

Reforming the Common Agricultural Policy of the European Union in the Framework of the *Green Deal*

The Position of Agroecology Europe¹

March 2020

Executive Summary

Agroecology Europe developed its position on the reform of the Common Agricultural Policy (CAP) by analysing and drawing on the consequences of the current environmental, social, and economic situation of the agricultural and food system, and by building this position on the solid foundations of:

- the Treaty on the Functioning of the European Union (TFUE),
- the priorities for the Common Agricultural Policy (CAP) for the 2021-27 period,
- the European *Green Deal*, and specifically the *Farm to Fork* approach.

Agroecology Europe recommends **four measures**:

- **The phasing out of current subsidies by agricultural area and livestock head, and on energy, large equipment and external inputs.** Such subsidies create a strong bias in the productive model at a massive environmental and social cost. The EU should be consistent with its own Green Deal cornerstone: “*First do not harm*”.

MAIN MEASURES

The following measures constitute the two pillars of the reform proposal. They aim at replacing the current subsidies.

- **If basic subsidies are maintained, they should be paid on a full-time equivalent worker (FTE) basis and not on a hectare (or livestock head) basis anymore.**

This measure will have multiple impacts: saving the remaining farmers’ population, creating new jobs, opening new perspectives for European agriculture, new entrants and young farmers, encouraging local quality products, product processing and short marketing chains, conserving the environment in marginal agricultural areas through farmers’ presence. The latter will also allow mitigation of natural disasters with severe impact on the whole society (fires, floods, landslides) through farmer-driven

¹ Agroecology Europe (AEEU) is a European association to promote agroecology. It intends to place agroecology high on the European agenda of sustainable development of farming and food systems.

landscape care. This base income would be conditional on strict compliance with environmental rules, and to a declared activity on a farm.

- **The main part of taxpayer's money spent within the CAP should be allocated to the production of public goods, i.e. the provision of ecosystem services and the restoration of biodiversity and the ecological network (payment for result-oriented agro-environment and climate measures).** This measure corresponds to societal demand, will make full sense to EU taxpayers. Public money should contribute to halting biodiversity loss, mitigating and adapting to climate change mainly through carbon sequestration in soils, and finally pay farmers for producing a real added value, and not just for maximising yields with many known negative externalities.

ACCOMPANYING MEASURES

- Although it has been shown that agroecological systems can be more profitable than conventional ones, **the transition towards agroecological farming** can be difficult and risky for farmers as systems are often more complex. This is the reason why it **should be specifically supported for several years**. This transition should be envisaged in a holistic manner in each farm through the coherent deployment of agroecological practices that enhance ecosystem services and ensure a quality food production. These ecosystem services provided by biodiversity can replace synthetic inputs such as fertilizers and agrochemicals (e.g. biological nitrogen fixation or crop pest control by natural enemies). These practices include reduced or no-tillage; continuous soil cover; direct seeding of main crops into cover crops; the development of a dense ecological network (connectivity); the choice of climate-resilient crop species, cultivars and mixtures; intercropping (including agroforestry); long and diversified crop rotations; crop/livestock integration that allows the inclusion of legume-based temporary grasslands in annual crop rotations; rotational grazing; and the use of rustic livestock breeds in grass-based systems.



Key actions in a nutshell

MAIN MEASURES

Action 1 – Replacing current subsidies per hectare (or livestock head), on energy or capital, with a base income per full-time equivalent (FTE). This base income would be conditional on strict compliance with environmental rules, and to a declared activity on a farm.

Action 2 – The main part of CAP budgets should pay for the production of public goods, including the three main ones: the sequestration of carbon in agricultural soils, the restoration of rural biodiversity and the development of the ecological network. These subsidies should be subject to compliance with reduction of nutrient excess and pesticides dependency and also to the maintenance of a real agricultural production.

ACCOMPANYING MEASURES

(co-financed by Member States)

Action 3 – Developing a programme for helping farmers during their transition towards agroecological systems. This could include specific subsidies, the implementation of a training network with well-trained advisers and a network of innovative farms that could be used as “lighthouses” from which principles may radiate out to local communities.

Action 4 – Reducing the current subsidies for large machines and buildings to enable the creation of a new fund for facilitating the purchase of agroecological tools and equipment (in coordination with action 3).

Action 5 – Creating “Land banks” at European scale and in all Member States for facilitating young and small farmers to buy or rent land on the basis of a project that is relevant and consistent with the goals of the ‘Green Deal’ and the future ‘Farm to Fork’ programme.



All these recommendations are compatible with the rules of the World Trade Organisation (WTO).

In coherence with the Green Deal, the CAP should be coordinated with other policies for the phasing out of subsidies on fossil energy and external inputs and with the private sector (notably banks) for the phasing out of loans to fossil fuel extraction and to industrial nitrogen fixation.

It should also be coordinated with public health policies and the private sector for reducing food waste and combat obesity, malnutrition, and related non-communicable diseases.

Note: For readers who would not be familiar with the concept, **agroecology** has been defined by the Food and Agriculture Organization of the United Nations (FAO) in its memorandum "The Ten Elements of Agroecology"² and, in an even more detailed manner, in the report of a FAO High-Level Panel of Experts on food security and nutrition³. In addition, Agroecology Europe has proposed a six-sentence summary text summarizing the previous documents⁴. In order to illustrate the core of the concept, the annex of this paper presents also a consolidated set of 13 agroecological principles detailed in the report of the above-mentioned FAO High-Level Panel of Experts.

² www.fao.org/agroecology/knowledge/10-elements/fr/

³ www.fao.org/3/ca5602en/ca5602en.pdf

⁴ www.agroecology-europe.org/our-approach/our-understanding-of-agroecology/

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1. Reasons for a fundamental redesign of agricultural systems

The rationale and ambition for a deep redesign of agricultural and food systems is based on three main documents: the Treaty on the Functioning of the European Union (TFEU)⁵, the priorities of the European Commission for the future Common Agricultural Policy (CAP)⁶ for the 2021-27 period, and the European “Green Deal”⁷.

1.1. Environmental dimension

Article 191 of the Treaty on the Functioning of the European Union (TFEU) states that: “Union policy on the environment shall contribute to pursuit of the following objectives:

- preserving, protecting and improving the quality of the environment,
- protecting human health,
- prudent and rational utilisation of natural resources,
- promoting measures at international level to deal with regional or worldwide environmental problems, and in particular combating climate change”.

The European Commission summarized its priorities for the future Common Agricultural Policy (CAP) for the 2021-27 period in nine general objectives reflecting the economic, environmental and social importance of the policy:

1. Support viable farm income and resilience across the European Union (EU) territory to enhance food security;
2. Enhance market orientation and increase competitiveness including greater focus on research, technology and digitalisation;
3. Improve farmers' position in the value chain;
4. Contribute to climate change mitigation and adaptation, as well as to sustainable energy;
5. Foster sustainable development and efficient management of natural resources such as water, soil and air;
6. Contribute to the protection of biodiversity, enhance ecosystem services and preserve habitats and landscapes;
7. Attract young farmers and facilitate business development in rural areas;
8. Promote employment, growth, social inclusion and local development in rural areas, including bio-economy and sustainable forestry;
9. Improve the response of EU agriculture to societal demands on food and health, including safe, nutritious and sustainable food, as well as animal welfare.

⁵ Consolidated version 2016.

⁶ https://ec.europa.eu/commission/presscorner/detail/en/MEMO_18_3974

⁷ https://ec.europa.eu/info/sites/info/files/european-green-deal-communication_en.pdf

More recently, the European Green Deal recognised that “Food production still results in air, water and soil pollution, contributes to the loss of biodiversity and climate change, and consumes excessive amounts of natural resources, while an important part of food is wasted. At the same time, low quality diets contribute to obesity and diseases such as cancer”.⁸

Reaching the objectives of the Treaty on the Functioning of the European Union and the priorities of the future CAP for the 2021-27 period requires a major change in the way agriculture is practiced and a reform of current policies for reducing the negative impacts identified in the European Green Deal.

Conditioning the level of financial support to European farmers to the area they use for their crops or grasslands and the animals they raise, from the budget of the 1st pillar of the Common Agricultural Policy (CAP), while encouraging them to invest in powerful machinery and large infrastructure on the basis of the 2nd pillar budget, is far from being neutral with regards to the management of natural resources. At the farm level, farmers can be considered to use cash obtained from subsidies to buy inputs that degrade the environment, reduce soil fertility, emit greenhouse gases and reduce biodiversity. Some support from the second pillar accentuates this trend. Powerful and heavy tractors, for example, allow deep ploughing and the use of other machinery that destroy soil structure, increase soil compaction, accelerate the mineralization of soil organic matter, which contributes to climate change by emitting carbon dioxide into the atmosphere while destroying soil life, and therefore accelerating soil degradation.

The agro-environmental and climatic measures of the 2nd pillar mitigate these effects, but in a very limited way. The final results remain largely negative for environmental quality and biodiversity. Biodiversity indicators such as the common farmland bird index, for example, continue to decline while the common forest species index increases. This situation is hardly surprising as these measures are applied to only a few percent of the agricultural area, while the vast majority of this area remains hostile to biodiversity.

In the current “CAP vehicle”, the 1st pillar acts like an accelerator of environmental degradation, while the 2nd pillar acts partially as a brake. As the 1st pillar benefits from more fuel (budget) than the 2nd, the vehicle continues to move very quickly towards soil degradation, greenhouse gas emissions, loss of biodiversity and destruction of habitats.

However, the CAP is not the only mechanism that fuels the intensification of agriculture. The close relationship between input retailers and farmers has an enormous effect. This relationship is ambiguous. It leads to excessive use of commercial inputs. The main farmers’ adviser is indeed also the seller of seeds, fertilisers, agrochemicals and livestock feed. Input trade and agricultural advice should be separated.

⁸ https://ec.europa.eu/info/sites/info/files/european-green-deal-communication_en.pdf

Other actors may have a similar influence such as some farmers' newspapers, applied scientific trials, conference speakers, and farmers' representatives.

Supermarket purchasing centres by exerting a strong pressure on product price encourage farmers to prioritize yields at the expense of food quality. This also leads to excessive input use.

Sections 1.1.1 to 1.1.4 develop a diagnostic of the current situation with respect the environmental EC priorities for the future CAP n^r 4, 5, 6 and 9 (see above).

1.1.1. Climate change mitigation and adaptation, and sustainable energy

Soils managed under conventional cropping systems lost significant amounts of carbon to the atmosphere since the early 1960s.

The specialization of farms has led to dramatic simplification of cropping systems, in which crops, livestock and forestry, once integrated, were separated and intensified, leading to a very high level of specialization and dependence of external, synthetic inputs. Arable land under current conventional systems receive now much less (if any) inputs of carbon in the form of farmyard manure or organic residues.

Moreover, deep ploughing and other intensive soil tillage techniques have destroyed soil structure and, together with the intense use of synthetic nitrogen fertilizer, degraded and oxidized soil organic matter, releasing huge amounts of CO₂ into the atmosphere.

In addition, the production of soluble nitrogen fertilizer, which is applied widely and in high quantities today, requires very large amounts of fossil energy for the industrial fixation of atmospheric nitrogen through the Haber-Bosch process. This process therefore contributes to further significant emission of greenhouse gases.

Since highly simplified agroecosystems are also very susceptible to weeds, pests and diseases outbreaks, agrochemicals (also requiring intense use of fossil energy for their production and application) are more and more used.

The total energy efficiency of agricultural production has declined considerably in recent decades, being now inversely proportional to the amount of fossil energy injected into the agricultural and food systems. It is now estimated that "every calorie of food energy produced and brought to the table represents an average of 7.3 calories of fossil energy inputs".⁹

In a context of climate change, mitigation and adaptation in conventional production systems (originated from the "Green Revolution" paradigm) poses a significant challenge, since the use of few species grown in monocultures with low genetic diversity are much more

⁹ Heinberg R. and Bomford M. 2009. The Food and Farming Transition: Toward a Post-Carbon Food System. Post Carbon Institute, Sebastopol, USA.



susceptible to climate and biotic stresses. When combined with low levels of organic matter in soils – that reduces soil water holding capacity and nutrient cycling – the result is a strongly decreased resilience of farming systems to disturbance from climate change, therefore increasing the risk for crop failures and food insecurity.

1.1.2. Sustainable development and efficient management of natural resources such as soil, water and air

The recent development in agriculture has not led to sustainable and efficient management of natural resources. Soils have been heavily degraded since the 1960s, mainly because of the processes referred to in section 1.1.1. They have lost a significant portion of their natural fertility. Their structure has deteriorated, resulting in significant erosion and lower water holding capacity. Soil life has been greatly reduced in biomass and also in diversity especially with regard to fungi and earthworms, essential for soil health and to avoid nutrient losses.

The suboptimal use of nitrogen and phosphorus fertilizers and agrochemicals such as herbicides, pesticides and fungicides used in conventional agriculture have polluted many surface and ground water.

The atmosphere has been polluted not only by CO₂ emissions by the processes described in section 1.1.1, but also by N₂O emissions from synthetic and organic nitrogen fertilizer use. It has also been contaminated by some agrochemicals, especially at the time of application to crops, harvest and by the excess and improper use of these chemicals.

1.1.3. Protection of biodiversity, enhancement of ecosystem services and preservation of habitats and landscapes

Sixty years of conventional agriculture have had a huge and unprecedented negative impact on the different forms of biodiversity in rural areas. The mechanisms that explain this biodiversity decline vary by organism and habitat. They can be **physical** (e.g. homogenisation of habitat and landscape; elimination of ecological infrastructure, of mixed farming systems and agroforestry; changes in grassland cutting frequencies; trampling of bird species nestling on the ground due to heavy animal stocking rate in intensified grasslands; ploughing and other intensive tillage practices in arable land), **chemical** (e.g. application of synthetic nitrogen in grassland that favours a small number of fast-growing plant species compared to all other species, agrochemicals that directly suppress target and non-target plant, insects or fungi species), or **mechanical** through the traffic of agricultural machinery and tools for tillage, weeding and harvesting (e.g. tillage done quickly after harvest thanks to the increasing power of tractors buries fallen grain, grains that become inaccessible to birds that once used them to build up pre-wintering or migration body reserves).



These mechanisms can be direct or indirect. The use of herbicides, for example, has a direct effect in eliminating or drastically reducing biodiversity, such as the abundance of dicotyledon plant species and an indirect action in reducing the abundance of pollinating insects for which these plants are a food source, and also that of birds feeding on these insects (e.g. juvenile partridge). The application of pesticides eliminated many of the needed beneficial insects that can reduce crop pests, but also pollinators necessary for the production of fruit and vegetable.

Drainage has dried up many wetlands to "enhance" them. A large proportion of hedges and networks of hedgerows have been removed to facilitate the movements in the fields of machines of increasing size. As a result, many habitats have disappeared from landscapes and been replaced by large, much more uniform blocks of land.

1.1.4. Response of EU agriculture to societal demands on food and health, including safe, nutritious and sustainable food, as well as animal welfare

The diversity of food products, especially fruits and vegetables, has increased in Europe in recent decades, mainly thanks to the import of tropical products or products long consumed in Europe but produced today in countries of the South, for example in the off-season. These products do not always meet European standards¹⁰. The production of these fruits and vegetables in these countries can have disastrous consequences. The rapid development of avocado cultivation in Mexico has led to massive deforestation in the wooded mountains of Michoacan, for example¹¹. The explosion in market gardening production in Kenya, green beans and other vegetables, has been accompanied by massive agrochemical use. These beans imported into Europe have breached European standards for a time, even if today the problem seems to be partially solved.

Studies have shown that the nutritional values of many foods have decreased during the 20th century, particularly with regard to their mineral and vitamin content as a result of the use of conventional farming techniques and new more productive cultivars^{12, 13}.

In the meantime, the European Union has increased its domestic protein production deficit, largely due to a significant gap in legume production for food and feed compared to what is needed, feasible and desirable¹⁴. This contributes to diet unbalances in both humans and livestock.

Feeding livestock with grains (cereals, soybean) instead of grass has not only negative environmental implications, but also affects the fatty acid composition of meat and dairy products. Total fatty acid, saturated fatty acids and omega 6/omega 3 levels increased. Combined linoleic acid (CLA) levels, with anti-cancer properties, declined. Large proportion of

¹⁰ https://ec.europa.eu/food/plant/plant_health_biosecurity/non_eu_trade_en

¹¹ <https://www.wri.org/blog/2020/02/mexico-avocado-industry-deforestation>

¹² Mayer A.N., 1997. *British Food Journal*: 99/6, 207–211.

¹³ Marles R.J., 2017. *Journal of Food Composition and Analysis* 56: 93–103.

¹⁴ Zander, P., Amjath-Babu, T.S., Preissel, S. et al. (2016). Grain legume decline and potential recovery in European agriculture: a review. *Agron. Sustain. Dev.* 36, 26.

grain in livestock diet has also negative impact on animal health, leading to excessive use of veterinary medicines.

However, it is mainly food processing and additions of sugar, saturated fatty acids and salt, downstream of agricultural production, that have a very negative impact on the syndemic of obesity, malnutrition, and related non-communicable diseases (cancer, diabetes, cardiovascular diseases)¹⁵. Changes in consumption habits and an increase in the share of processed products in diets are the main cause of major public health problems, with collective costs accounting for 10-12% of health care costs and that will soon exceed those of alcohol or tobacco-related diseases. Although this is not a direct consequence of the CAP, it should be duly taken into account in an agricultural and food policy approach.

Factory farming of pigs, poultry and sometimes cattle cause promiscuity problems resulting in the spread of diseases, that are controlled by antibiotics. Routine and preventative antibiotic use induce the development of resistance phenomena, selecting also human pathogenic bacteria and posing a threat to the entire society. Regarding animal welfare, stress is permanent for these sensitive animals, raised in conditions far from those of their wild ancestors and that do not allow the expression of basic social behaviours.

1.2. Economic dimension

While a reform of the CAP is absolutely necessary from an environmental perspective, there is ample reason to question the current CAP economic effectiveness. The importance of agricultural production in the EU, as well as food abundance on supermarket food shelves, give the impression that the system is highly productive. In reality, the agricultural and food system of the EU has become much more import-dependent (also because of its energy dependence), more unequal, less resilient at both the macro- and micro-economic levels, and finally with a low level of food security and sovereignty. It has also become less *value-adding* and more *value-extracting* out of our collective natural capital. This can be reviewed against the CAP objectives, as set out in the treaties. Article 39 of the Treaty on the Functioning of the European Union (TFEU)¹⁶ states that ***“The objectives of the common agricultural policy shall be”:***

- a) ***“to increase agricultural productivity by promoting technical progress and by ensuring the rational development of agricultural production and the optimum utilisation of the factors of production, in particular labour;”***

Far from being optimal, the use of production factors has been strongly skewed by the combined impact of various policies on their relative prices. Indeed, the CAP subsidy per

¹⁵ The Global Syndemic of Obesity, Undernutrition, and Climate Change: The Lancet Commission report ,2019.

¹⁶ Consolidated version 2016.

hectare reduces the cost of land¹⁷, while national aid policies reduce the cost of capital and the use of fossil fuels. Only the cost of labour is increased by taxes and social levies. This has encouraged the deployment of an economic model that has proven its worth in the industrial sector, and which combines economies of scale and specialization. This model has been successful in maximizing labour productivity as measured by value added per unit of work (VA/FTE) at the expense of other factors of production whose productivity has declined significantly, notably VA/ha or VA/energy. This model of specialization and monoculture has also become increasingly extractive in value on “nature capital” through the destruction of assets (e.g. soil organic carbon content, biodiversity, water resources, consumption of fossil fuels) and the production of negative externalities (e.g. greenhouse gas emissions, water pollution, beneficial insect and pollinator decline). The “added value” of agriculture is to a large extent over-estimated as it hides a value extracted from our collective net asset. If the extraction of net assets were to be deducted from agricultural value added (following a “Green GDP” approach), the downward trend in VA/ha would be markedly accentuated. It may even be negative depending on the prices attributed to these externalities, and in particular the price per ton of carbon (or CO₂ equivalent emissions)¹⁸.

b) “thus to ensure a fair standard of living for the agricultural community, in particular by increasing the individual earnings of persons engaged in agriculture;”

The increase in the income of those working in agriculture has been the corollary of the increase in VA/FTE, with a drastic reduction of the labour force in agriculture. The highly unequal distribution of farm income and distribution of aids¹⁹ keeps a significant segment of farmers below the poverty line promoting a continuous flow of people and families leaving the agricultural sector with social and environmental deleterious consequences. This model is economically justified by the fact that it pretends to select the best performing players. It is now clear that rather than a “*selection of the fittest*”, the system selects to a large extent the most “*extractive players*”, in terms of tapping nature capital.

c) “to stabilize markets;”

Prices for agricultural inputs and outputs are largely globalized, and the CAP has little influence on them. However, by favouring a specialized agribusiness model that competes

¹⁷ Even though this subsidy often benefits to the landowner more than the farmer

¹⁸ Green GDP is an attempt by economists to measure the growth of an economy compared to the harm production does to the environment. This is done by subtracting the costs of environmental and ecological damage done in a specific period of time from the gross domestic product, or GDP, from that same time.

¹⁹The order of magnitude generally retained is 80% of the aid that benefits 20% of farmers, and in many cases, to farm owners and not necessarily to farmers.

globally rather than favouring mixed farms to meet local demand and support local communities, the CAP has exposed an increasing share of farmers to fluctuations in world prices. Farmers find themselves “*price takers*” in the face of highly concentrated sectors upstream (seed, fertilizers, equipment) and downstream (purchasing centres from retailers and processing industries). This has contributed to a much faster increase in input prices relative to that of agricultural products, and thus to the erosion of farmers' incomes.²⁰

d) “to assure the stability of supplies;”

Supply security goes hand in hand with the resilience of the sector. While there is a strong decline in environmental resilience (section 1.1), economic resilience also raises questions both at the farm and macroeconomic levels. At the micro level, the resilience of specialized farms (which are by definition very simplified in terms of products, and exposed to price fluctuations as explained above), is inevitably lower, as evidenced by repeated crises in multiple sub-sectors. At the macro level, the massive dependence of the production model on fossil fuels almost entirely imported from a limited number of non-European regions makes security of supply very precarious in the event of geopolitical or other crises especially in the Middle East or Russia.

e) “to assure that supplies reach consumers at reasonable prices.”

The CAP has certainly helped to reduce the cost of food for consumers in the disposable income of European households. However, downward pressure on prices has contributed to the development of production methods that have favoured the quantity and standardization of products at the expense not only of the environment, but also of the nutritional quality of the products (section 1.1.4). On the other hand, it would be natural that farmers receive a fair price for their products.

1.3. Social and societal aspects

Among the priorities of the European Commission for the future CAP for the 2021-27 period²¹, the following ones are related to social and societal topics:

1. Support viable farm income and resilience across the EU territory to enhance food security;

²⁰ Over the last three decades, the output price indices progressed by an average 1.1% per year, while the price of most of the inputs increased by around 3% yearly. Data from: IMF, World Bank, USDA, Eurostat, Fertilizer International.

²¹ https://ec.europa.eu/commission/presscorner/detail/en/MEMO_18_3974



3. Improve farmers' position in the value chain;
7. Attract young farmers and facilitate business development in rural areas;
8. Promote employment, growth, social inclusion and local development in rural areas, including bio-economy and sustainable forestry;
9. Improve the response of EU agriculture to societal demands on food and health, including safe, nutritious and sustainable food, as well as animal welfare.

The social question in agriculture is strongly related to the profitability of farming activities and with risk perception especially by young farmers. Moreover, access to land is difficult for young farmers. The average farmers' age in the EU is close to 55 years. A very small percentage of these farmers has declared successors. The number of farmers is thus still declining very fast. There is a high risk that in 5 to 10-year time the number of family farms will virtually collapse in the European Union.

The link between human and ecosystem health should be a central element of the future CAP. It is well known that agriculture intensification has dramatic consequences on habitat and biodiversity losses. What is now becoming dramatically evident is also that the loss of habitat and biodiversity are contributing to the emergence of diseases in wildlife that may be sources of new severe infections in humans²².

1.4. The European « Green Deal »

The reform of the Agricultural Policy is not only an opportunity to correct its shortcomings in relation to its original objectives, but also to contribute to the objectives of the EU as set out in the Green Deal drawn up by the Commission:

“European food must remain safe, nutritious and of high quality. It must be produced with minimum impact on nature”.

Quite rightly, the Commission's “Farm to Fork” approach is intended to be horizontal, which requires aligning agricultural, food, public health and environmental objectives and strong and active collaboration of stakeholders from different sectors.

²² Sattenspiel, L. (2000). Tropical environments, human activities, and the transmission of infectious diseases. Yearbook of Physical Anthropology 43: 3-31.

2. The principles and goals of the reform

2.1. The guiding principles

In 1992, the CAP was radically reformed to integrate the rules of international trade and avoid the perverse effects of the previous policy, including surplus production. Support mechanisms through minimum prices have been replaced by direct aid, mainly per hectare and livestock head.

The perverse effects of the current policy, despite some corrections introduced since then, must lead us to a new reform of the same magnitude. It must also be part of the Union's objectives set out in the Green Deal in terms of carbon neutrality by 2050, safeguarding biodiversity, reducing the use of agrochemicals and synthetic fertilizers, and the nutritional quality of production accessible to all.

In doing so, the CAP must remain compatible with the rules of international trade²³. The use of public money to support commercial productions can certainly be challenged. On the other hand, allocate taxpayers' money to support non-market production such as soil enrichment, biodiversity enhancement, wetland conservation, etc., is perfectly justifiable, both to the taxpayer and to World Trade Organisation (WTO) rules.

The two overarching principles of the reform should be:

- First: **“Do not harm”**, the cornerstone of the European Green Deal. This means that all the current measures of the CAP that induce unsustainable production models or behaviours should be phased out. It also means that any new proposals should pass the “Do not harm” test at least relative to the climate change issues, or broader in Sustainable Development Goals (SDGs) terms.
- Second: **“Public money for public good”**. Taxpayers’ money should not be used for supporting the production of marketable goods or services, as it introduces market distortions and biases in the production modes. Marketable goods and services should be paid by market prices²⁴. Taxpayers’ money should be essentially, if not exclusively, used to support the production of public goods such as biodiversity, healthy soils, clean water and air, healthy food, diversified landscapes. A real production of public goods by farmers, that is not remunerated by the market. This public good production is also a positive element for agricultural production as it conserves and restores agricultural biodiversity and soil fertility.

²³Subject to the debate on a CO₂ "correction" at the entrance, which would certainly apply in the field of agri-food products.

²⁴ This should be helped by favouring production for local markets and value added and differentiated products as it reduces direct exposure to world prices and fluctuations.



2.2. The main goals

The main objectives of the CAP as stipulated in Art 39 of the TFEU remain valid and should not be forgotten. They should be implemented with the following additional features to fully embed the sustainability dimension.

2.2.1. Ecologically based agriculture

Climate and biodiversity crises must be taken into account in a new European agricultural and food model. There are many challenges. Soil will need to be regenerated by sequestering carbon, improving fertility and increasing their microbial, floral and faunal diversity. This will have the positive effect of controlling pathogens and reducing disease as well as better coping with more frequent and intense weather anomalies. Habitats and agricultural, functional and heritage biodiversity will need to be restored and conserved. This will reduce pest populations. All of this will support to mitigate climate change impacts and increase the resilience of agricultural systems to extreme weather events.

Agriculture will so be more resilient and crop yield could be maintained. Nevertheless, agriculture will also have to be less reliant on fossil fuel. It will have to reduce drastically the use of synthetic fertilizers and agrochemicals, and livestock feed imported from other continents, mostly produced in unsustainable ways. It will have to sell most of its products in short and local supply chains.

2.2.2. Agricultural aid, climate and biodiversity

The time has come to no longer pay farmers to practice their job according to a business as usual model because the pricing mechanisms do not allow them to be paid sufficiently and fair for their work. Agricultural aid should be paid on the basis of the production of common goods enjoyed by society as a whole, namely ecosystem services and biodiversity. This would make sense to taxpayers and give agriculture new prospects.

The European Green Deal stipulates that *“European farmers and fishermen are key to managing the transition. The Farm to Fork Strategy will strengthen their efforts to tackle climate change, protect the environment and preserve biodiversity. The common agricultural and common fisheries policies will remain key tools to support these efforts while ensuring a decent living for farmers, fishermen and their families”*. The Commission’s proposals for the Common Agricultural Policy for 2021 to 2027 stipulate that *“at least 40% of the common agricultural policy’s overall budget and at least 30% of the Maritime Fisheries Fund would contribute to climate action”*.²⁵

²⁵ https://ec.europa.eu/info/sites/info/files/european-green-deal-communication_en.pdf



2.2.3. Maintaining family farms and vibrant rural communities

Creating new prospects for European family farms would require increasing their profitability by decreasing production costs, especially those of commercial inputs, and increasing revenue by targeting quality products, by processing the products and selling them in short and local supply chains, at least partly. Complementary activities such as agritourism or part-time jobs are also possible solutions. Decreasing input use is feasible by replacing fossil-fuel based products (e.g. synthetic nitrogen fertilizer and agrochemicals) by the ecosystem services provided by biodiversity. This is perfectly possible since species of the agroecosystem can biologically fix large amounts of nitrogen, can regulate weeds, pests and diseases, support recycling of nutrients, and secure pollination and other vital functions. This requires the strong development of agroecological practices on large scales for the restoration of soil life with reduced or no-tillage; continuous soil cover; direct seeding into cover crops; the development of a dense ecological network (connectivity); the choice of climate-resilient crop species, cultivars and mixtures; intercropping (including agroforestry); long and diversified crop rotations; crop/livestock integration; rotational grazing; and the use of rustic livestock breeds that can transform grass into meat, eggs and dairy products.

Adopting these practices, measures and strategies allows not only to ensure the future of farms by one successor but often by several by the creation of jobs in processing and marketing activities. Maintaining farms in rural areas are also opportunities to develop new activities in these areas if economic activities are re-localised, thus also contributing to the social revitalisation of rural territories and therefore to rural development.

Since small-scale family farms get much less support than large industrial farms while they create more jobs per hectare, this trend should be counteracted by an adequate mechanism, supporting people and not hectares.

2.2.4. The systemic approach of agroecology

Dealing with crises, developing a system that is truly up to the challenge and adopting a systemic approach is essential. It alone can, with the support of analytical approaches, respond to the issues. This approach should integrate environmental, social and economic components while being technically realistic. With regard to the restoration of biodiversity, this ecologically based system should provide favourable conditions for life forms on the entire agricultural area and not only on a minority of land.

This system exists with **agroecology**. It has been defined by the Food and Agriculture Organization of the United Nations (FAO) in its memorandum "The Ten Elements of Agroecology"²⁶ and, in an even more detailed manner, in the report of a FAO High-Level Panel of Experts on food security and nutrition²⁷. In addition, Agroecology Europe has proposed a

²⁶ www.fao.org/agroecology/knowledge/10-elements/fr/

²⁷ www.fao.org/3/ca5602en/ca5602en.pdf



six-sentence summary text summarizing the previous documents²⁸. In order to illustrate the core of the concept, the annex of this paper presents a consolidated set of 13 agroecological principles detailed in the report of the above-mentioned FAO High-Level Panel of Experts.

The agroecological systems approach redesigns the agricultural system based on the principle that the role of external inputs can be replaced by ecological processes, while production levels can be maintained.

Thanks to its systemic approach explained above, agroecological systems are often more profitable than conventional agriculture as recently shown by a panel of around thirty European scientists²⁹.

3. The main measures for a sustainable CAP

3.1. Support people not hectares

Current subsidies to European agriculture have led to a very strong distortion of the relative costs of production factors in favour of surface, energy and capital intensity and against labour. This distortion has led to highly extractive and unsustainable production models which also contribute to job redundancy, unemployment and overexploitation of socially weaker workers. That is a clear breach to the “Do not harm” principle. Just as the energy transition begins with the phasing out of fossil fuel subsidies, the new CAP must abandon subsidies to unsustainable practices and/or conflicting with the EU's environmental and social objectives.

In general, agricultural practices compatible with respect for the environment, the fight against climate change, short circuit feeding, etc. are more labour intensive. It is therefore counterproductive to maintain a policy that subsidizes most factors of production except the most crucial one: labour.

The replacement of subsidies per hectare (or per livestock head) with a base income per FTE would correct this distortion, at least partially, given the usual social and income tax levies. This base income would be conditional on strict compliance with environmental rules, to a declared activity on a farm.

The replacement of the subsidy per hectare with an employment subsidy, would allow for a premium of 8,000 euro/year/FTE³⁰. This order of magnitude shows that this measure could have a significant and rapid impact to support family farming and more labour-intensive modes of production, which are necessary for a better protection of environment.

This base income could be financed not only by the phasing out of the current pillar 1 subsidies but also by the introduction of charges on practices that contribute to depleting our

²⁸ www.agroecology-europe.org/our-approach/our-understanding-of-agroecology/

²⁹ www.aardeboerconsument.nl/wp/wp-content/uploads/2019/10/19-10-08-Economic-potential-agroecology-jdvanderploeg.pdf

³⁰ France Stratégie, "Making agricultural policy a lever for ecological transition" October 2019.



common natural capital (use of agrochemical or chemical fertilizers), based on the “*polluter pays*” principle.

3.2. Public money to produce public goods

European agriculture provides, or has the potential to provide, public goods that benefit society as a whole. Among these, the three main public goods are the sequestration of carbon in agricultural soils, the restoration of rural biodiversity and the development of the ecological network that structures the landscapes.

Ecosystem services are declining, and they are better provided by small-scale farms in a heterogeneous landscape matrix³¹. However, small-scale family farms get much less support than large industrial farms. This would be corrected by the basic farmer income proposed in section 3.1, strongly conditioned on good environmental practices, including on compliance with reduction of nutrient excess and pesticide dependency.

As a complement to the former measure (section 3.1), replacing current subsidies to the surface by direct payments for the production of public goods in a context of a quality food production would give meaning to the Common Agricultural Policy. From the farmers' point of view, they would no longer be paid to do their ordinary job only as seen to provide high yields for different commodities. The present monetary support is a kind of assistance because of the insufficient profitability of their activity. The future should be the production of common goods that are not otherwise paid because they are not marketable. From the citizens' point of view, their taxes will no longer be spent to the bottom of a profit to subsidize a declining sector but for the actual production of public goods which they can enjoy and profit concretely in a long-term perspective.

The payment per ton of carbon sequestered in soils can be based on two alternative systems: periodic and geo-localized analysis of soil carbon content or the adoption of a fairly simple grid that assesses carbon sequestration on the basis of agricultural practices. When these amounts of carbon are assessed, a value must be assigned to the ton of carbon that is high enough to motivate farmers to opt for sustainable practices.

The payment based on the length, the density and quality of ecological networks is easy to implement. These data can be measured by a combination of aerial detection (remote sensing) and field record. Then a price must be given to the quantity of each type of habitat.

Agricultural practices, in particular various agroecological practices, that sequester carbon in soils are also those that restore, conserve or enhance soil and above-ground biodiversity. Moreover, the development of the ecological network is the basis for the recovery of biodiversity that could spread above the soil surface.

³¹ Perfecto I. and Vandermeer J., 2010. The agroecological matrix as alternative to the land-sparing/agriculture intensification model. Proceedings of the National Academy of Sciences of the United States of America 10, 13: 5786-5791.

However, additional measures in favour of biodiversity are to be foreseen for the conservation of certain habitats or species: late cutting or low stocking rate in certain grassland types, strips of unharvested cereals at the field edge for certain passerines, etc. All these specific measures are easily identifiable in detail at the scale of European regions. Moreover, the current agro-environmental schemes provide a good basis for pricing them.

All these public good related measures supported by direct payments have the potential to improve productivity and resilience of the agricultural production. They can thus produce an additional economic benefit.

The two previous main measures, “Support people not hectares” and “Public money to produce public goods”, constitute the two pillars of the reform proposal. They have to be completed by accompanying measures.

3.3. Other supporting measures

These supporting measures accompany the transition towards agroecology.

Even if agroecological farming appears to be more profitable than conventional agriculture on the medium-term³², farmers who want to convert to agroecological farming face difficulties in the first years. They have to make new investments, while soil fertility restoration and adaptation of crop practices take time, and new markets have to be developed. New tools adapted to agroecological systems and practices are needed. Transition towards a new system is thus difficult and risky.

The implementation of a training network with well-trained advisers in transition towards agroecological systems is therefore essential. Their role would be to escort farmers’ groups. They will help the majority of farmers to avoid the mistakes of the pioneers of agroecology. They will facilitate and speed up the transition and adaptation of agroecological practices to the local pedo-climatic and socio-economic context.

A network of innovative agroecological farms should be set up and promoted. These farms could be used as “agroecological lighthouses from which principles may radiate out to local communities, helping them to build the basis of an agricultural strategy that promotes efficiency, diversity, synergy, and resiliency”³³.

The reduction of current subsidies for large machines and buildings will free financial means for the creation of a new fund for facilitating the development and purchase of agroecological tools and equipment (e.g. direct drill machine, roller crimper, adapted harrow types, machineries co-designed with farmers, intercrop harvesters, outwintering platform for cattle, product processing equipment and workshop, farm shops).

³² www.aardeboerconsument.nl/wp/wp-content/uploads/2019/10/19-10-08-Economic-potential-agroecology-jdvanderploeg.pdf

³³ Nicholls C. and Altieri M.A., 2018. Pathways for the amplification of agroecology. *Agroecology and Sustainable Food Systems* 42, 10:1-24.



Creating land banks (inspired by the French “SAFER”³⁴ and other examples) at European scale or in all Members States would facilitate young and small farmers to buy or rent land on the basis of a project that is relevant and consistent with the goals of the ‘Green Deal’ and the future ‘Farm to Fork’ programme.

All the previous accompanying measures should be co-financed by Member States.

In coherence with the Green Deal, the CAP should be coordinated with other policies. The context and the rationale of this cross-cutting approach cannot be described and justified in this document. It can just be said that this coordination between the CAP and other policies and the private sector is necessary for questions of policy coherence and efficiency. The phasing out of subsidies on fossil energy and external inputs should be implemented in coordination with other EU policies and the phasing out of loans to fossil fuel extraction and to industrial nitrogen fixation in coordination with the private sector (notably banks). The CAP should also be coordinated with public health policies and the private sector for reducing food waste and combat obesity, malnutrition, and related non-communicable diseases.

The policy proposed in this paper should result in a better distribution of income for farmers and overall a better margin for their activities. The public good production would be supported by taxpayer money, while their food production margins would benefit from the reduction of costly inputs while the reorientation of the production toward quality products, local markets and value productions should result in better prices. Increasing the share of the production devoted to the local market and alternative distribution channels, would increase the contestability power of farmers relative to the concentrated industrial buyers. Overall the exposure to the volatility of world priced would be significantly mitigated.

It is likely, and probably logical, that the prices to the final consumer would increase in line with the improved nutritional quality of the products. However, this should not be seen as a negative issue undermining people’s spending power. It should rather be seen as an opportunity to rebalance distribution of added value along the food supply chain, while providing consumers with better quality food which is value for money, empowering them, and reducing food waste. First, fair distribution of added value and adequate remuneration of farmers will be favoured by short food supply chains typical of agroecological production. Second, increased supply of high quality, local and seasonal food will favour rebalancing of food offer and supply thereby diminishing food waste. Third, fostering agroecological food systems will (re)educate consumers towards values like seasonality of production or avoidance of mass purchase of non-fresh and overly processed food, and make them aware that they can play an active role in fostering local socio-economic wealth, and in sustaining their own health and environmental health. In this way, consumers will also learn what is the dark side of cheap food (unbalanced added value distribution, unfair remuneration of farmers, environmental degradation, borderline or illegal exploitation of seasonal and migrant work).

³⁴ <https://www.safer.fr/>



Annex. Consolidated set of 13 agroecological principles according to the report of a FAO High-Level Panel Experts on food security and nutrition³⁵.

Principle	FAO's ten elements	Scale application*
Improve resource efficiency		
1. Recycling. Preferentially use local renewable resources and close as far as possible resource cycles of nutrients and biomass.	Recycling	FI, FA
2. Input reduction. Reduce or eliminate dependency on purchased inputs and increase self-sufficiency.	Efficiency	FA, FO
Strengthen resilience		
3. Soil health. Secure and enhance soil health and functioning for improved plant growth, particularly by managing organic matter and enhancing soil biological activity.		FI
4. Animal health. Ensure animal health and welfare.		FI, FA
5. Biodiversity. Maintain and enhance diversity of species, functional diversity and genetic resources and thereby maintain overall agroecosystem biodiversity in time and space at field, farm and landscape scales.	Part of diversity	FI, FA
6. Synergy. Enhance positive ecological interaction, synergy, integration and complementarity among the elements of agroecosystems (animals, crops, trees, soil and water).	Synergy	FI, FA
7. Economic diversification. Diversify on-farm incomes by ensuring that small-scale farmers have greater financial independence and value addition opportunities while enabling them to respond to demand from consumers.	Part of diversity	FA, FO
Secure social equity/responsibility		
8. Co-creation of knowledge. Enhance co-creation and horizontal sharing of knowledge including local and scientific innovation, especially through farmer-to-farmer exchange.	Co-creation and sharing of knowledge	FA, FO
9. Social values and diets. Build food systems based on the culture, identity, tradition, social and gender equity of local communities that provide healthy, diversified, seasonally and culturally appropriate diets.	Parts of human and social values and culture and food traditions	FA, FO
10. Fairness. Support dignified and robust livelihoods for all actors engaged in food systems, especially small-scale food producers, based on fair trade, fair employment and fair treatment of intellectual property rights.		FA, FO

³⁵ www.fao.org/3/ca5602en/ca5602en.pdf

11. Connectivity. Ensure proximity and confidence between producers and consumers through promotion of fair and short distribution networks and by re-embedding food systems into local economies.	Circular and solidarity economy	FA
12. Land and natural resource governance. Strengthen institutional arrangements to improve, including the recognition and support of family farmers, smallholders and peasant food producers as sustainable managers of natural and genetic resources.	Responsible governance	FA, FO
13. Participation. Encourage social organization and greater participation in decision-making by food producers and consumers to support decentralized governance and local adaptive management of agricultural and food systems.		FO

*Scale application: FI = field; FA = farm, agroecosystem; FO = food system

Source: derived from from Nicholls et al., 2016; CIDSE, 2018; FAO, 2018c.