 Direct payments Regulation
[140] 15% from all net ceilings added up. See Annex III Direct payments Regulation.
[141] European Commission. EU Draft Budget for 2016. [online] Budget lines starting from code 05.
[142] Alan Mathews (2015) Two steps forward, one step back: coupled payments in the CAP. CAPreform.eu. [online]
[143] European Commission (2014) The CAP towards 2020. Implementation of the new system of direct payments. MS notifications. [online]. Promoting protein crop production in Europe can however be considered positive as a way to replace soy import from South America.

EPHA is sensitive to the aim of supporting rural communities where (extensive) livestock keeping is important to maintain their socio-economic and cultural fabric and to help perpetuate permanent grasslands. However it is doubtful whether the voluntary coupled support measure in its present format is sufficiently targeted to achieve this aim. The European Court of Auditors, in its audit of the suckler cow premium and sheep and goat aid schemes, appears to have similar concerns and found that these measures *"without explicit and sufficient targeting provisions … may have the effect of subsidizing other, more intensive animal farming methods*". Furthermore, it found that this aid was not targeted to the most vulnerable regions in need, but was diluted by being distributed over the entire Member State.[144] Regrettably there is little reason to believe the coupled support provision in its current format will deliver anything better.

It is worth noting that according to the Regulation, *"any coupled support granted"* should be *"consistent with other Union measures and policies"*.[145] It does not appear that the proposed coupled support measures were adequately assessed on their likely health or environmental impacts.

Recommendation: Remove all livestock products from the voluntary coupled support option. These funds should be re-allocated to targeted rural development programmes in order to support regions in which livestock keeping is vital for socio-economic reasons, maintains permanent grasslands and causes no environmental harm. Funds should likewise be used to assist farmers diversify into other forms of production.

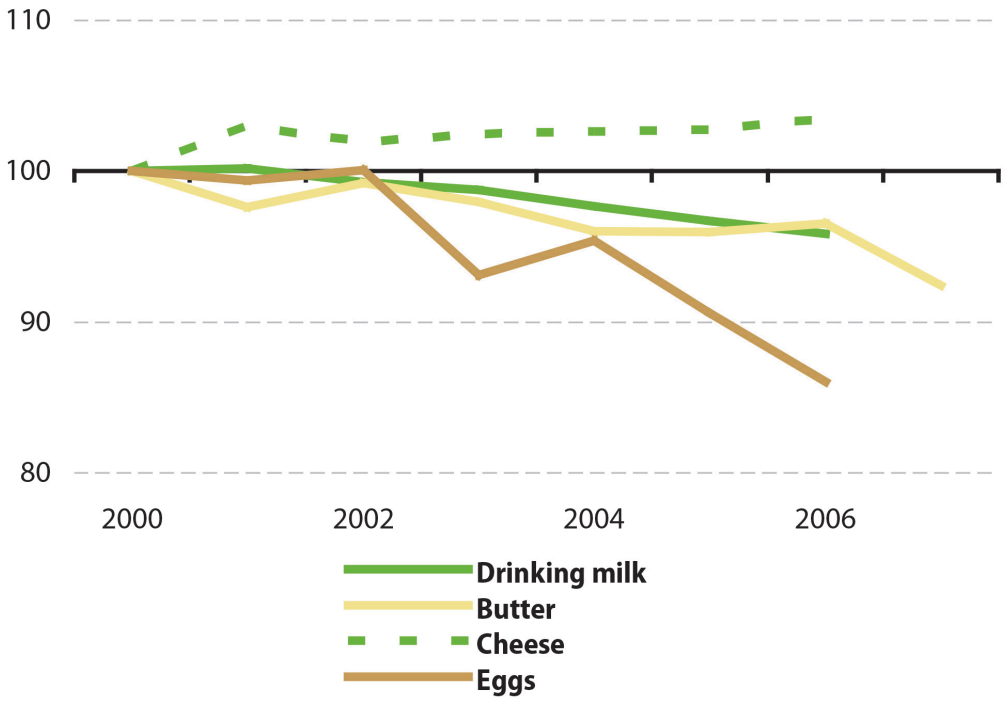
School milk scheme

The EU grants aid to the distribution of milk and milk products to children in schools through the "School milk scheme".[146] This scheme is now amended and merged with the School milk scheme through a package recently adopted by the European Parliament in plenary, which will take effect in August 2017.[147] This new scheme allocates an additional €20 million per year for milk measures, bringing the total budget for support to milk products to €100 million annually. Member States have the flexibility to increase this budget by transferring up to 20% of funds from the vegetables and fruit section. At the same time, budget must be allocated for educational measures to enhance children's understanding of food and farming.

Whether the consumption of milk and milk products needs to be promoted is an ambiguous question. In the first place, the milk and meat sectors are complementary, with the former supplying 'expired' milk cows as well as calves to the latter. Secondly, European consumption of milk products is already higher than anywhere in the world. At the same time, the consumption of milk is slowly decreasing, which could justify a measure to keep children familiar with the product and possibly replace soft drinks. On the other hand, the consumption of cheese, also supported by the scheme, is on the rise.[148]

[144] European Court of Auditors (2012) Suckler cow and ewe and goat direct aids under partial implementation of SPS arrangements. [online] Both these schemes expired in 2014 together with Regulation (EC) No 73/2009 on direct support schemes for farmers under the common agricultural policy.
[145] Article 52(8) Direct payment Regulation
[146] Article 26 CMO Regulation and further
[147] European Parliament News (2016) Milk and fruit scheme: MEPs endorse better schooling in healthier eating habits [online]
[148] Eurostat (2011) Food: From farm to fork statistics. [online]

Figure 8: Consumption of milk products and eggs (Eurostat)



Milk contains different micronutrients, especially calcium, as well as protein and saturated fat (in whole milk). Milk is an accessible food for consumers that can form part of a healthy diet, but the quantity consumed varies dramatically from individual to individual.[149] Due to recommendations to reduce saturated fat intake, lower fat varieties of milk are recommended in Member States' national dietary guidelines with the possible exception in young children whose growth and development may benefit from full fat milk (after the period recommended for exclusive breastfeeding).[150]

If milk product distribution in schools is to remain, an adequate nutrient profiling model should be applied to ensure that milk, yoghurts, cheese and other milk products do not exceed maximum added salt, saturated fat and sugar levels, as allowed by the finally adopted text.[151] An obligation to choose products on the basis of health, environmental and ethical criteria, as well as giving priority to short supply chains, should be a binding condition for receiving EU co-financing. This scheme should not be regarded as either social assistance or as an additional outlet for 'dumping' excess milk, but should primarily be an educational measure to connect children with food, food production and agriculture. Therefore, it is not the price-quantity, but the price-quality relationship that should be the core of the product distribution criteria.

Recommendation: School schemes distributing milk products should apply nutrient profiling to determine which milk products, according to levels of salt, saturated fat and/or sugar, may be distributed to children. Only products that conform to health, environmental and ethical criteria, as well as cultural products from the region and/or using short supply chains, should receive EU co-financing.

[149] FAO. Milk and Dairy products in human nutrition – questions and answers. [online]

[150] FAO. Food-based dietary guidelines, Food guidelines by country. [online] . For criticism on reduced fat milk see for instance: David Ludwig et al. (2011) Three daily servings of reduced-fat milk – an evidence based recommendation? JAMA Pediatrics. [online]

[151] Aid scheme for the supply of fruit and vegetables, bananas and milk in the educational establishments. Text adopted in EP Plenary on 8 March 2016. [online]

Market intervention measures

The CAP through the CMO Regulation maintains the possibility to intervene in the market by buying-up surplus beef, veal, butter and skimmed milk to protect market prices from collapsing. These products bought under public intervention may be *"disposed of"* by making them available to the most deprived.[152] Aid for private storage can be granted for beef, butter, cheese, skimmed milk, pig meat, sheep meat and goat meat.[153] In 2015 private storage was activated in the pig meat sector, temporarily taking 64.000 tons of pork off the market.[154] In the milk sector both private storage aid and public intervention were activated in 2014. At the time of writing 108,652 tonnes of butter and 40,045 tonnes of skimmed milk powder were offered for private storage and 1,176 tonnes of milk powder for public intervention.[155]

Export refunds are still allowed for beef and veal, milk and milk products, pork, eggs and poultry meat.[156] However, these are no longer considered to be 'regular' market policy mechanisms, but to be activated only in case of *"market disturbances caused by significant price rises or falls"* or other circumstances significantly disturbing markets which are likely *"to continue or deteriorate"*.[157] Furthermore, exceptional market support measures can be taken for beef and veal, milk, pig, sheep, goat, egg and poultry in case of both animal disease outbreaks and loss of consumer confidence due to public, animal or plant health risks.[158]

Market intervention measures can be justified for emergency situations where farmers' livelihoods are put at risk. More problematic is the context within which these intervention measures are embedded. The recent abolition of milk quotas and increased export-orientation of the livestock sector are enhancing farmers' susceptibility to volatility and risks.[159] Dependence on exports has shown its ugly face with the Russian ban on EU agricultural imports and lower-than-expected demand from China.[160] Negotiations on the Transatlantic Trade and Investment Partnership (TTIP) add concerns around farmgate prices.[161] Pork and beef prices are already low while falling milk prices threaten many small to medium sized farmers with bankruptcy.[162] High production levels, without sufficient demand, international competition, and increasingly powerful retailers in the EU have set the scene for recent farmers' protests, like those in France, Belgium and the UK. Farmers' representatives, many of whom had pushed for the abolition of milk quotas, now lament the critical situation and are demanding public support through export restitutions, storage aid, increased intervention prices and the non-collection of milk super-levies.[163]

Fair prices & innovation support

When the interrelationships between supply, demand and trade are so maladjusted, market intervention measures can only 'pay lip service' to a failing system and will perpetuate rather than solve the CAP's problems at the expense of public budgets. The majority of farmers want fair prices, rather than

[152] Articles 11 and 16 CMO Regulation
[153] Article 17 CMO Regulation
[154] European Commission (2015) Private storage in the pig meat sector. [online] Private storage: funds are set aside for private warehouses to buy up meat in order to prevent market prices from collapsing.
[155] European Commission Press release (2015) Safety net measures for dairy, fruit and vegetables to be extended. [online] Public intervention: buying-up of products by the EU when price of a product has reached the 'reference threshold'.
[156] Article 196 CMO Regulation. Export refunds: payments to trading companies to export agricultural products outside the EU.
[157] Article 219 CMO Regulation. See also: Alan Mathews (2013) The end of export subsidies? CAPreform.eu. [online]
[158] Article 220 CMO Regulation
[159] European Parliament Resolution of 7 July 2015 on prospects for the EU dairy sector – review of the implementation of the Dairy Package [online] See also: European Parliament News (2015) End of milk quotas: "Opportunities to build a more confident and robust dairy sector". [online]
[160] Euractiv (2014) Moscow pork embargo causes havoc in Brussels. [online]
[161] Jez Fredenburgh (2015) US trade deal could drag down EU farmgate prices. Farmers Weekly [online]
[162] AHDB Dairy (2015) EU Farmgate milk prices. [online]
[163] Copa-Cogeca Press release (2015) Copa and Cogeca warn at EU Milk Market Observatory meeting market deteriorated rapidly in past 4 weeks and EU action crucial. [online] See also: Euractiv (2015) France promises emergency aid to farmers, [online] & Euractiv (2015), Farmers look to EU food aid to boost meat market. [online]
Milk super-levy: penalty for farmers whose sales of milk exceeds the individual milk quota.

subsidies.[164] But prices, to be truly fair, must also reflect the externalities to public health, the environment and animal welfare. The most logical solution is a transition towards a food and farming system where consumers pay higher prices for EU primary products, farmers keep less livestock and receive better prices, and where farmers receive support through the Rural Development pillar to reduce input costs through innovation, to improve environmental performance, to increase animal welfare, to maintain permanent grasslands, to promote short supply chains and so forth. This approach would be more sustainable in terms of economy, rural development, environment, public health and public funding.

A scenario where both livestock rearing and animal product consumption is decreased will better deliver these welfare and environmental benefits while also being more economically beneficial to farmers. In addition, human health benefits arise from grass-fed animal products which tend to have better nutritional profiles due to lower saturated fat content, increased levels of omega-3 fatty acids and an improved balance of vitamins and minerals.[165] [166] [167] Similarly, milk from grass-fed cows has several health benefits compared to milk from cows being fed feedlot diets, including a better fatty acids profile.[168] [169] Furthermore, improved welfare and lower stocking densities enhance immunity and reduce probability of disease outbreaks, reducing the need for antibiotics and so lowering the threat of antibiotic resistance as well as the transmission of other zoonotic diseases.[170] [171]

Recommendation: Develop a transition plan, including through economic incentives, towards a lower livestock product consumption and production future which ensures benefits to public health, the environment, farmers' incomes and rural communities.

[164] See for instance: VILT.be (2015) Landbouworganisaties komen met gemeeschappelijke eisen. [online] A coalition of Belgian farmers' organizations demands what farmers really want i.e. fair prices.
[165] Aileen Robertson et al. (ed) (2004) Food and health in Europe: a new basis for action. WHO Europe. [online]
[166] M. Crawford et al. (1970) Comparative studies on fatty acid composition of wild and domestic meats. International Journal of Biochemistry. [online]
[167] Compassion in World Farming (2012) Nutritional benefits of higher welfare animal products. [online]
[168] B. H. Schwendel et al. (2014) Organic and conventionally produced milk – An evaluation of factors influencing milk quality. Journal of Dairy Science. [online]
[169] Liesbet Smit et al. (2010) Conjugated linoleic acid in adipose tissue and risk of myocardial infarction. The American Journal of Clinical Nutrition. [online]
[170] UN FAO (2015) Status Report on Antimicrobial Resistance. Conference Report. [online]
[171] Compassion in World Farming, World Society for the Protection of Animals (2013) Zoonotic diseases, human health and farm animal welfare. [online]

Boost vegetables and fruit production & consumption

Strategic aim: Align the CAP with promoting sustainable diets

The WHO recommends a minimum intake of 400g of vegetables and fruit (V&F) per day.[172] Regardless of methodological difficulties in measuring consumption, there are firm indications that the average European does not eat enough.[173] The latest consumption monitor by Freshfel puts average V&F consumption in Europe at 342 g/capita/day, a 1.9% decrease compared to the 2008-2012 average. 22 of the 28 EU Member States are below WHO recommendations.[174] V&F consumption by materially deprived households is far below average, with about 10% of EU households unable to provide children with fruit on a daily basis.[175] More than 2.5-3.9% of the burden of disease in Europe in 2004 is attributable to low V&F consumption.[176]

School fruit scheme

The EU "School fruit and vegetables scheme" (School fruit scheme) promotes vegetables and fruit consumption with schoolchildren.[177] This scheme is now amended and merged with the School milk scheme through a package recently adopted by the European Parliament in plenary, which will take effect in August 2017.[178] The new "Aid scheme for the supply of fruit and vegetables, bananas and milk in the educational establishments" (School milk and fruit scheme) mentions the contexts of declining V&F consumption and rising childhood obesity as well as the aim to promote *"healthy eating habits and the consumption of local products"*. The annual budget for the V&F section of the School milk and fruit scheme has increased from €90 million to €150 million and can be further enhanced by transferring up to 20% of the budget from the school milk section (see above). Part of the total yearly budget should be allocated for educational measures meant to *"reconnecting children with agriculture and the variety of Union agricultural products, particularly those produced in their region"*.[179] While initially 10-20% of the budget was foreseen for the educational component, this specification is no longer included in the latest text.[180] Also, the fact that products distributed through the scheme may contain *"limited"* quantities of added sugar, salt and/or fat, is worrying despite the need for authorisation by national health authorities.

The School fruit scheme has great potential and EPHA has consistently spoken out in its favour, but it only represents 0.25% of the overall CAP budget.[181] The Scheme also received overall positive evaluations, including by the European Court of Auditors.[182] [183] The main long-term value of the scheme is when children effectively discover and become accustomed to the variety of tastes and organoleptic qualities of vegetables and fruits, building acceptance, especially of vegetables, at a young age and providing a knock-on effect for food choices throughout life. The scheme can achieve its full potential when both sourcing of vegetables and fruit and the educational elements, foreseen by this new measure, are integrated into one consistent activity.[184]

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[172] WHO (2015) Healthy Diet. Fact sheet No 394. [online]
[173] EUFIC (2012) Fruit and vegetables consumption in Europe – do Europeans get enough? [online]
[174] European Association for the Fresh Fruit and Vegetables Sector (2015) Freshfel Consumption Monitor. [online]
[175] AFC Management Consulting (2012) Evaluation of the European School Fruit Scheme – Final report. For the European Commission. [online]
[176] WHO (2009) Global Health Risks Summary Tables. [online]
[177] Article 23 CMO Regulation and further
[178] European Parliament News (2016) Milk and fruit scheme: MEPs endorse better schooling in healthier eating habits [online]
[179] Aid scheme for the supply of fruit and vegetables, bananas and milk in the educational establishments. Text adopted in EP Plenary on 8 March 2016. [online]
[180] For previous text versions see: European Parliament Procedure File 2014/0014 COD. Aid scheme for the supply of fruit and vegetables, bananas and milk in the educational establishments. [online]
[181] See for instance: Joint Open letter: Save the EU School Fruit Scheme: 'Better Regulation' cannot go against the wellbeing of European children (2015). [online]
[182] European Court of Auditors (2011) Are the School milk and School fruit schemes effective? [online]
[183] AFC Management Consulting (2012) Evaluation of the European School Fruit Scheme – Final report. For the European Commission. [online]
[184] With this in mind, bananas can easily be excluded from the scheme as they can hardly qualify as typical EU agricultural products and are, due to their popularity, not among the products children are in need of being encouraged to eat.

Recommendation: Refer to this scheme, which combines supply and demand measures and which has the potential to benefit both health, farmers and public budgets alike, as an example for other food policy initiatives.

Recommendation: School schemes distributing processed vegetables and fruit products should apply nutrient profiling to determine which products, according to levels of salt, saturated fat and/or sugar, may be distributed to children. Only products that conform to health and environmental as well as cultural products from the region and/or using short supply chains, should receive EU co-financing.

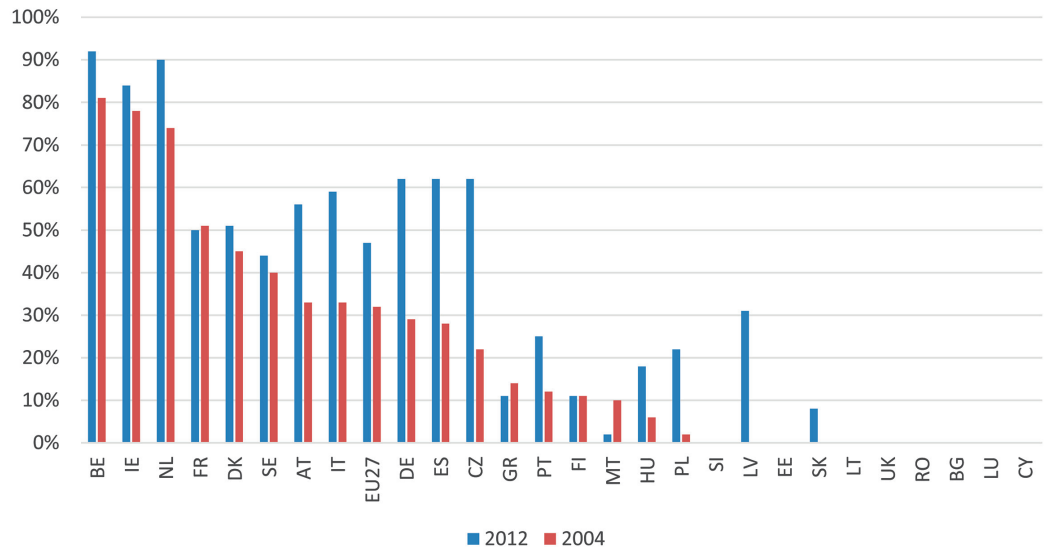
Recommendation: Gradually increase the budget for this scheme, in line with increased take-up, and enhance co-financing rates for schools in economically deprived areas where vegetable and fruit intake is especially low.

Recommendation: The new scheme should contain more guarantees that EU funding is linked to a maximum effort from schools to ensure that the scheme will positively affect children's food choices later in life. This could be done, for instance, by integrating product sourcing and education into one coherent activity.

Support for V&F sector

Since reforms in 2007, EU support for the V&F sector is primarily channelled through producer organisations (PO's), membership of which is meant to improve the bargaining power of V&F producers in globalizing and increasingly concentrated supply chains.[185] POs implement operational programmes to plan production, improve product quality, boost commercial value, enhance promotion of V&F, improve environmental quality and manage crises.[186] In 2014 more than € 930 million was granted in support of POs, but the budget appears to be decreasing.[187] The policy was effective in enhancing the popularity of POs, however substantial differences in organisational rates across Europe remain.[188]

Figure 9: PO organisation rates compared across Europe (Wageningen University)



[185] European Parliament Policy Study (2011) The EU Fruit and vegetables sector: overview and post-2013 CAP perspective. [online]
[186] Article 32 CMO Regulation and further
[187] European Commission. EU Draft Budget for 2016. [online] Budget lines starting with code 05.
[188] European Parliament Policy Study (2015) Towards new rules for the EU's fruit and vegetables sector. [online]

One of the public health criticisms of the old policies was their 'withdrawal' (destruction) of V&F from the market. While such measures help to maintain producer prices, they simultaneously increase prices for consumers.[189] [190] Product withdrawal activities are still financed in the new CAP, but indirectly through 'crisis prevention and management' measures implemented by POs. These include market withdrawal and 'green'- and non-harvesting measures. Withdrawn products may be, but not mandatorily so, earmarked for free distribution to charities and public institutions like prisons, schools, hospitals and old people's homes. Free distribution is fully financed by the EU.[191]

Any policy that has the outcome of increasing V&F prices for consumers is working against health. Prices for fresh V&F have been increasing while prices of highly processed foods have gone down. Technological improvements in the processing sector have decreased production costs per unit of output. Highly processed foods tend not to rely on quality farm products, but achieve added value through manufacturing processes combining relatively cheap ingredients enhanced by sugars, salts, fats and flavours.[192]

The area for V&F production in Europe decreased by 6% in the period 2003-2010 and total production is slowly decreasing, even though total value remains the same.[193] [194] Although exports as well as imports are on the rise, Europe remains a net V&F importer.[195] [196] The decline in cultivated area and production, contrasted by the clear public health recommendation to increase V&F intake, is alarming and a clear example of where the current CAP fails to be consistent with health. The cost of insufficient fruit and vegetable intake can be estimated at €22.3 billion per year in its contribution to cardiovascular disease only.[197] If EU citizens were to consume 600g of vegetables and fruits per day, as recommended by Denmark, the risk of coronary heart disease would fall by almost 20%.[198]

V&F production represents only 3% of total European cultivated area, but 18% of value added in agriculture.[199] Whereas if V&F production was increased this could enhance economic returns while also increasing employment opportunities, given the labour intensive nature of horticulture. Although POs are potentially able to enhance the commercial viability of horticultural producers, their main focus is marketing and not increasing availability of V&F to European citizens. Moreover, other measures are needed to support those horticultural producers (60% of total) who are not members of POs.

Fostering production & consumption

However, increased horticultural production is only half of the equation and, without enhanced vegetable and fruit consumption, it is doomed to result in falling farmgate prices and more food waste. Vegetables and fruits should become better available to those groups in the population that need them most. A pilot programme in the US found that providing financial incentives to buy V&F for low-income households helped improve diets, rather than leading to more money being spent on junk food, indicating that price is a major barrier to V&F consumption.[200] Likewise, young mothers participating in

[189] Schäfer Elinder (2003) Public health aspects of the EU Common Agricultural Policy. Developments and recommendations for change in four sectors: Fruit and vegetables, dairy, wine and tobacco. National Institute of Public Health, Sweden

[190] Lennert Veerman et al. (2005) The European Common Agricultural Policy on fruits and vegetables: exploring potential health gain from reform. European Journal of Public Health. [online]

[191] European Commission. Fruit and vegetables: crisis prevention and management. [online]

[192] Steve Wiggins et al. (2015) The rising cost of a healthy diet – changing relative prices of food in high income and emerging economies. Overseas Development Institute, UK. [online]

[193] European Parliament resolution of 7 July 2015 on the fruit and vegetables sector since the 2007 reform. [online]

[194] Luciano Trentini (2015) Les fruits et légumes européens dans le monde. Fruit and Horticultural European Regions Assembly. [online]

[195] Luciano Trentini (2015) Towards new rules for the EU's Fruit and Vegetables Sector (Southern European countries). [online]

[196] Jos Bijman (2015) Towards new rules for the EU's fruit and vegetables sector. European Parliament policy study. [online]

[197] European Heart Network (2008) Response to "Towards a possible European school fruit scheme – Consultation document for impact assessment". [online]

[198] Karen Lock et al. (2005) Fruit and vegetable policy in the European Union: Its effects on the burden of cardiovascular disease. London School of Hygiene and Tropical Medicine, European Heart Network. [online]

[199] European Parliament resolution of 7 July 2015 on the fruit and vegetables sector since the 2007 reform. [online]

[200] An Ruopeng (2015) Nationwide Expansion of a Financial Incentive Program on Fruit and Vegetable Purchases among Supplemental Nutrition Assistance Program Participants: A Cost-effectiveness Analysis. Social Science & Medicine. [online]

the UK "Healthy Start" program ate significantly more portions of vegetables and fruit and were more likely to meet micronutrient intake levels without vitamin supplements.[201] The "Preparatory Action on fruit and vegetables consumption", aimed at increasing consumption of fresh V&F in vulnerable population groups, supported by the European Commission is also a positive action in this regard.[202] [203]

At the same time, care must be taken not to overemphasize the quantity of production over quality. There is evidence that the amount of minerals in commonly grown crops has diminished over the last few decades.[204] Nutritional content of vegetables and fruit heavily depend on the used varieties. In apples, some of the most heavily cropped varieties like Golden Delicious have some of the lowest levels of vitamin C.[205] Also, increased V&F production must go hand-in-hand with lower fertilizer and pesticides use and enhanced uptake of integrated, more sustainable pest and nutrient management techniques.[206]

Recommendation: To analyse evidence and experiment with policy action with the aim of enhancing both production and consumption of vegetables and fruit in Europe. Such a strategy should be based on the premise that vegetables and fruit, including leguminous crops, merit positive discrimination at the stage of cultivation and in marketing, particularly for setting-up short supply chain systems. The strategy should also take account of the nutritional value and mineral content of vegetables and fruit, the need to reduce chemical input use, ensure adequate market opportunities for small- and medium sized non-PO members, and healthy occupational conditions for farm workers.

[201] F. Ford et al. (2009) Effect of the introduction of 'Healthy start' on dietary behaviour during and after pregnancy: early results from the 'before and after'. [online]

[202] European Commission (2014) First Commission interim report on the implementation of Pilot Projects and Preparatory Actions 2014. [online]

[203] Biró György et al. (2015) Review of current practices to increase the intake of fruit and vegetables. For the European Commission. [online]

[204] Anne-Marie Mayer (1997) Historical changes in the mineral content of fruits and vegetables. British Food Journal. [online]

[205] Aileen Robertson et al. (ed) (2004) Food and health in Europe: a new basis for action. WHO Europe. [online]

[206] See: Directive 2009/128/EC establishing a framework for Community action to achieve the sustainable use of pesticides. [online]

Promote products for diverse and healthy diets

Strategic aim: align the CAP with promoting sustainable diets

The EU supports promotional campaigns for European agricultural products conducted both within and outside the Union. In December 2015 a new Regulation entered into force updating the rules for promotional activities.[207] Compared to the previous regime it increases the budget to up to €200 million per year, provides higher rates of EU co-financing and more focus on export promotion. All agricultural products are eligible except for tobacco.[208] [209] The 2016 work programme foresees €111 million of EU funding, with €30 million singled out for dairy and pig meat.[210] The 2015 work programme provided for €65 million EU co-financing covering meat and dairy products, fresh fruits and vegetables, olive oil and olives as well as other categories including wine, processed fruits and vegetables and organic products.[211]

From the perspective of sustainable diets, product promotion should not centre on enhancing *"the competitiveness of the Union agricultural sector"* and increasing market shares for EU agriculture in general.[212] Rather, product promotion should be seen as an opportunity to drive a transition towards more diverse, sustainable and healthy diets. Promotional efforts should therefore primarily focus on the internal market rather than third countries, the latter being more associated with the re-distribution of excess production. Livestock products and alcohol should be excluded from receiving EU support for promotional activities as their enhanced consumption from the current baseline is associated with negative health outcomes.

Recommendation: Ensure product promotion measures focus exclusively on products whose enhanced consumption is likely to contribute to more diverse, sustainable and healthy diets. Products should include vegetables and fruit, pulses, nuts, whole grains, fish from aquaculture conforming to strict environmental, welfare and food safety standards, nutritious varieties of cereals etc. Product promotion should focus mainly on the internal market.

[207] Regulation (EU) No 1144/2014 on information provision and promotion measures concerning agricultural products implemented in the internal market and in third countries. [online]
[208] European Commission (2014) Formal adoption of new EU promotion rules for agricultural products. [online]
[209] European Commission (2015) The new promotion policy. Synoptic presentation. [online]
[210] European Commission (2015) Annual work programme for 2016. [online]
[211] European Commission (2015) Annex Promotion on the internal market and in third countries. [online] See also: European Commission Press release (2015) The Commission approves new promotion programmes for agricultural products. [online]
[212] Article 2 Regulation (EU) No 1144/2014 [online]

Transition towards forward-looking direct payments

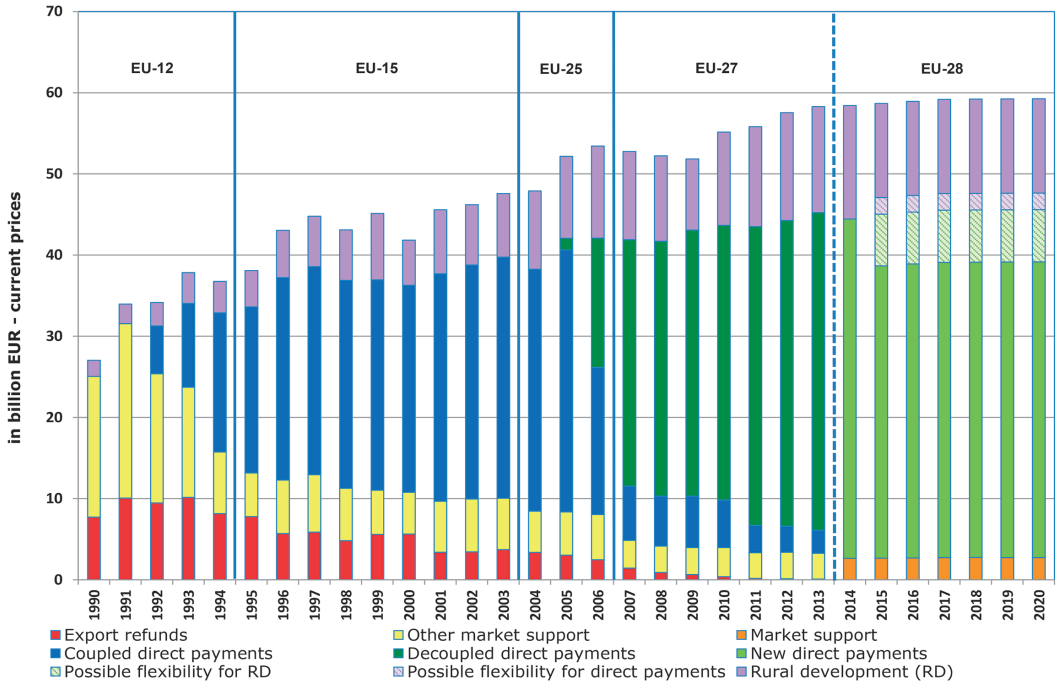
Strategic aim: build a CAP that enhances delivery of public goods

Since the mid-1990s, direct payments have become core instruments in the provision of farm support. Today, direct payments represent around 70-75% of total CAP funding, or nearly €312.7 billion for the period 2014-2020 (amount includes expenditures for market measures). Direct payments were initially introduced as coupled payments linked to the levels of production – the higher the production, the higher the support – but were gradually 'decoupled'.[213] [214]

Convergence

In the new CAP, the main principle is that land owners receive payments per hectare of land, envisioning the ideal situation in which all practicing farmers would receive an equal amount per hectare, regardless of the crop cultivated or number of animals held. This process of 'convergence' would in principle have to be completed by 2019, but many exceptions remain.[215]

Figure 10: Evolution of CAP expenditures 1990 – 2020 (European Commission)



Member States may, as some did, opt for slower convergence rates and in doing so protect the interests of the often more intensive and large-scale farmers who have received high levels of support in the past.[216] Those levels of support are usually based on a historical reference, from the time that payments were not yet decoupled.[217] The possibility for newer Member States to apply the Single Area Payment Scheme until the end of 2020 may furthermore allow for hidden production linkages.[218] Likewise, Member States applying the Single Payment Scheme on regional level can continue doing so,[219] even

[213] Graph: European Commission (2013) Overview of CAP Reform 2014-2020. [online] First pillar funding amount is in current prices.
[214] European Commission DG AGRI (2011) The Future of CAP Direct Payments. [online]
[215] Article 25 and further Direct Payments Regulation
[216] European Parliament Policy Study (2015) Implementation of the First Pillar of the CAP 2014–2020 in the EU Member States. [online]
[217] European Commission DG AGRI (2013) CAP reform - an explanation of the main elements. [online]
[218] Article 36 Direct Payments Regulation
[219] Article 21 Direct Payments Regulation

though doubts on the truly decoupled nature of this scheme have been raised.[220] So, unless full convergence takes place, the coupled payments from the historical CAP will still be influencing the relative profitability of different types of enterprises and therefore shape production decisions.

Recommendation: Move to full convergence of payments as soon as possible, at the latest by 2020, to remove incoherent subsidy legacies from earlier versions of the CAP.

Redistribution of payments

The CAP has been much criticized for its unequal distribution of subsidies. The often-quoted figure is that 80% of subsidies go to 20% of farms.[221] For individual countries more extreme inequalities are calculated, like Bulgaria and Romania where the top 1% of beneficiaries receive around 50% of direct support.[222] The new CAP reform introduced several options to reduce this misbalance. In addition to convergence, one option is the 'redistributive payment' which allows Member States to use up to 30% of their direct payment ceilings to give additional support to farms under the size of 30 hectares.[223] Another option is the 'small farmers scheme' which allows granting additional support and exemptions to small farmers.[224] Furthermore, Member States are obliged to apply 'degressivity' by reducing the amount of direct payments exceeding €150.000 in a given calendar year by at least 5%. Optionally, this reduction can go up to 100%, establishing a true 'cap' on the total amount of subsidy each farmer or land owner can receive.[225]

Although these additional options permit a system of positive discrimination for certain types of holdings, thus technically undermining the principle of convergence, they should be considered as positive tools to counterbalance the decline in farm numbers. Europe's ageing farming population has fallen by half over the last 25 years with a corresponding increase in farm sizes and decrease in employment opportunities in agriculture.[226] The exit of small farmers from agriculture may furthermore lead to rural unemployment and depopulation within rural areas in Member States with less-developed infrastructure,[227] [228] as well as increased urbanisation with its corresponding problems.[229] Rural decline can manifest itself in ill-health, including mental problems, amongst the remaining populations[230] as well as cultural loss. The redistributive policy options may not be sufficient to counterbalance negative trends, also because they are mostly dependent on individual Member States' discretion.

Direct payments & horticulture

The CAP's direct payment regime is based on the principle of payment per hectare, inherently favouring large-scale arable forms of agriculture producing bulk commodities for the food processing industries and animal feed. Horticultural farm sizes on the contrary tend to be far below the EU average, responsible for only 3% of the total agricultural area in Europe.[231] V&F production loses out in this payment system, while, as discussed above, increased V&F production could produce significant positive externalities,

[220] See for instance: Alan Mathews (2009) How decoupled is the single farm payment? CAPreform.eu. [online]
[221] The Economist (2005) Europe's farm follies. [online]
[222] European Parliament Policy Study (2015) Extent of Land Grabbing in the EU. [online]
[223] Article 41 and further Direct payments Regulation
[224] Article 61 and further Direct payments Regulation
[225] Article 11 Direct payments Regulation
[226] European Commission DG AGRI (2013) Structure and dynamics of EU farms: changes, trends and policy relevance. [online]
[227] European Commission (2010) Does population decline lead to economic decline in EU rural regions? [online]
[228] The Economist (2015) Rural France. Village croissant. [online]
[229] WHO Europe (2012) Addressing the social determinants of health: the urban dimension and the role of local government [online]
[230] John Bryden et al. (2004) Rural development and food policy in Europe. In: London School of Economics and Political Science. Eurohealth issue: Integrating Public Health with European food and agricultural policy. [online]
[231] European Parliament Policy Study (2015) Towards new rules for the EU's fruit and vegetables sector. [online]

such as contributing to employment opportunities, increased added value, vibrant rural economies and slower rates of urbanisation, substituting imports and enhanced EU V&F availability which could help drive up consumption.

Recommendation: Introduce an absolute cap on the total amount that each farmer or land-owner can receive in hectare-based payments.

Environmental conditionality

'Cross-compliance', as well as the new 'greening' measures, are the so-called environmental standards which must be complied with in order to receive (part of) the direct payments.[232] Cross-compliance includes compliance with already mandatory pieces of EU legislation, like the Nitrates, Habitats and Birds Directives, animal welfare Directives, identification of animals Directives and Regulations, but also Good Standards of Agricultural and Environmental Conditions (GAEC). Greening measures, hotly debated even before the new CAP implementation started and now in the process of being 'simplified',[233] centre on requirements for crop diversification, maintenance of permanent grasslands and ecological focus areas.[234]

Agriculture produces significant health-relevant environmental externalities with impacts on climate change, the quality of nature, biodiversity and landscapes, pesticide hazards, air quality, antibiotic resistance other zoonotic diseases (see Annex) and so there is clear need to transition towards farming practices that drastically reduce agriculture's burden on both the planet's and human health. This transition includes periodically upgrading minimum standards for, e.g. animal welfare, nitrate emissions and pesticides, but also primarily by promoting innovative sustainable farming practices and creating remunerative business models, which are best achieved through rural development programmes. A forward-looking CAP would therefore shift from direct payments to rural development support, whose measures can be more targeted and capable of achieving specific aims.

Recommendation: Maintain an effective, efficient and well-enforced system of environmental protection in which standards are upgraded in line with societal needs. Add the 'Integrated Pest Management Directive'[235] to the list of cross-compliance measures.

Recommendation: Shift the financial focus of the CAP away from direct payments towards rural development. A forward thinking agricultural policy would have at least 2/3 of its funding distributed through rural programme-based payments.

[232] Article 5 Direct payments Regulation referring to Regulation (EU) [online] which contains the list of cross-compliance measures in Annex II

[233] European Council of the European Union. Simplification of the EU's Common Agricultural Policy (CAP). [online]

[234] Article 43 and further Direct payments Regulation

[235] Directive 2009/128/EC establishing a framework for Community action to achieve the sustainable use of pesticides

Support transformative rural development

Strategic aim: Build a CAP that enhances delivery of public goods

The rural development pillar of the CAP complements direct payments and market measures "to contribute to [the CAP's] objectives".[236] During negotiations for the 2014-2020 Multiannual Financial Framework, the rural development fund suffered from the largest budget decline – 18% compared to only a 13% reduction for the direct payments and market measures. For the period 2014-2020 nearly €95.5 billion of EU support is set aside to co-finance rural development projects.[237]

Menu of rural development measures

Member States can choose from a wide 'menu' of available measures to shape their rural development programmes.[238] Funding can be used to promote organic farming, which can be seen as a pioneering method for agro-ecological innovation and providing produce with good nutritional quality and far lower pesticide residues.[239] Agroforestry, which offers wide-ranging co-benefits including improved water and nutrient cycling, pest management, erosion prevention, enhanced production of nuts, climate change mitigation (according to one study, deployment of agroforestry to its full potential could sequester more than 1/3 of all EU greenhouse gas emissions)[240] and improved farm economies.[241] It allows farmers to be paid for reducing pesticide and fertilizer use, improving animal welfare standards, adopting mixed farming methods, and using more advanced cropping systems. Funding is also available for village renewal measures as well as additional support for farming activities in areas with natural constraints. Furthermore, actions like "Leader" and "European Innovation Partnerships" can be used to establish bottom-up collaborative projects by farmers, researchers, SMEs and civil society groups, including short supply chain systems.

The rural development pillar has much to offer in terms of moving towards a CAP that delivers public goods for public money and allows farmers to innovate in a sustainable manner. However, at the same time, rural development funding through the "Investments in physical assets" heading, can also be used to finance the construction of housing for cattle, pigs and chickens as well as manure storage and processing facilities. Such investments, often used to facilitate the expansion of intensive livestock systems, are funded by the public for up to 40% of investment costs.[242] Rural development funding is also being used, as mentioned in the chapter on tobacco above, as a covered form of coupled support for tobacco cultivation.

Furthermore, an assessment of rural development programmes introduced under the new CAP showed that 73% of the 19 countries and regions reviewed decreased their spending on environmental measures. The assessment also concluded that in about 80% of the cases the quality of the environmental measures is overstated.[243] The latter echoes a European Court of Auditors report from 2014 which raised concerns about the effectiveness of implementation and control of rural development measures.[244]

Nevertheless, the rural development pillar offers the best available option to shape a CAP which promotes sustainable innovation in farming practices and business models, thriving rural areas, improved environmental performance and responsiveness to public health. Unfortunately, in addition to the greater reduction in the rural development budget, the new CAP has also allowed Member States

[236] Recital 2 Rural development Regulation
[237] European Commission (2013) Overview of CAP Reform 2014-2020. [online]. In current prices. Rural development measures, unlike direct payments or market measures, are co-financed by Member States.
[238] Article 13 and further Rural development Regulation
[239] John Reganold (2016) Organic agriculture in the twenty-first century. Nature Plants. [online]
[240] Joris Aertsen et.al. (2013) Valuing the carbon sequestration potential for European agriculture. Land Use Policy. [online]
[241] FAO (2013) Advancing agroforestry on the policy agenda. [online]
[242] European Commission (2014) Investment support under Rural Development Policy. [online] Implementation of the First Pillar of the CAP 2014–2020 in the EU Member States
[243] European Environmental Bureau & Bird Life (2016) New Rural Development Plans and the Environment: The Hidden Truth. [online]
[244] European Court of Auditors (2014) Special report no 23/2014: Errors in rural development spending: what are the causes, and how are they being addressed? [online]

to transfer funds away from rural development into the direct payments budget. This is a clear reversal of the principles behind the previous CAP reforms which aimed to progressively increase the rate of so-called 'modulation' – i.e. the transfer of funds from the direct payments into the rural development pillar. The current CAP allows up to 15% of national envelopes to be transferred either way from one pillar to the other, which some Member States used to the detriment of rural development.[245] [246]

Recommendation: Transfer the CAP budget away from direct payments and market measures towards rural development.

Recommendation: Conduct a thorough review of rural development measures in order to single out the key measures with greatest potential to contribute to sustainable socio-economic and technological innovation in agriculture and facilitate a transition towards an ecologically and health-compatible food system. Fostering short supply chains should receive particular focus.

Recommendation: Increase co-funding rates for the key measures identified, while excluding funding from those measures that contribute to the proliferation of socially, environmentally and public health-harmful outcomes.

Recommendation: Include aquaculture as a farm diversification measure, accompanied by strict binding and enforced conditionalities regarding feed, medicine (antibiotic) use and pollution control. Fish offers human health benefits compared to consumption of livestock products and is more efficient in feed conversion.

Recommendation: Offer support for care farms, where farming activities are used as therapeutic practices for vulnerable groups of people especially with mental health benefits, as a measure eligible for rural development support.

[245] Article 14 Direct payments Regulation. See also: Wageningen University, IEEP (2009) Study on the impact of modulation. [online]

[246] European Parliament Policy Study (2015) Implementation of the First Pillar of the CAP 2014–2020 in the EU Member States. [online]

There is no such thing as cheap food

Strategic aim: Align the CAP with promoting sustainable diets

This paper envisions a CAP that facilitates the transition towards diverse, sustainable and healthy diets. Sustainable eating patterns reflect public health, environmental, social and economic requirements.[247] This transition consists of a move towards more varied, healthy plant-based diets, the preference of quality produce over quantity, more agro-ecological agricultural methods, and fair prices for farmers. Europe needs a farming sector where farmers can feel secure to introduce new, sustainable agricultural practices and business models. This is difficult at a time when indebtedness and market volatility are high, while farm incomes are less than half the average wage in the majority of EU's regions.[248]

Such a transition in EU agriculture will affect the relative price of certain foods and may have an effect on affordability. This even while most of the price addition actually occurs beyond the farm. Average EU household expenditures on food are less than 15% of total household expenditure, suggesting there is room for paying a higher price for some types of foods.[249] But averages conceal the sharp social inequalities that exist between countries in the EU and within countries, which are increasing.[250] One out of four EU citizens is at risk of poverty and for many poor households food represents a significant part of total expenditure, restricting their food choices.[251] [252] At the same time, it is the vulnerable socio-economic groups that are disproportionally affected by tobacco, alcohol and diet-based and environmentally induced ill-health.[253] [254] For instance, people from low income socio-economic groups are around twice as likely to become obese. Obesity is a major cause of premature mortality and healthy life years lost in this segment of the population.[255]

While for an individual the price of food may matter, from a societal perspective there is no such thing as cheap food. The costs to society that are not paid at the counter are paid by taxpayers, or not paid at all, leaving future generations to foot the rising bill for treatment of chronic diseases and ecological degradation, which further harms public health. Dynamic societies and vibrant economies can only be sustained if they are underpinned by a healthy environment as well as a healthy population.[256] [257]

A transition in agriculture should occur on the basis of the scientific evidence, rights, principles and basic societal requirements. Individual farmers and horticultural producers, as well as vulnerable socio-economic groups, need better incentives to bridge certain parts of this transition. This strengthens the argument for a coordinated approach to food and agricultural policy covering the entire supply and marketing chain, including international trade.

Recommendation: Commence serious research and debate into how policy coherence in the food and agricultural system can be enhanced leading to better outcomes for public health (with a focus on combatting diet-related health inequalities), environment, farmers, consumers and rural development. This could take place in the framework of elaborating a sustainable European food and agricultural policy.

[247] FAO (2012) Sustainable diets and biodiversity. Directions and solutions for policy research and action. Proceedings of International Scientific Symposium. [online]
[248] European Commission (2011) Evaluation of effects of direct support on farmers' incomes. [online]
[249] Eurostat. Cross-country comparison of final consumption expenditures on food and housing in 2011. [online] In UK and Luxembourg the average is below 10%, while in Latvia and Estonia it is near 20% of total expenditure.
[250] OECD (2012) Income inequality in the European Union. [online]
[251] UCL Institute of Health Equity (2014) Review of social determinants and the health divide in the WHO European Region: final report. WHO Europe. [online]
[252] Eurostat data in: Euractiv (2014) One out of four EU citizens at risk of poverty. [online]
[253] Aileen Robertson et al. (2007) Obesity and socio-economic groups in Europe: Evidence review and implications for action. Report for European Commission. [online]
[254] A. Drewnowski (2009) Obesity, diets and social inequality, Nutrition Reviews, [online] See also: WHO (2012) Environmental Health Inequalities in Europe. [online]
[255] Belinda Loring et al. (2014) Obesity and inequities Guidance for addressing inequities in overweight and obesity. [online]
[256] European Commission (2005) The contribution of health to the economy in the European Union. [online]
[257] Lancet Commission on planetary health (2015) Safeguarding human health in the Anthropocene epoch. The Lancet. [online]

Annex – the burden of preventable diseases

The preventable burden of diet, alcohol and tobacco related diseases

Reflecting the 'Top 5' risk factors for disease adjusted life years lost

1. Unhealthy diets

- Unhealthy diets are major risk factors for a range of chronic diseases, including cardiovascular diseases, cancer, diabetes and other chronic conditions linked to obesity, which constitute the overwhelming majority of the total burden of mortality (86%) and disease (77%) in Europe.[258]
- The bulk of unhealthy diets consist of foods high in saturated fats, trans-fats, sugar, salt and refined carbohydrates.[259] [260]
- Recommendations for a healthy diet include eating more vegetables, fruit, legumes, nuts and whole grains, while cutting down on salt, sugar and fats.[261]
- Unhealthy diets are influenced by today's food environments which *"exploit people's biological, psychological, social, and economic vulnerabilities, making it easier for them to eat unhealthy foods. This reinforces preferences and demands for foods of poor nutritional quality, furthering the unhealthy food environments."*[262]

2. High blood pressure

- Is responsible for 13% of deaths worldwide.[263]
- Important contributor to cardiovascular disease, which causes 40% of all deaths in the EU with a cost of around €196 billion per year.[264]
- Main risk factors: a diet high in saturated fat and salt, overweight and obesity, excessive alcohol consumption, diabetes.[265]

[258] WHO Europe (2012) Action plan for implementation of the European strategy for the Prevention and Control of Noncommunicable Diseases 2012-2016. p. 5. [online]
[259] WHO (2015) Healthy Diet. Fact sheet No 394. [online]
[260] Yanping Li et al. (2015) Saturated Fats Compared With Unsaturated Fats and Sources of Carbohydrates in Relation to Risk of Coronary Heart Disease: A Prospective Cohort Study. J Am Coll Cardiol. [online]
[261] WHO (2015) Healthy Diet. Fact sheet No 394. [online]
[262] The Lancet Series on Obesity (2015). [online]
[263] WHO Europe (2013) Fact sheet High Blood Pressure. [online]
[264] WHO Europe (2013) Fact sheet High Blood Pressure, [online]
[265] European Heart Network, European Society of Cardiology (2012) European Cardiovascular Disease Statistics. [online]

3. Smoking

- Is responsible for 700,000 deaths per year in the EU.[266] 19,000 European non-smokers die every year from exposure to second-hand smoke either at home or at the workplace.[267]
- In the EU, around €25 billion per year is spent on healthcare for smoking related diseases and €7.3 billion is lost due to smoker's absenteeism and early retirement. The total economic loss of smoking to societies, including cost of premature mortality, amounted to more than € 544 billion in 2009.[268]
- Tobacco is a risk factor for 6 out of 8 leading causes of death, including ischaemic heart disease, cerebrovascular disease, lower respiratory infections, COPD, lung cancer and tuberculosis.[269]

4. High body mass index

- Nearly 60% of the EU adult population is now overweight or obese.[270] [271] The rate is expected to increase to 67-91% of population by 2030 in some countries.[272]
- Around 7% of national health budgets across the EU are spent on obesity related diseases each year,[273] which could be 2.4 times higher by 2025.[274]
- Is associated with diabetes, cardiovascular diseases, cancers, mental health problems (low self-esteem, depression), social stigmatization and respiratory diseases.[275]
- Risk factors: a diet high in fat and sugar, low fruit and vegetable intake, excessive alcohol consumption.[276] [277]

5. Harmful alcohol consumption

- Europe is the heaviest drinking region in the world. Harmful alcohol use is the fifth leading cause of death and disability in the EU.[278]
- Is responsible for an annual cost of 1% of GDP in high- and middle income countries, amounting to €155.8 billion in 2010 in the EU.[279]
- Drinking harms not just the drinkers, but also others who fall victim to, for instance, drunk driving, domestic violence, anti-social behaviour and child neglect. Drinking during pregnancy negatively affects the unborn child.[280]

[266] European Commission. Infographic: Tobacco in the EU. [online]
[267] European Commission (2009) Factsheet: Tobacco control in the EU [online]
[268] GHK (2012) A study on liability and the health costs of smoking. For the European Commission. [online]
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[270] Eurostat, Overweight and Obesity – BMI statistics, [online]
[271] WHO Europe (2015) European Health Report 2015. [online]
[272] João Breda (2015) Media Release "Proportion of overweight and obese males and females to increase in most European countries by 2030, say latest projections by WHO". WHO Europe. [online]
[273] European Commission (2014) EU Action Plan on Childhood Obesity 2014-2020. [online] See also: WHO (2000) Establishing the true costs of the problem of overweight and obesity. [online]
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[275] WHO Europe (2007) The challenge of obesity in the WHO European Region and the strategies for response. [online]
[276] WHO Europe (2007) The challenge of obesity in the WHO European Region and the strategies for response. [online]
[277] H. Boeing et al. (2012) Critical review: vegetables and fruit in the prevention of chronic diseases. European Journal of Nutrition. [online]
[278] WHO (2014) Global Status Report on Alcohol and Health 2014. [online]
[279] OECD (2015) Tackling harmful alcohol use. [online] See also: OECD (2015) Policy Brief. Tackling harmful alcohol use. [online]
[280] Awareness Week on Alcohol Related Harm. Infographic, The effects of harmful alcohol consumption. [online] See also findings from: Amphora project (2012). [online]

The health burden linked to agricultural production

Air quality

- More than 400,000 people die prematurely from air pollution in the EU each year.[281] Health-related economic costs of air pollution range between €330-940 billion annually.[282]
- Main risk factors: particulate matter (PM), ozone, nitrogen dioxide.[283]
- Agriculture is responsible for 90% of ammonia emissions (precursor to PM), 40% of methane emissions (precursor to ozone), as well as direct PM emissions.[284]
- Air pollution is associated with: respiratory disease, cardiovascular diseases, atherosclerosis, neurodevelopment and cognitive dysfunction, cancer, reproductive system dysfunction, diabetes.[285]

Climate change

- Climate change threatens to undermine the last 50 years of gains in development and global health. Climate change will lead to systemic changes in ecological conditions and social dynamics with far-reaching effects on public health.[286]
- The EU food system is responsible for 31% of EU's contribution to global warming.[287]
- Livestock alone is responsible for at least 14.5% of global greenhouse gas emissions.[288]

Nature, biodiversity & landscape

- Agriculture, occupying 40% of the EU land area, is a main driver of biodiversity loss. Only 16% of European natural habitats are considered to be in good state. [289] Biodiversity loss is estimated to reduce global GDP by 7% by 2050,[290] or EU GDP by 3% annually.[291]
- A growing body of evidence shows how public health is intrinsically linked to the health of the environment, or 'planetary health', including indicators like soil quality and pollination.[292] [293]
- Contact with nature can lead to measurable health benefits, including positive effects on mental health, blood pressure and other components of human well-being.[294]

Antibiotic resistance & other zoonotic diseases

- More than 25,000 people die in the EU each year from infections caused by antibiotic resistant bacteria.[295] The WHO warns that a "post-antibiotic era" in which "common infections and minor injuries can kill" could become a 21st century reality.[296]
- Rise of antibiotic resistance is a consequence of antibiotics overuse in both human and veterinary medicine.[297]

[281] European Environment Agency (2015) Air quality in Europe – 2015 report. [online]
[282] European Commission (2013) Impact assessment – A Clean Air Programme for Europe. [online]
[283] Jürgen Schneider et al. (2014) EU Air Quality Policy and WHO Guideline Values for Health. European Parliament Policy Study. [online]
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[285] European Environment Agency (2014) Air quality in Europe – 2014 report. [online]
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[287] Arnold Tukker et al. (2006) Environmental Impact of Products - Analysis of the life cycle environmental impacts related to final consumption of the EU-25. Joint Research Centre. [online]
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[294] A. Sandifer et al. (2015) Exploring connections among nature, biodiversity, ecosystem services, and human health and well-being: Opportunities to enhance health and biodiversity conservation. Ecosystem Services. [online]
[295] WHO (2011) Tackling antibiotic resistance from a food safety perspective in Europe. [online]
[296] WHO (2014) Antimicrobial Resistance Global Report on Surveillance. [online]
[297] EFSA (2008) Foodborne antimicrobial resistance as a biological hazard. Scientific Opinion of the Panel on Biological Hazards. [online] See also: WHO (2011) Tackling antibiotic resistance from a food safety perspective in Europe. [online]

- Pig farmers, livestock workers and people living near farms or fields treated with pig manure have a higher probability of attracting antibiotic resistance through MRSA infection.[298] In the Netherlands, people in contact with farmed pigs or meat calves are isolated during hospitalisation.[299]
- Zoonotic diseases like E.Coli, Campylobacter, Salmonella, Avian and swine influenza,[300] Q fever,[301] facilitated by intensive livestock farming, as well as odour annoyance[302] pose a non-negligible threat to public health. For instance, over 85.000 cases of salmonellosis are annually reported in the EU costing up to €3 billion per year.[303]

Pesticides

- Around 45% of European fruit and vegetables are contaminated with detectable levels of pesticides, while multiple residues were found on 27% of samples. Although 97% of the residues detected where within legal limits, the long-term effects of exposure to multiple residues are still insufficiently researched.[304] Some groups of pesticides could display cumulative toxicity exceeding their added individual levels.[305]
- Acute and chronic pesticides exposure are associated with respiratory disorders, cancer, leukemia, disruption of the endocrine, reproductive, immune and neural systems (including Alzeihmer, Parkinson, ADHD) and thyroid dysfunction.[306] The costs of endocrine disrupting chemicals in the EU, which contribute to IQ loss, autism, obesity, infertility, are estimated at €157 billion per year.[307]
- Farmers, farm workers and farmers' children are disproportionally exposed to pesticide hazards, which often remain underreported.[308]

[298] Nature news (2013) Pig-manure fertilizer linked to human MRSA infections. [online]
[299] MRSA-net. Controleert het ziekenhuis of ik varkenshouder ben? [online]
[300] Compassion in World Farming, World Society for the Protection of Animals (2013) Zoonotic diseases, human health and farm animal welfare. [online]
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