

# Climate-smart policy



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The need for a coherent approach  
at food systems level

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# Climate is a key challenge

Among the many challenges the world is currently facing, climate change and the need to address this is one of the most pressing. Climate change affects our food systems worldwide, though in different ways, and may also jeopardise SDGs like fighting poverty and combatting hunger. The signing of the Climate Agreement in Paris in 2015 clearly shows that dealing with climate change is being given increasing priority by international government officials.

The Green Deal published by the European Commission in mid-December 2019, aims to make the EU the first climate-neutral continent by 2050. The goal is to transform the EU into a resource-efficient and competitive economy where there are no net emissions of greenhouse gases in 2050 and where economic growth is decoupled from resource use.

The European food system is an important contributor to the emission of greenhouse gasses. Moreover, climate change threatens the status quo of the European food system due to among others droughts, water floods and changes

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*The European food system has the potential to become an important part of the climate solution*

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in infectious disease pressure for animals and crops. At the same time the European food system also has the potential to become an important part of the climate solution, for example by enabling the transition to a bio-based instead of fossil fuel dependent society. So a key question is, how can the EU food system help realise the ambitions of the Green Deal and what policy is needed to achieve this?

## The need for a coherent food system policy at EU level

In this paper we argue that the EU's Green Deal calls for a coherent food system policy at EU level that goes beyond the farm gate to make the necessary transition to a sustainable, climate-smart and resilient food system. As such it



can contribute to an approach that overcomes fragmented national and/or domain-oriented approaches. Currently, the focus of the EU policies tends to be on the producer side of the food system, implementing a variety of instruments to steer producers in a more climate-friendly way of production. Food system scholars argue that it is not self-evident that implementing policy interventions at the point where the problem is identified is the most effective strategy due to the dependencies between the actions that together result in the current outcomes of our food system (Ericksen, 2008; Gaitán-Cremaschi et al., 2018). Policy makers need to take into account the relationships and dependencies between actors and flows of the entire food system and with this perspective in mind design more effective policies that, where possible, take into account dependencies, feedback loops and trade-offs.

In addition we argue there is a need for a coherent food system policy at EU level to make the necessary transition to a sustainable and resilient food system. As such it can contribute to an approach that overcomes fragmented domain-oriented approaches. We propose to have a new look at policy coherence

issues and incorporate this more strongly in policy making, to strengthen the use of performance-based financial incentives to farmers for climate mitigation activities (e.g. eco-schemes), and suggest the introduction of consumer taxes differentiated in accordance with the climate impact of products to steer both consumption and production in the right – more climate friendly – direction.

This has as positive additional effect that it will induce farmers to pick up climate mitigation actions and will give a price incentive to consumers to make healthier food choices. The euros collected with the consumer taxes can be used to invest in initiatives of food and/or bio-based pioneers and/or networks that want to pursue a novel climate-friendly idea. Currently, these types of innovations can have a hard time to attract funds as these are not grand research and/or technical projects that promise radical solutions or start-ups with potentially large economic revenues. Such a more concrete radical policy will assist the European food system transformation which is needed to create a system that stores greenhouse gases instead of emitting these and that is resilient and diverse enough to guarantee food availability despite climate crises such as droughts and water floods.





# Understanding the role of the food system in climate change

## Food systems contribute to GHG emissions...

The Intergovernmental Panel on Climate Change (IPCC) special report on food security notes that the global food system represents 21-37% of the total anthropogenic emissions. Primary agriculture plays a significant role in this: farms and agricultural land expansion contribute 16-27% of total emissions, and energy, transport and industry related to food processing/distribution contribute 5-10% of total emissions. Food systems are “all the elements (environment, people, inputs, processes, infrastructures, institutions, etc.) and activities that relate to the production, processing, distribution, preparation and consumption of food, and the outputs of these activities, including socio-economic and environmental outcomes” (HLPE, 2017). Both socioeconomic and environmental conditions influence the food system activities and these activities create diverse (unforeseen) impacts. Food systems can be perceived as complex webs of actors, hardware, data, food, environments, institutions, etc. that interact with each other (Hoes et al., 2019).

Although there are, to the authors’ knowledge, no comprehensive estimates about the GHG emissions of the EU food system, according to some estimates food is responsible for about 30% of the EU’s total GHG emissions (Garnett, 2011). These figures do take into account the GHG related to the import of agricultural products. For the Netherlands we know that the contribution of the agrocomplex – the entire set of direct and indirect activities surrounding the agricultural sector as one interrelated chain – is roughly 20% of total national GHG emissions (Verhoog, 2020).<sup>1</sup>

<sup>1</sup> One of the major difficulties in establishing the contribution of the food system to GHG emissions is setting the boundaries. Unlike agriculture, there is no fixed definition of a food system or an agro-complex.

Breaking down the figures for the EU shows that agricultural production has the biggest contribution to GHG emissions, whereas other parts of the food system like storage, processing, transport and retail have a more limited impact.<sup>2</sup> The largest agricultural emission sources are direct land use change (LUC), fertiliser production, fertiliser-based N<sub>2</sub>O emissions from soil and methane (Gustafson et al., 2016: 7).

Important reductions in GHG emissions by the agricultural sector have been made, but have slowed over the past decade; since 2012 emissions have started to rise again (Hart et al., 2017). According to projections based on the current levels of animal products consumption, agricultural non-CO<sub>2</sub> emissions are expected to triple their current share and account for a third of total EU emissions in 2050 (Matthews, 2015).

### ...and are affected by GHG emissions

Food system activities generate greenhouse gases that drive climate change but are also affected in multiple ways by climate changes. Extreme drought and water floods threaten yields already, a situation that will become worse over the years if climate change is not sufficiently addressed (IPCC, 2012; WUR-Ecorys 2020). Especially food production in Southern Europe might be hit hard due to increasing water shortage as a result of reduced rainfall and increased temperatures. Higher temperatures are likely to reduce crop yield substantially if no actions are taken. However, when farmers and plant breeders adapt and respond (e.g. modifications of planting date and crop maturity, better heat stress tolerant crops) yield losses might be substantially reduced (Cassman et al., 2010). On a positive note, climate change also extends the growing season; agricultural production in Northern countries could become more profitable, and more tropical cultivations might be feasible.

### Need to address all actors in the food system...

With the entire food system contributing to the emissions of GHG, climate policy should address the entire food system to reduce its climate impact. However, until now the focus has mainly been on agricultural (primary) production being

<sup>2</sup> This can be a matter of discussion as in the end it depends on attribution calculations.



the main contributor to anthropogenic GHG emissions despite calls for a more integrated approach (see for instance Fresco and Poppe, 2016). Especially consumption, an important driver for production, needs explicit recognition as high levels of animal protein intake, food waste and overeating at the consumer level contribute to large inefficiencies of global food systems (Garnett, 2011; Alexander et al., 2017).

The primary aim of food policy is to deliver sufficient, safe, healthy and accessible food for the entire world population. This imposes an enormous performance requirement on food systems, as a growing world population is expected, while income growth is likely to shift demand into more animal protein rich diets (dairy, meat, eggs). Since land availability is becoming more and more restrictive, continuing yield and productivity are key to meet this objective. As such this complicates solving the climate issues since it increases the challenge while restricting the space for manoeuvre.



According to the EAT Lancet report a transformation to sustainable, safe and nutritious diets by 2050 will require global<sup>3</sup> consumption of vegetables, fruits, nuts and legumes to double, and global consumption of foods such as meat/sugar to be reduced by more than 50% (EAT Lancet, 2019, also World Resources Institute, [www.wri.org/our-work/topics/food](http://www.wri.org/our-work/topics/food)). This confirms that the changes required in the current EU food systems go beyond primary agriculture. The EU Green Deal, launched in December 2019, is an excellent opportunity to pursue this. The European 'Farm to Fork Strategy', published in May 2020, will need to translate the ambitions of the Green Deal into an integrated agriculture and food policy that can be implemented from 2022 onwards.

<sup>3</sup> Please note that at regional level the required dietary changes may be quite different, as the food consumption patterns differ widely across regions.

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## ...in a coherent way

The EU already has a wide range of policies that affect the food system. Many are targeted to the food system or its specific components (e.g. common agricultural policy, Codex Alimentarius), others affect food systems in an indirect way (e.g. environmental policy, transport policy, biofuel policy). These policies are often designed to solve sector-specific issues (e.g. animal welfare), or seemingly single, well-defined topics (e.g. nitrate, climate, food safety). If these issues are not addressed in an integral way this may lead to the implementation

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### *Stimulating fish consumption for public health may have unintended negative impact on marine life*

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of suboptimal instrument use, fragmentation and incoherencies. Or worse, policy instruments that seem appropriate to solve a 'single issue' might, in the long run, create undesirable (side)effects on other policy issues if an integral system perspective is not taken into account. For example, stimulating fish consumption for public health may have unintended negative impact on marine life (Parsons, 2018). So a key lesson from a food systems approach to policy is that policy coherence and coordination at the level of the food system is crucial to enhance its effectiveness and ensure that the inherent trade-offs characterising food systems (e.g. animal welfare versus environment) are properly accounted for (Hoes et al., 2019).

Keeping this in mind, the next section explores the following question: What advice would we give for the Farm to Fork policy so as to contribute to delivering a climate-smart and healthy food system?





# A well-designed policy approach for transition

## The Green Deal provides a good roadmap towards a climate neutral food system

The EU's New Green Deal policy has an important role to play in achieving the transition to a climate-neutral food system, while at the same time addressing four other important objectives such as fairness, health and environment (see Figure 1, EU Green Deal). From a food systems perspective, within the Green Deal framework especially the part focusing on agriculture and food, the Farm to Fork Strategy, is of interest. The Farm to Fork Strategy has been announced to be the key vehicle for designing a fair and healthy food system.

The Farm to Fork Strategy is an example of a strategy that incorporates food system thinking. It goes beyond ensuring sustainable food production and food security and also includes sustainable food processing and consumption, and reducing food loss/waste and food fraud. The Farm to Fork Strategy aims to accelerate the transition to a sustainable food system that should:

- have a neutral or positive environmental impact
- help to mitigate climate change and adapt to its impacts
- reverse the loss of biodiversity
- ensure food security, nutrition and public health, making sure that everyone has access to sufficient, safe, nutritious, sustainable food
- preserve affordability of food while generating fairer economic returns, fostering competitiveness of the EU supply sector and promoting fair trade.

According to the F2F strategy, this also includes the strengthening of the resilience of the food system and to ensure that it operates within planetary boundaries.<sup>4</sup>

<sup>4</sup> One of the goals of the Green Deal is to create a circular (bio)economy, a goal that is also touched upon by the Farm to Fork Strategy but surely merits more attention.

To achieve this, the strategy sets out both regulatory and non-regulatory initiatives, with the common agricultural policy as a key tool to support a just transition. It announces that a proposal for a legislative framework for sustainable food systems will be put forward and that a contingency plan for ensuring food supply and food security will be developed. Moreover, the EU aims to support the global transition to sustainable agri-food systems through its trade policies and international cooperation instruments.

Figure 1 provides a brief summary of the main actions and initiatives of the European Commission presented in the F2F strategy at the levels of sustainable agricultural production, food processing and distribution, sustainable consumption and prevention of food waste and food loss. Key objectives of the F2F strategy with respect to agriculture are reductions of chemical fertiliser

*The prevention of losses is a cross-cutting theme, that challenges the food system as a whole*

application, pesticide use, antibiotics use, and the increase in the land area dedicated to organic farming. With respect to the consumer side a key objective is the reversal of obesity, while also an increase in organic food consumption is mentioned. As regards the food processing and distribution stage, the measures focus on improving sustainability in food packaging, the rebalancing of nutrient profiles, increasing transparency with respect to sustainability, and better food labelling. The prevention of losses is a cross-cutting theme, that challenges the food system as a whole. Together with the setup of a robust and transparent carbon accounting system and innovative sustainable packaging solutions, fighting waste fits in with the Circular Economy Action Plan.

In this section we first reflect on the EU policies targeted at production and second on policies targeted at consumption. Because of space limitations we do not reflect on policies aimed at processing and distribution and food waste and food loss prevention. We acknowledge that these topics also deserve further exploration.

application, pesticide use, antibiotics use, and the increase in the land area dedicated to organic farming. With respect to the consumer side a key objective is the reversal of obesity, while also an increase in

Production	<ul style="list-style-type: none"> <li>• Making recommendations to MS w.r.t. their NSPs before they are formally submitted.</li> <li>• Revision of the Sustainable Use of Pesticides Directive (incl. reduction of use, risk en stimulating IPM)</li> <li>• Revision of implementing Regulations under the Plant Protection Products framework (facilitating more sustainable plant protection products)</li> <li>• Revision of the pesticides statistics Regulation</li> <li>• Evaluation and revision of the existing animal welfare legislation</li> <li>• Revision of the feed additives Regulation</li> <li>• Revision of the Farm Accountancy Data Network Regulation (include sustainability data)</li> <li>• Clarification of the scope of competition rules in the TFEU with regard to sustainability in collective actions</li> <li>• Legislation to enhance cooperation of primary producers to support their position in the food chain and non-legislative initiatives to improve transparency</li> <li>• EU carbon farming initiative</li> </ul>	<ul style="list-style-type: none"> <li>• EU-level targets for food waste reduction</li> <li>• Revision of EU rules on date marking ('use by' and 'best before' dates)</li> </ul>
Processing & distribution	<ul style="list-style-type: none"> <li>• Improve the corporate governance framework (better integrate sustainability)</li> <li>• Develop an EU code and monitoring framework for responsible business and marketing conduct</li> <li>• Stimulate reformulation of processed food (including the setting of maximum levels for certain nutrients)</li> <li>• Set nutrient profiles (restrict promotion of food high in salt, sugars and/or fat)</li> <li>• Revision of EU legislation on Food Contact Materials (improve food safety, ensure citizens' health and reduce the environmental footprint)</li> <li>• Revision of EU marketing standards for agricultural, fishery and aquaculture products</li> <li>• Enhance coordination to enforce single market rules and tackle Food Fraud</li> </ul>	
Consumption	<ul style="list-style-type: none"> <li>• Harmonised mandatory front-of-pack nutrition labelling (facilitating healthy consumer food choices)</li> <li>• Require origin indication for certain products</li> <li>• Determine the best modalities for setting minimum mandatory criteria for sustainable food procurement</li> <li>• Sustainable food labelling framework (to empower consumers)</li> <li>• Review of the EU promotion programme for agricultural and food products</li> <li>• Review of the EU school scheme legal framework (refocus on healthy and sustainable food)</li> </ul>	

Figure 1 Brief overview of announced steps and actions in Farm to Fork Strategy detailed for different stages in the food supply chain.

## Production: The CAP could substantially contribute to the Green Deals' roadmap

At EU level, food production policy is embedded in the common agricultural policy (CAP). The 2018 reform proposals for the CAP address the need to improve the sustainability of agriculture in various ways, as comprised by the proposed new green architecture of the CAP. The current architecture, see left side of Figure 2, is adapted to improve the environmental performance of the CAP instruments. This new green architecture is visualised on the right hand side of Figure 2 and contains the following key elements:

- First, via the enhanced conditionality it establishes and ensures a well-defined baseline, which goes beyond of what is required from farmers outside the EU (although public support for farmers outside the EU is also different). The proposed EU baseline now includes the greening requirements (and has these extended to all farms), which are currently supported by a Green Payment, comprising 30% of the Pillar I national envelopes.
- Second, it introduces the instrument of eco-schemes in the first pillar of the CAP. Eco-schemes are defined as voluntary schemes (for farmers) for the climate and environment and should be specified in greater detail in the National Strategic Plans of the Member States. The allowed compensations for

eco-schemes shall take the form of an annual payment per eligible ha and may be granted as either an additional payment to the basic income support or as a payment based on a compensation of income forgone or additional costs.

- Third, the green architecture comprises the agri-environmental and climate-schemes (AECMs) of the second pillar of the CAP. AECMs provide support for management commitments comprising a wide range of activities (which is more extensive than the activities covered by eco-schemes). It may, for example, include organic farming premia for the maintenance of and the conversion to organic land; payments for other types of interventions supporting environmentally friendly production systems such as agro-ecology, conservation agriculture and integrated production; forest environmental and climate services and forest conservation; premia for forests and establishment of agroforestry systems; animal welfare; conservation, sustainable use and development of genetic resources. The coverage of this instrument has been extended in that Member States may grant compensatory payments for area-specific disadvantages imposed by any mandatory requirements resulting from the current environmental framework that go beyond the conditionality requirements. Member States may develop other schemes under this type of interventions on the basis of their needs.

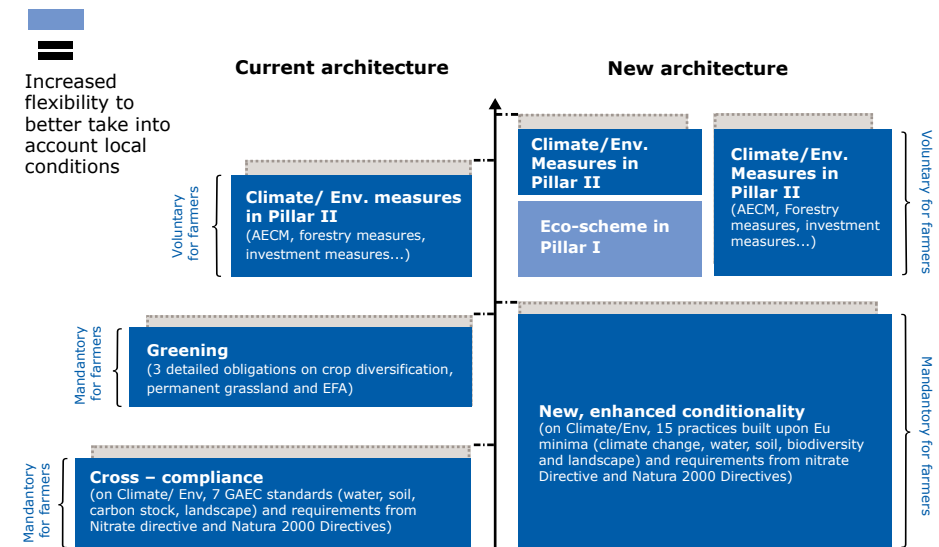


Figure 2. Current and proposed new green architecture of the CAP (European Commission, 2018a)

Another second Pillar CAP measure to mention is the possibility for Member States to support investments, both productive and non-productive ones (NPIs), both on farms as well as off-farm. Instead of the 13 investment fields covered by the investment support arrangement under the current CAP, the newly proposed

*Under the current CAP, the newly proposed intervention covers 7 fields*

intervention covers 7 fields: investments in basic/local services in rural areas, land purchase for environmental conservation, agricultural and forestry infrastructures linked to

the environmental and climate-related issues, land purchased by young farmers through the use of financial instruments, restoring investments following natural disasters and catastrophic events, and investments in irrigation respecting river basin management plans. Non-productive investments, basic services and forest-related investments can benefit from a maximum contribution rate of 80%.

From this it follows that the proposed CAP after 2020 offers the flexibility to further strengthen the sustainability and climate dimension of agricultural policy.



Of course, it depends on the implementation choices made by the Member States whether this will become reality.<sup>5</sup> The inclusion of the current greening requirements into the enhanced conditionality for the basic income scheme prevents backsliding as compared to the current situation, but there is no guarantee that the enhanced conditionality scheme will go beyond what is currently required from farmers.

It is also the Member State who decides what part of the budgetary envelop for the first pillar is allotted to the eco-schemes – and what part is allotted to the basic income scheme and the special support schemes. No minimal financial allocation to eco-schemes is defined in the current proposals (Jongeneel and Silvis, 2018). Including such a requirement would do better justice to the high priority attached by the Green Deal to the improvement of sustainability and climate action (see also European Commission, 2020).

It also complicates assessing the eco-schemes potential contribution to Green Deal objectives, which is further hampered by the fact that it is up to the Member States to define the type of obligations under an eco-scheme and to prevent eco-schemes from becoming the next green washing instrument. And it is up to the farmers to enrol in these schemes. So although eco-schemes are a potentially more effective instrument than the past greening provisions it is at the moment of writing far from clear to what extent their potential will be realised.

Still, eco-schemes offer an opportunity in linking eco-scheme targets with existing non-binding legislation, such as those under other EU environmental directives or policies like the EU Biodiversity Strategy. Linking eco-schemes to for example increased cropping frequency, the reduction of bare fallow, the increased use of perennial forages (including N-fixing species) in crop rotations and allowing these to be a substitute for EFA requirements, are possible examples. The retaining of crop residues and reduction or eliminating tillage would provide additional opportunities for carbon sequestration and also

5 In its evaluation of the current greening the European Court of Auditors critically concluded that “the Commission did not develop a complete intervention logic for the green payment. Nor did it set clear, sufficiently ambitious environmental targets that greening should be expected to achieve. Furthermore, the budget allocation for greening is not justified by the policy’s environmental content. The green payment remains, essentially, an income support scheme”. This underscores the importance of various interest groups in ‘protecting’ the income support and the lack of political will in political circles resulting in green washing (ECA, 2017, 6).

contribute to soil quality improvement (Paustian et al., 2007; Emmerling and Pude, 2016). Intertwining targets like this could see governments more motivated to utilise all the financing available under the CAP for environmental purposes (IEEP, 2020). As regards the agri-environment-climate measure of the second Pillar of the CAP, relative to the current CAP, the EC proposes a flexible co-financing rate for Member States, which may provide an incentive to Member States to more actively use the AECM instrument in the future. This is a welcome change, as following from previous evaluations AECs have been identified as one of the most effective instruments to achieve environmental, biodiversity and landscape objectives (e.g. Pe'er, 2018).

## Consumption: The consumer-dimension needs strengthening

Designing a fair and healthy food system not only requires policies geared at producers but also targeted at other parts in the food system such as consumers. Within the European Union, the Directorate General for Health and Food Safety is responsible for consumer related food policy. There is a wide body of legislation regarding food in the EU, under the umbrella of the General Food Law adopted in 2002. The food related legislation has grown over time and addresses food quality and food safety. It includes standards for food safety, animal welfare, agricultural product quality and the environment. There are also rules regarding the labelling of the nutritional value of food as well as health claims. Certification and food safety standards are important instruments to pursue the goals of food safety and quality (Verbeke, 2013).

The 'health' related part of food policy is less well developed. There are EU-funded programmes to support the consumption of fruit and vegetables and of milk products at school to promote a more healthy diet among school children. There are many campaigns to promote EU agri-food products in and outside the EU, for instance for bread, vegetables, chicken and pork. In light of the discussion about the climate impact of animal proteins, not all programmes necessarily aid in stimulating a healthy diet. Overall, the policy instruments used are rather narrow and focus mainly on providing information.

Next to programmes to promote healthy food or diets, another way to steer consumer's (eating) behaviour in the right direction might be through price



policy. Demand for food is generally regarded relatively price inelastic, hence raising the prices of products considered less healthy and climate unfriendly may not be a very effective means of improving diets as it will only moderately change consumer behaviour. It may nevertheless be a useful instrument to give the right price signal to consumers and combine it with complementary nudging policies.

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*The past years only a few countries have gained experience with taxing products that are regarded unhealthy*

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The past years only a few countries have gained experience with taxing products that are regarded unhealthy (Dagevos, 2018). The most well-known are the sugar tax and the meat tax. Evidence with

regard to the effectiveness of these taxes is mixed, also due to the limited experiences, and implementation is not without its issues. Still, this is not a compelling reason to discard the idea of taxing. And while a sugar tax would merely be a health-related instrument, a meat tax may also be "an environmentally friendly policy" (Caillavet et al., 2016: 555). Taxing meat

products is an effective way to internalise the environmental costs as well as to gain health benefits (Rijksoverheid 2020).

Such taxes could be extended to more products. From a health perspective such taxes may be quite complicated to implement, as in general the direct link between the consumption of an ingredient or product and its health effects is limited (health revolves around the daily diet in combination with life style), with sugar being the notable exception. From a climate point of view there is more potential, as it is possible for every product to establish the climate foot print in terms of GHG emissions.

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*The climate impact of animal proteins is higher than of plant based proteins*

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Incorporating the costs of this foot print through taxes in the price of the product, thus “getting the prices right”, may also help steering diets in a more healthy direction. The

climate impact of animal proteins is higher than of plant based proteins, tipping the balance towards a more plant based diets is regarded as healthy. Thus, balancing diets will to a large extent go hand in hand with making them more climate-smart (Fresco and Poppe, 2016: 31). Such an instrument – a climate tax on products – will be most effective if it is generically applied to domestically produced as well as imported products. Introducing and implementing criteria to evaluate the negative externalities associated with agricultural and food production and distribution will put challenges to the EU’s trade policy and its international relationships.

In addition, the money raised through such taxes can be used to compensate low incomes for their loss of welfare or to invest in initiatives of food and/or bio-based pioneers and/or networks that want to realise a promising novel idea that supports the ambition of a climate friendly and healthy food system.<sup>6</sup>

<sup>6</sup> As a background calculation for this article a model simulation has been made in which a 10% health-sustainability tax is imposed on meat, dairy and sugar (at consumer level), while the fruit and vegetable tax has been set at 5% (this is the EU minimum level, which is 4% below its current VAT level in the Netherlands). Moreover, 80% of the tax revenue is channelled back to consumers, while 20% is used for a sustainability fund. It turns out that this tax would generate 334 million euros, which is more or less similar to the total amount of direct payments animal product farmers currently get. It could, when well spent, really create leverage to further improve sustainability at farm level. On average, meat and dairy consumption would be reduced by about 5%, while fruit and vegetables consumption would increase by about 5%. A 10% tax could be labelled as ‘moderate’, since it does not yet cover the true price aspects with environmental, climate and health externalities. Source: author calculations.

Currently, these types of innovation can have a hard time to attract funds as these are not grand research and/or technical projects that promise radical solutions or start-ups with potentially large economic revenues. It is a missed opportunity for society if these promising initiatives fail to get off the ground because it is undoable to attract traditional financing. The consumer taxes gained could remove these financial barriers and give space to the innovation power of Europe.

Another option is use the collected euros to stimulate the consumption of healthy and climate friendly food. It is unlikely that simply lowering prices of healthy and climate friendly products will have a similar positive impact as the negative impact that raising the prices of unhealthy and climate unfriendly products may have. A consumer win of lowering prices might have less behavioural impact as losses seem to appear larger for people than gains (Kahneman & Tversky, 1979). Therefore it is recommendable to make the win more visible such as with coupons or to consider more creative ways to stimulate the consumption of healthy climate-friendly food. The expertise of retailers could be used for this as they have way more experience with influencing consumer choices than policy makers and also have an important role to play in the transition to a climate-neutral food system.



# Policy coherence

The EU Green Deal and its Farm to Fork Strategy mark a watershed in EU policy making as it promotes an integrated food systems approach, while acknowledging that this system is embedded in an ecological natural system. An important policy issue in this context is the issue of policy coherence. Assessing policy coherence requires analysing the contribution policy instruments have on achieving a set of multiple objectives. A complication in policy coherence assessments is that the evaluator should not only focus on the use of individual policy instruments, but rather on their combined use<sup>7</sup>. Within a food systems context, achieving policy coherence will depend on simultaneously implementing a proper set of policy instruments at different levels of the food chain.<sup>8</sup>

Within the context of a food systems approach the policy coherence issue can be addressed at different levels. First there is the overall level, which requires that the set of policies the EU pursues (e.g. the CAP, food policy, environmental policy, trade policy, development policy) all align in such a way that they contribute in an effective manner to achieve the multiple objectives with respect to the food system. From the EU's Green Deal and the Farm to Fork Strategy it is clear that these objectives comprise issues such as climate, healthy diets, affordable food, fair incomes, environment, biodiversity. At a second, or lower level, policy coherence can be addressed with regard to a specific policy (e.g. the CAP), but now approached from its contribution to the larger whole. As such the food systems approach has its implications for policy coherence at policy measure-level. One bottleneck here could be the adjustment of the trade policy to include sustainability criteria.

<sup>7</sup> This is an insight known already since the pathbreaking work of Tinbergen in the 1950s (see also Schader et al, 2014 for a recent application to agri-environmental policy).

<sup>8</sup> See for a detailed assessment of policy coherence in the current CAP the results from the CAP Mapping an Policy Implementation project. There a specific instrument-objective (IO) methodology has been developed and applied. The constructed IO-matrix of different CAP policy measures allows to determine the direction in which a measure will impact on the objectives, which is the basis for concluding to which extent a measure is relevant. It also helps to address to what extent different measures contribute to similar objectives and how they work together, might be neutral or work against each other. Url: [https://www.recap-h2020.eu/mapping\\_and\\_analysis\\_cap\\_implementation/](https://www.recap-h2020.eu/mapping_and_analysis_cap_implementation/)

## Challenges with respect to policy coherence in the CAP

Because of space limitations our focus will be on challenges with respect to policy coherence in the CAP, taking into account the food systems approach launched by the EU Green Deal and Farm to Fork Strategy actions. This implies that policy coherence has to be seen in the context of the shifting objectives due

### *The productivity and farm income objectives still playing an important role*

over time the focus of the CAP instruments shifted to supporting farm income, as the initial success of the CAP led to product surpluses and downward pressure on prices. Then it shifted in the direction of greening and sustainability, however, with the productivity and farm income objectives still playing an important role. With the food systems approach consumer health, food safety and food affordability are 'added' as new objectives.

More specifically, the current CAP has three key objectives: (i) viable food production (with a focus on agricultural income, agricultural productivity and

to the EU Green deal and F2F strategy. Different phases in the CAP can be identified: it started as a policy with a focus on modernisation of agriculture, leading to increased productivity;

price stability), (ii) sustainable management of natural resources and climate action (with a focus on greenhouse gas emissions, biodiversity, soil and water) and (iii) balanced territorial development (with a focus on rural employment, growth and poverty in rural areas). With respect to these themes it can be argued that to a large extent the CAP already aligns with important objectives mentioned in the food systems approach (Ecorys-IEEP-Wageningen, 2016). This doesn't imply that a shift in priorities between the different objectives may not be needed, to ensure a good fit with the overall food systems objectives.

According to a recent typology analysis it was found that for the majority of the Member States the main focus of the CAP remains viable food production (a combination of farm income and productivity or competitiveness) (Jongeneel et al., 2018). Member States have used the different Pillar 1 instruments in different combinations to address this objective. The typology results also indicated a poor correlation between the decisions made in the first and the second Pillar: the analysis did not allow to establish a link between the implementation choices (in terms of measures chosen) under Pillar 1 and the decisions made in Pillar 2. In the CAP Mapping project Ecorys-IEEP-Wageningen (2016) identified very few actual examples of where Member States have actively planned the implementation of Pillar 1 and Pillar 2 measures together. They found that in the majority of cases efforts have been made to ensure that the measures do not overlap, rather than to proactively find ways of making them work together synergistically. Evidence of incoherencies between objectives also emerged, for example areas where decisions made in relation to one objective (e.g. farm incomes) were not taking into account the implications that these might have on another (e.g. environment/climate). The two examples given related to the use of voluntary coupled support to support livestock and crop production (where conflicts can arise of farm income with climate and sustainability objectives), and on the eligibility criteria of permanent grassland for Direct Payments (i.e. where Member States could have decided to exclude environmentally valuable permanent grassland). However, despite good examples, it is concluded that the opportunities for synergies could have been better exploited by the Member States.

From this quick scan on EU policy coherence of the CAP it follows that many of the food systems objectives are already covered by the current CAP objectives, but increased priority should be given to climate and sustainability issues. Although the proposals made for the CAP beyond 2020 (European Commission 2018) address this need, doubts remain as to whether the level of ambition is





sufficient. As an example, with respect to climate mitigation measures these remain largely unspecified, thus leaving it open to Member States to propose and develop each their own measures. Moreover, Member States may transfer up to 15% of the EAFRF envelope to Pillar I, which then would erode the significance of the second pillar's 30% devotion to AECMs requirement and could weaken the priority given to environment and climate objectives (Jongeneel and Silvis, 2018, 42).

As such, the action announced in the Farm to Fork Strategy, namely that the Commission is going to make recommendations with respect to the National Strategic Plans of the Member States before their formal submission, using criteria from the Green Deal and Farm to Fork Strategy, is welcomed (see Figure 1). The requirement imposed on Member States to develop a NSPs in which they have to motivate their policy choices for both pillars of the CAP - contrary to the current situation where only for Pillar 2 such a plan has to be presented - taking into account identified needs, is a positive means to promote

and discuss policy coherence in an ex-ante policy implementation stage. Since there is already a wide body of experience with ex ante impact assessments of EU and national policy, the development of policy coherence could build on this

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*The derived implications for agriculture from the consumer objectives such as healthy diets and healthy food should get more attention in the reform of the CAP*

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experience, but there is a clear need to extend this to a food systems-context. For example by enriching ex ante evaluations with broader reflections on the potential consequences for actors, hardware and institutions that go beyond the well-defined evaluation criteria. Finally, the

derived implications for agriculture from the consumer objectives such as healthy diets and healthy food should get more attention in the reform of the CAP as these are now weakly addressed both in terms of specified specific objectives as well as with respect to available instruments.





# A climate-smart policy requires actions from all

This paper reflects on the underlying approach and policy coherence of the Green Deal, Farm to Fork Strategy and CAP. We see the European Green Deal as an opportunity to reconcile our food system with the needs of the planet, to respond positively to Europeans' aspirations for healthy, equitable and environmentally friendly food, and to appreciate the farmers and workers who at a daily basis produce the food. It is argued that the EU Green Deal roadmap and Farm to Fork Strategy put the CAP in a new context, implying a stronger focus on sustainability objectives and on consumer and health issues. Indeed, these topics have been put on the agenda, and as such the plea for an EU agriculture and food policy by Fresco and Poppe (2016), has been responded to. The roadmap and strategy are important instruments to make the EU's food system more climate smart.

However, ambitions and goals agreed upon in the Green Deal and Farm to Fork are not enough, because addressing climate change and its impact on our food systems necessitates serious policy actions at member state level and across the entire food system. When stepping back from agricultural and farm issues alone,

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*We also propose to let these measures reinforce each other, thereby creating potentially important synergies for sustainability improvements*

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and when looking with the larger food system picture in mind, it becomes apparent that a climate-smart food system requires actions from all. In this paper we argue that, in addition to policies to increase climate-smart agricultural production, also policies that stimulate

climate-smart consumption should be included. For example, governments could consider introducing consumer taxes that differentiate in accordance with the climate impact of food products to steer both consumption and production in the right – more climate friendly – direction. We also propose to let these measures reinforce each other, thereby creating potentially important synergies for sustainability improvements.

Finally, we argue that these policy ideas have to be investigated and considered in more detail, taking into account (long-term) results and effects throughout the entire food system, which goes beyond most 'conventional' ex ante policy evaluations. In this regard we reflected on the importance of policy coherence in the CAP, while taking into account the new objectives and priorities as a side-condition. The latter is important, since the gains of coherence cannot compensate for a lack of ambitious objectives, with clearly defined target levels. While we show that policy coherence could be improved, we recognise at the same time that from a food system perspective, in which the complex web of interlinked activities and feedbacks of specific policies is accounted for, this imposes new challenges to policy coherence assessments.

Agro-economists could play a role in making such analyses by investigating market dynamics and identifying dependencies and anticipating consequences or trade-offs such as which actors or actor groups will benefit and which will experience harm from policy interventions (Fresco et al., submitted). Krijn and Ruerd have been and still are prime and inspiring examples of such economists. At this farewell we thank you for that and for the things we learnt from you and we promise to pick up the baton from you.

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