



# **MORE** **farmers** **BETTER** **food**

**Why and how to put  
small-scale sustainable  
producers at the core  
of the new CAP**

**March, 2019**





# More farmers, better food

Why and how to put small-scale sustainable producers at the core of the new CAP

March, 2019

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*For the* **Nyeleni Europe and Central Asia Platform for Food Sovereignty**

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## **Nyeleni Europe and Central Asia Platform for Food Sovereignty**

We are a political and social alliance of grassroots, community based movements and organizations, representing small-scale food producers: peasants/small farmers, pastoralists, indigenous peoples, small-scale fisher people, agriculture and food workers; and supporting constituencies, such as urban poor; rural and urban women's and youth organisations; consumers, environmental, justice, solidarity, human rights organizations; community-based food movements, which politically respect the 6 principles of Food Sovereignty as agreed at the First Nyéléni Food Sovereignty Forum and sign up to the Nyéléni Europe Declaration from 2011.

Organisations active in Nyéléni Food Sovereignty Movement in Europe and Central Asia:

European Coordination Via Campesina (ECVC)  
World Forum of Fisher People (WFFP)  
URGENCI, Community Supported Agriculture Network  
Centre for Support of Indigenous peoples of the North (CSIPN)  
European Shepherds' Network (ESN/WAMIP)  
Friends of the Earth Europe (FoEE)  
FIAN European Sections and Coordinations (FIAN)  
Transnational Institute (TNI)

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# Preface



The Nyéléni Europe network is part of a global movement that has been growing for over three decades, in which hundreds of organisations and movements have engaged in efforts to defend and promote people's right to food sovereignty around the world. This struggle has emerged to challenge the increasingly dominant role of corporate-controlled industrial agriculture in our food system, which is founded upon chemical and fossil fuel inputs, mechanisation and cheap labour. This has come at the cost of jobs, rural livelihoods, the environment and public health.

Following the launch of the principles of food sovereignty by La Via Campesina at the 1996 World Food Summit in Rome, and the 2007 International Forum on Food Sovereignty in Mali, European peasants and civil society actors gathered in 2011 in Krems, Austria, for the 1st European Forum for Food Sovereignty. It was here that more than 400 women and men from 34 European countries came together to formulate the Nyéléni Europe Declaration.

The Declaration denounced the corporate-controlled industrial agricultural model taking hold of European and global food systems, and the policy frameworks, including the Common Agricultural Policy, that were supporting these developments. In response, it called for a redesign of the food system rooted in the principles of food sovereignty.

The 2nd Nyéléni Europe Forum for food sovereignty took place in 2016 in Cluj-Napoca, Romania. 500 delegates representing 290 civil society organisations from 43 countries convened to develop joint strategies for re-localising food systems and influencing key policies in Europe.

Since then, the Nyéléni Europe network has continued to work towards resilient food systems that promote environmentally sustainable and socially just production, distribution and consumption of safe and healthy food, whilst continuing the fight to reclaim the right to the commons for food producers and citizens alike. The organisations active in the network include: European Coordination Via Campesina, Friends of the Earth Europe, URGENCI, the Transnational Institute, the World Forum of Fisher People, the Centre for Support of Indigenous Peoples of the North, the European Shepherd's Network, and FIAN.

# Introduction



Small-scale family farms are the backbone of food production worldwide. Together, they are the main or sole providers of diverse and nutritious food for 70% of the world's population [1]. However, the livelihoods of these small-scale producers are increasingly being threatened by the development of our globalised industrial food system. The narrowing focus on maximising yields and economic profits through high-input methods has brought about a crisis in the food and farming sector [2], [3], [4]. This situation also holds true in the European Union (EU).

Not only has the increasing concentration of control over European agriculture forced smaller producers out of business, it has also brought with it devastating impacts for the environment, human health and rural vitality. Soils are being degraded at an alarming rate, biodiversity and water quality are threatened, and rural communities are vanishing, endangering the right to food sovereignty for European citizens. The policy framework that explicitly aims to stimulate and regulate the agricultural sector in the EU is the Common Agricultural Policy (CAP). In recent years, the focus of the CAP and wider trade policies on competitiveness and international markets has significantly contributed to the situation outlined above.

Like more and more people from diverse backgrounds, the Nyéléni Europe network is joining the call for a fair and healthy food system, which nourishes soils and biodiverse ecosystems, protects the climate, promotes social cohesion in rural areas, and provides fair prices, dignified employment, and healthy food for all across the EU [5], [6], [7].

The CAP is currently undergoing a process of reform, providing the perfect opportunity to reorient the EU's food and farming system in line with these demands. This report introduces the CAP and its reform process; identifies areas of concern; makes the case that supporting small-scale sustainable producers is our best bet for addressing these concerns; and lays out what is needed from the CAP in order to assist them effectively. It then outlines potential pathways through which organisations can involve themselves in the CAP reform process, in order to push for the future of food and farming we want.



# Reforming the CAP

The CAP is the EU-wide policy framework designed to regulate the agricultural sector. Its purpose is to support farmer productivity and livelihoods, ensure that the climate and environmental challenges of agriculture are addressed, and promote social and economic development in rural areas [8]. Given the linkages between agriculture and many aspects of society, the CAP affects everyone.

Over time, the CAP has undergone several phases of reform, from its original focus on ensuring food security through market regulation to more recent market liberalisation, removal of the link between subsidies and production, and attempts to promote ‘greening’ of agricultural practices [9].

The current CAP commands 38% of the overall EU budget [10]. Payments are managed and distributed at the national level by each Member State. Funding is provided through two core pillars:

**Pillar 1:** provides direct income support for producers through a series of mandatory and voluntary measures, as well as funding for market support measures through the common organisation of the markets (CMO).

**Pillar 2:** provides funds for rural development, designed to foster competitiveness, ensure sustainable natural resource management and climate action, and achieve balanced territorial development. Pillar 2 is co-financed by national, regional and local level authorities.

The CAP is reformed periodically in order to adapt to changing conditions, coinciding with decisions over the EU’s seven year budget and the so-called Multiannual Financial Framework. The next CAP and EU budget period runs between 2021 and 2027. However, the reform process is already well underway. In June 2018, the European Commission (EC) published legislative proposals outlining their vision for the post-2020 CAP [11], following on from an earlier communication in 2017 [12]. The key features of the proposals are outlined below [i]:

**Funding:** The total budget of the proposed new CAP is €365 billion [13]. It will account for 28% of the overall EU budget for this period. The new CAP will maintain the two pillared structure, as outlined in the table below. This represents a reduction of 10-15% in real terms, with the potential cut to the rural development budget at 27% [4].

An additional €10 billion will be made available through the Horizon Europe programme, which is targeted at supporting research and innovation, with a strong emphasis on digitalisation.

**9 overall objectives:** the proposals set out nine main EU level objectives, as outlined in the diagram below. These are clustered around the themes of (1) providing a fairer deal; (2) improving climate and environmental ambition; and (3) placing farming at the heart of society [15].

Pillar 1	Pillar 2
<b>Direct payments:</b> € 265.2 billion <b>Market support:</b> € 20 billion	<b>Rural development:</b> € 78.8 billion



CAP specific objectives (European Commission, 2019) [16]



**National Strategic Plans:** based on these objectives, a toolbox of appropriate measures and progress indicators will be developed at EU level. Member States will then use these to develop their own tailored National Strategic Plans. These would require EC approval before going ahead.

**Eco-schemes:** another notable feature of the new CAP proposals involves the mandatory provision of eco-schemes by Member States in Pillar 1 [17]. These would offer compensation to farmers that implement practices deemed beneficial for the climate and environment, beyond the requirements already covered by direct payments. Participation in eco-schemes would be voluntary for farmers.

**Coupled support:** Member States will still be able to allocate coupled support to sectors such as cereals, oilseeds, protein crops, milk and dairy products, lamb and goat meat, beef and veal, olive oil and cotton.

**Capping:** it will be mandatory for annual direct payments per beneficiary to be capped at €100,000, with digressive payments starting at €60,000. Labour costs can be deducted from this.

**Redistributive income support:** redistributive payments to support small and medium scale farmers will be mandatory. Individual Member States, however, will be free to decide on the parameters of the scheme in their country.

## PART 1

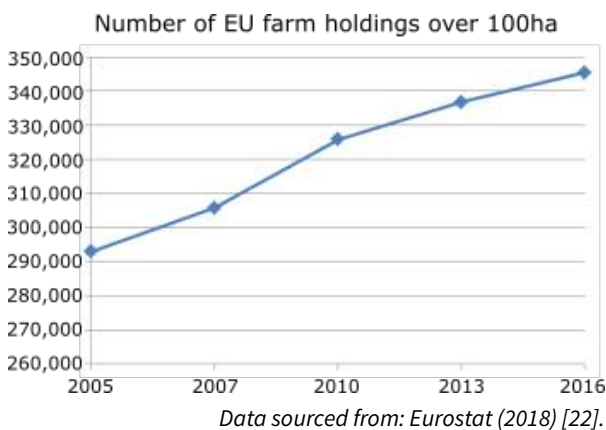
# Where is the CAP falling short?

The current CAP has prioritised ‘competitiveness’ and an orientation towards international trade [18], and the new proposals look set to continue this trajectory. Incentives to scale-up, such as area-based payments, have encouraged the development of larger industrial farms and squeezed smaller family farms out of the market. This has far ranging consequences, which this section aims to outline.

## The rise of industrial farming

Whilst a broad spectrum of food producers exists across the EU, the last two decades have seen a noticeable rise in a particular type of enterprise: large-scale industrial farms.

The mode of production typically associated with these holdings relies heavily on chemical inputs, mechanisation, and cheap labour for large-scale livestock operations or monoculture cultivation [19]. They are also embedded within a supply-chain dominated by a handful of corporate actors [20], [21].



Due to the increased dominance of these actors in the food system, and their vested interest in the industrial model, small and medium producers face little choice but to conform, go into niche markets, or leave the sector altogether. This often means contract farming arrangements with big processors or retailers, and pressure to scale-up and adopt an input-intensive approach [23], [24]. Under current market conditions, smaller producers are simply unable to compete with the cheap prices at which industrial producers can offer their products.

As a result, factory farms and industrial monoculture or single-crop production are taking hold [25], [26], [27]. Access to low-cost commodities has also allowed large agri-food companies to develop mediocre quality, highly processed food products, further accelerating the concentration process across the supply-chain.

## Environmental damage

This trend threatens biodiverse ecosystems across Europe, and the vital services that they provide.

**Chemical pollution:** the excessive agrochemical use required for industrial production is polluting soils and water sources [28], [29], [30], [31]. The animal waste generated by factory farms is also contaminating our water systems and contributing towards air pollution [32], [33], [34]. Rivers, estuaries and coastal and marine ecosystems are adversely affected, threatening the livelihoods of fishers and others who rely on the health of these ecosystems. Initiatives to tackle these issues such as the Nitrates Directive have proven insufficient in the context of a wider framework that encourages industrial models of production [35].

**Biodiversity loss:** vast expanses of genetically uniform, intensively cultivated cropland are creating biodiversity deserts and fuelling biodiversity loss [36], [37], [38]. Excessive water abstraction or diversion for irrigation also threatens fish populations [39]. The greening measures introduced in the current CAP are widely recognised to be insufficient in combatting declining trends in biodiversity [40], [41].

Populations of common farmland birds fell by 56% across the EU between 1980 and 2016 [42].

Heavy agrochemical application has decimated populations of pollinators and natural pest predators [43], [44]. Declining bee populations are a headline example of this wider trend [45], [46], [47].

Total insect biomass across 63 protected sites in Germany is estimated to have declined by 76% over a period of 27 years [48].

Agro-biodiversity, including the diversity of animal breeds, is also being eroded by the prevalence of monoculture cropping and intensive livestock rearing [49].

**Soil degradation:** intensive and extractive industrial production for food and animal feed is contributing to the depletion of soils across the EU [50]. The rich cernozem soils of Central and Eastern Europe (CEE) are particularly at threat from the influx of agribusinesses operating destructive industrial modes of production. Erosion and soil sealing also pose a significant threat to the long-term fertility of European soils [51].

**Deforestation and land degradation abroad:** intensive industrial livestock farming in the EU is built upon imports of animal feed inputs, such as soybean, from abroad [52], [53]. The CAP, as well as international trade agreements, have contributed significantly to this scenario [54]. Industrial soybean plantations in Latin America have driven the deforestation and degradation of globally important biomes such as the Amazon and Cerrado, threatening endangered species and fuelling the pace of global climate change [55], [56]. Plans to promote European protein crop production have so far failed to move away from the industrial production of soybean, failing to deal with the central issue of livestock overproduction, and putting pressure on so-called 'underutilised' land and rural communities in CEE [57].

**Greenhouse gas emissions:** when considering the entire global supply chain, our food system accounts for around half of human-caused greenhouse gas (GHG) emissions [58]. In addition to EU agriculture's footprint through deforestation abroad [59], [60], the production and use of fertilisers is a significant source of emissions [61]. Industrial meat and dairy production, heavily subsidised by the EU [62], is an incredibly high GHG emitter [63], [64].

**Waste:** the food system that has been built around, and now reinforces industrial production, generates an incredible amount of waste.

It is estimated that around 88 million tonnes of food waste is generated per year in the EU [65]. Costs associated with food waste in the EU were estimated at €143 billion in 2012 [66].

The increasing distance from farm to fork has gone hand in hand with the explosion of plastic food packaging, contributing significantly to our current plastic waste crisis [67]. Both the current CAP and new reform proposals have not identified waste as a key issue, and provide insufficient support for potential solutions.

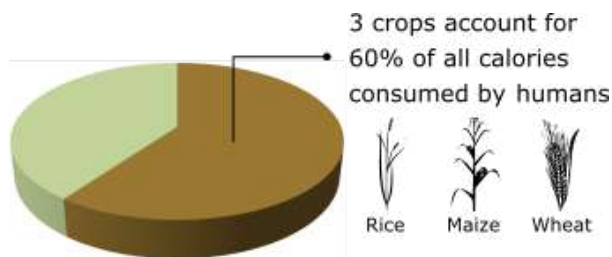
## Deteriorating human and animal health

Our agricultural system is inherently linked to the health of the population [68]. Many of the EU's most pressing health issues can be traced back to practices in the industrial food and farming sector.

**Chemical contamination:** chemical residues found on food present a major public health threat; one example would be the widespread use of glyphosate, the active ingredient in widely used herbicides, which has been categorised as 'potentially carcinogenic to humans' [69]. Nitrate, phosphorous and heavy metal pollution, for which agricultural run-off is partly responsible [70], [71], has been linked with various forms of cancer and other adverse health effects [72], [73].

**Spread of disease:** intensive livestock production has proven a fertile breeding ground for disease, putting both animal and human populations at risk [74]. High and prophylactic antibiotic use in animal farming is creating increased anti-microbial resistance [75], undermining the viability of industrial livestock production and the use of antibiotics in human medicine [76], [77].

**Uniform and unhealthy diets:** the genetic diversity of the food we eat has plummeted in recent years [78], [79]. In addition, industrial food systems have resulted in high availability of unhealthy and ultra-processed foods [80]. Similarly, continued support for the industrial livestock sector has contributed to the overconsumption of meat products [81], [82].



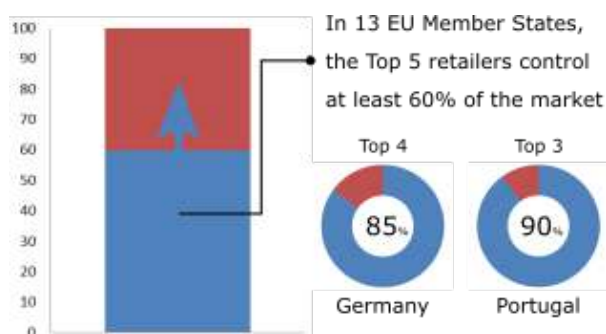
Data sourced from: Willet et al. (2019) [84].

These trends play a significant role in the increasing incidence of overweight and obesity in the EU, which has reached epidemic levels [84], [85].

51.6% of the EU population is overweight or obese [86]. Other non-communicable diseases such as diabetes linked to unhealthy diets are also on the rise [87]. This poses an incredible economic burden for health services across the EU [88], yet CAP-funded promotion campaigns have failed to target healthy produce [89]. Solutions have tended to focus narrowly on addressing individual consumer choice. Little attention has been paid to providing healthy, nutritious, diverse and affordable food for the consumer by addressing the entire food supply-chain, from inputs and production through to processing and retail [90], [91], [92].

## Unfair markets and liberalisation

**Low prices at the farm gate:** the opening up of food markets, coupled with the control of the downstream sector by a few large corporations [93], has destabilised the price received by producers.



Data sourced from: European Parliament Research Service (2016) [94].

Farmers can find themselves receiving payments lower than the cost of production. The recent dairy crisis is an example of this [95]. The prolonged drop in producer prices for pork between 2014 and 2016 is another [96]. Recently, a Directive on Unfair Trading Practices has been set up to deal with some of these

inbalances. However, in failing to treat this as a structural issue, it may simply shift price-setting power to corporations in other parts of the supply-chain [97]. Support for the development of alternative distribution networks such as short supply chains has been inadequate. To the contrary, large retailers have received significant funding from development finance organisations such as the European Bank for Reconstruction and Development (EBRD) and the World Bank to expand their activities, particularly in CEE [98]. This has further cemented the dominance of these actors.

**Hidden costs:** consumer prices do not reflect the environmental and social damage that is created by industrial food production [99], [100]: globally, it is estimated that for every \$1 (€0.85) paid by a consumer, another \$2 (€1.70) [ii] is incurred by society through health and environmental damages [101]. Artificially low food prices create and maintain the myth that industrial food systems have succeeded in delivering affordable food to the EU population [102], [103]. Despite this, food insecurity and reliance on food banks in the EU are on the rise, largely linked to austerity measures enforced in several Member States [104], [105]. Small-scale sustainable producers are not being rewarded for the diversity of their production, or for other social and environmental functions that they perform [106]. Public goods provided by pastoralism are particularly overlooked [107], [108]. The new proposals do not go far enough in linking payments to the provision of public goods.

**Poor labour conditions:** another aspect hidden from view is the dependence of agrifood operations on cheap, seasonal, and often migrant labour [109], [110], [111]. Recent investigations and media reports reveal appalling working and living conditions for agricultural and food labourers across the EU; these can no longer be dismissed as isolated incidences [112], [113], [114], [115]. Human trafficking and conditions of modern day slavery are prevalent both in production and processing [116], [117], [118]. Women are particularly vulnerable to labour exploitation and abuse [119], [120]. These issues are completely missing in the current CAP and the reform proposals.

**Dumping and Free trade agreements (FTAs):** CAP support for commodity exports has fuelled the dumping of surpluses in both CEE and developing

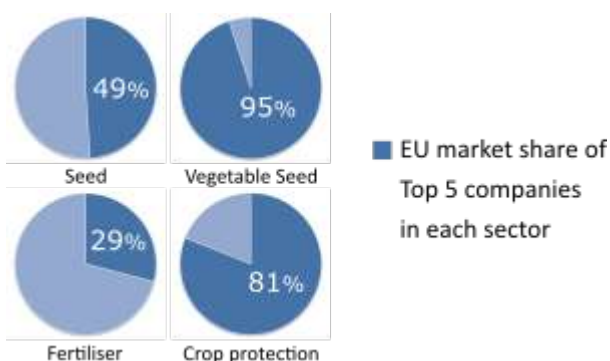


country markets, uprooting the livelihoods of local producers [121], [122]. At the same time, liberalisation has exposed EU markets to cheap imports from regions with far lower environmental and social standards. The recent flurry of free trade agreements signed between the EU and various partners further exposes both EU and foreign producers to unequal policy environments and price volatility. These agreements have largely been negotiated behind closed doors in an undemocratic manner, without the involvement of Europe's family farmers, food producers, and consumers.

## Concentration of control

**Disappearance of small farms:** several publications in recent years have indicated the alarming extent of land concentration in the EU [123], [124], [125], [126]. Updated Eurostat statistics from 2016 reveal that 52.7% of Utilised Agricultural Area (UAA) is controlled by just 3.3% of the holdings [iii]. The provision of direct payments based on area has incentivised and facilitated this process of consolidation, with 80% of direct payments ending up with just 20% of the beneficiaries [127]. This goes hand in hand with the continued disappearance of small farms, which are often excluded from direct aid eligibility despite the social and ecosystem services they deliver.

Between 2005 and 2016, the number of farm holdings under 50 hectares (ha) fell by 29.4%. That represents just over 4 million holdings [iii].



Data sourced from: Mammana (2014) and Wesseler et al (2015) [iv], [128], [129].

Concentration in input markets is also driving high input costs, meaning that producers need to invest more capital up-front. This further marginalises smaller farms, and particularly young farmers and new entrants, fuelling the challenge of generational renewal.

**Resource grabbing:** land and water grabbing, often thought of as a problem only in the developing world, has also been shown to be prevalent within the EU [130], [131], [132]. This can occur both within and outside of the law. EU Member States have been reluctant to implement the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests (VGGTs) [133], as promoted by the Committee on World Food Security and the European Economic and Social Committee [134].

**Financialisation of EU agriculture:** the EU's arable land and other agricultural resources are increasingly becoming commodities within financial markets [135]. Investors are acquiring cheap arable land, often in the CEE region [136], [137]. Per hectare payments and a weak active farmer definition allow them to claim subsidies whilst prices inflate, before selling it off for a handsome profit. This causes further inflation, providing a serious barrier for new entrants and young farmers. Other areas such as agricultural commodities and infrastructure are also experiencing similar trends [138], [139]. This is distorting food prices in a manner totally detached from production [140].

**Capture of the commons:** in addition to commonly managed land and natural resources, which are threatened by the processes described above, corporations are intensifying their efforts to control other common resources such as seed, livestock genetics, technology and data [141], [142]. The Bayer-Monsanto merger is a high profile example of this in practice [143]. This poses a threat to diverse food and farming systems, and to the many livelihoods that depend upon them.

**Innovation as digitalisation:** innovation has tended to be equated narrowly with digitalisation, and public funds have largely been allocated to agribusiness. Inexpensive yet effective innovations developed by small-scale agroecological producers have typically been overlooked. The post-2020 CAP proposals allocate funding for research and innovation through Horizon Europe, with a strong overall focus on digitalisation [144], yet fail to consider who will control these processes and who will ultimately benefit.

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## PART 2

# The future of food and farming we want

In the light of the issues outlined above, the Nyéléni Europe network calls for a transition towards a food system that provides healthy, nutritious, affordable, and locally distributed food for consumers, nourishes soils and biodiverse ecosystems, protects the climate, provides fair prices as well as safe and dignified employment, and promotes social cohesion in rural areas. For this transition to be successful, we must place small-scale sustainable producers at the centre, and provide them with the political, economic and social support they need to strive for food sovereignty.

*'Food sovereignty is the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems' [145].*

## Small-scale sustainable producers

The EU's food producers represent an incredible diversity of cultures and practices. So what is meant by small-scale sustainable producers in the context of the EU?

Small-scale sustainable producers are female and male farmers, livestock keepers, pastoralists, fishers and other rural and urban food providers that utilise agroecological and other resilient models of food production or gathering to provide abundant, high quality, healthy, safe and affordable food primarily to territorial markets [v].

Agroecology is a holistic set of ecological, social and political principles that aims to embed food production within healthy and diverse agroecosystems and social networks, in a manner that minimises external inputs, provides secure livelihoods for producers, and delivers nutritious food for consumers. Agroecology cannot be reduced to a set of replicable technologies or practices, as it will take different forms depending on the ecological and cultural context of the local area [vi].

**Not just physical size:** the physical size referred to by 'small' is relative to national and sub-national contexts, so cannot be rigidly defined. In addition, physical size of holding does not necessarily dictate

the mode of production being practised [146]; intensive industrial livestock production, for example, can occur on relatively small land areas (although their virtual land area, including that used to grow feed, is much higher).

**Diverse identities and practices:** this is an inclusive definition, and encompasses various culturally-specific terms of identity such as peasant, small-scale family farmers, crofters, contadino, Baeuerlich, boeren, țărani, and baserritarra amongst others. What is important here is not the term itself, but the common feeling of being part of and depending on nature, and the common goal of embracing agroecology and striving towards food sovereignty. This will involve an array of producers using a wide range of different production systems based on their geographic and economic possibilities, as well as cultural preferences.

**Diverse production backgrounds:** these producers could be traditional family farmers, new entrants, or conventional producers making the transition towards sustainable agroecological practices.

## They already exist

Small-scale producers already form the backbone of the EU's food system. Small and medium sized family farms are present across the whole of the EU.

93% of the EU's 10.8 million farm holdings are less than 50 ha in size [vii]. Two-thirds of the total holdings are smaller than 5 ha [147].

Many of these producers are already utilising sustainable practices. In addition, there appears to be a strong appetite for a sustainable transition among conventional producers; the EU's total organic area increased by 25% between 2012 and 2017, meaning it now covers 7% of the total UAA [148].

In a broad survey of Dutch farmers in 2018, 80% of respondents indicated a desire to transition to environmentally-friendly practices [149].

More than half thought that an export-oriented model that encouraged expansion would not be feasible in the long term.

## High quality, healthy and safe food

Supporting small-scale sustainable producers can facilitate the required shift in focus from producing high quantities of food to producing food that is going to sufficiently nourish the population [150].

**Quality over quantity:** by breaking free from the pressure to mass produce for industrial processors and retailers, small-scale producers can concentrate on nurturing healthy soils and other natural resources, enabling them to produce healthy and nutrient dense food [151], [152].

**Nutritional diversity:** small-scale peasant and family food producers are stewards of genetic biodiversity, and have been for countless generations. They are therefore crucial in contributing to diversified and sustainable diets.

Peasants are estimated to have bred and preserved 2.1 million crop varieties of around 7,000 domesticated species [153].

They are also responsible for domesticating livestock species, continuing to breed 8,774 varieties.

**Reducing chemical dependence:** on-site fertility regeneration and natural pest and weed management techniques can release small-scale sustainable producers from dependence on external chemical inputs [154]. Chemical residues on food products are therefore minimised, as is the pollution of soils, water systems and the atmosphere. A food system based on small-scale agroecology can therefore actively enhance human health by revitalising the natural resources that we interact with [155].

## Investing in the local environment

Small-scale sustainable producers actively invest in their local ecosystems, as this is the core of their management system [156].

**Building healthy soils:** agroecological methods explicitly aim to build healthy soils. This can be achieved through a variety of practices, but studies have shown that soil organic matter, soil structure and water and nutrient retention capacities increase under agroecological management [157], [158], [159], [160], [161]. This can lead to dramatic and sustained increases in yield.

**Biodiversity:** small-scale production systems focused on diversity already help support biodiverse ecosystems across Europe [162], [163], [164]. Small organic farms in the EU have been shown to host far higher species richness than their conventional counterparts [165]. Again, high agro-biodiversity is an integral part of the management system, providing benefits in areas such as pollination and pest control [166], [167].

A recent study of US corn fields found that insecticide-free regenerative farms had 10 times fewer pests than conventional fields [168].

Diversified production also serves as a form of insurance against external shocks such as price volatility and extreme weather events.

**Facilitating ecosystem services:** in addition to the benefits already described, agroecological production systems, including pastoralist systems [169], can provide benefits at the landscape level. Water quality maintenance, flood protection, prevention of erosion, and enhanced nature conservation are all examples of ecosystem services that small-scale sustainable producers could help to preserve [170], [171], [172].

## Moving away from fossil fuels

**Low fossil fuel use:** systems rooted in agroecology require far lower fossil fuel consumption across the entire chain [173]. Artificial fertilisers become largely unnecessary, the production of which is a major source of fossil fuel emissions. Small-scale

sustainable enterprises are typically less energy intensive, requiring lower levels of fossil fuels in order to optimise their outputs [174], [175]. Smaller producers also tend to distribute their output through local, national and regional markets, reducing emissions from transport and storage, and mitigating the associated impacts on land and marine ecosystems.

**Keeping carbon in the ground:** soils have been identified as a potentially crucial carbon sink in the fight against climate change [176], [177]. Agroecological practices have been shown to significantly improve soil carbon sequestration [178], [179], [180]. Supporting small-scale sustainable producers is therefore an incredible opportunity to mobilise widespread climate change mitigation action.

## Empowerment, employment & rural vitality

**Superior efficiency and profitability:** the focus on low external inputs means that small-scale producers can be far more cost effective [181], [182]. This raises farmer incomes and allows them to become more autonomous in terms of decision-making, as well as more independent financially.

According to data from the 2007 Farm Structure Survey [viii], Standard Gross Margin per hectare (SGM/ha) [ix] on smaller farms was higher than that for larger farms in 21 EU member states [183]. In 9 of these countries, SGM/ha was more than twice as high on smaller farms.

When considered in a holistic manner, the environmental and social benefits brought about by this low external input approach make small-scale sustainable production highly efficient in comparison to conventional production [184].

**More labour intensive:** small-scale food producers are typically much more labour intensive in comparison to larger industrial operations. This has often been portrayed as inefficient, but such a perspective ignores the labour absorption service that supporting small-scale production provides for rural areas. This is particularly important for certain areas in CEE, where the disappearance of small farms has driven high unemployment and migration.

Farm holdings under 50 ha provided an average of 0.13 Annual Work Units per hectare (AWU/ha) [x] in 2016, as opposed to 0.02 for holdings over 100 ha [vii].

A study of a sample of small organic producers in the UK found an average AWU/ha of 3.2, way above the national average at the time of 0.026 [185].

**Rewarding work:** beyond just labour intensity, studies from across the continent suggest that small-scale sustainable enterprises can provide dignified and fulfilling work [186], [187], [188]. There is growing interest in agroecological food production, or other professions within agroecological food systems, from a diverse cross-section of society. This reflects a growing appetite to be part of positive environmental and social change. The benefits of rewarding agricultural work for wellbeing and mental health are already well recognised, with several EU Member States supporting schemes that promote farm work for those with disabilities or facing mental health issues [189], [190].

**Sharing knowledge, building communities:** agroecology is incredibly knowledge intensive. Food systems built around small-scale sustainable producers are therefore founded upon the sharing of knowledge, cooperation, and collaboration, which build trust and solidarity. This can help to revitalise fractured rural communities; case studies from across Europe demonstrate how agroecological transitions can make rural areas more attractive places to live and work [191], [192], [193]. It also facilitates locally appropriate innovation, a process in which women are often central.

**Central role of women:** these horizontal processes of knowledge sharing also have the potential to break down gender barriers [194], [195], [196]. This can allow rural women to perform and revalorise the vital role that they hold in food systems as providers of nutrition, as well as custodians of biodiversity and knowledge, amongst other things [197], [198]. This is emphasised by the high female representation within the agroecology movement.

## Short supply-chains

Globally, 80% of small-scale producers market their produce on territorial markets [199], and smaller producers are continuing to find innovative ways to



link up with local consumers, such as Community-supported Agriculture (CSA) [200] and solidarity economy networks [201].

**Fairer prices:** shorter supply-chains offer a more realistic price in line with the cost of production [202]. This can benefit both producers and consumers [203], as the price is not dictated by corporate retailers and other financial entities invested in industrial food systems.

**Shelter from international price volatility:** price independence from corporate-controlled global supply chains also brings stability. Supporting the growth of local and regional markets for locally produced food not only fuels economic development in rural areas, but can do this in a sustainable manner that insulates against shocks on international commodity markets.

**Connecting people to their food:** facilitating short supply chains also helps to develop a food system in which consumers are closer to the source of their food. This can improve transparency in food supply-chains, serve as an effective educational tool, and build relationships between producers and consumers [204].

**Local food governance:** expanding the role of shorter supply chains in the EU also provides an opportunity for the democratisation of food systems. The emergence of local food councils and sustainable food strategies in some European cities reflects the demand from citizens to have a greater say in the choices affecting the food that they eat, and how it is produced and distributed [205], [206], [207].

## Small-scale producers can feed cities sustainably

Despite the fact that peasant agriculture continues to feed some of the world's largest urban centres [218], the argument that small farms cannot produce enough food to meet rising food demand, especially from urban areas, is often made to support the continuation of industrial food systems.

This idea is founded upon a couple of misconceptions:

**The yield gap myth:** firstly, the idea that conventional systems provide superior yields is misleading. Within an enabling policy and market environment, small-scale sustainable producers have been shown to compete with yields of conventional agriculture, even outperforming them under extreme climatic conditions [209], [210].

**Beyond yields:** the second misconception is the narrow focus on productivity and yield in the first place. It is now fairly well established that enough food is already produced globally to feed our projected population by 2050 [211]. The true challenge revolves around how to distribute food effectively in a manner that is socially and environmentally just. An agroecological transition in Europe could provide enough food, maintain export capacity, reduce reliance on imports, and provide environmental and social benefits [212].

## A holistic pathway

The key message here is that policy thinking needs to broaden its horizons. Until now, the various defects identified with our food systems have been targeted in isolation [213]. Solutions have also tended to focus on expensive highly technical fixes that then need to be integrated into the real world [214]. This approach has come at a huge economic, environmental and social cost.

By placing small-scale sustainable producers at the centre of the new CAP, multiple problems in traditionally separated policy domains can be tackled at the same time. Examples from around the world, including within the EU, are showing how supporting innovative small-scale agroecological producers can achieve multiple benefits [215]. This is a far more efficient and cost-effective pathway; the supporting evidence already exists, and it is continuing to mount.

## PART 3

# Mobilising the CAP for small-scale sustainable producers

A transition to a fairer, more sustainable and resilient food system based on food sovereignty is urgently needed if we are to overcome the environmental, social and economic challenges at hand. It is evident that the EU must carry out a radical reform of the CAP and other related policies in order to support small-scale sustainable producers. The following key areas must be addressed.

### Production and distribution

The new CAP must support a model of production and distribution that:

- a) Secures a fair income for farmers and farm workers.
- b) Ensures decent working conditions for everyone working in the food system.
- c) Facilitates and protects access to and rights over farmland for small-scale sustainable producers and new entrants.
- d) Prevents destabilisation of markets at the local, national, European and international levels.
- e) Encourages short supply chains and strengthens local and regional markets that enable an enhanced connection between rural and urban areas.
- f) Respects the right to food and decent livelihoods of small-scale producers in the global south.

#### Instruments to achieve this would include:

- Capping annual direct payments at €60,000 per beneficiary until the system of untargeted area-based payments is completely changed, with compulsory redistribution of subsidies for smaller producers.
- Making direct payments conditional on respect for labour rights as well as stronger environmental and climate action conditionality.
- Giving targeted support for young farmers and new entrants engaging in small-scale agroecology, including a monthly allowance to allow progress towards a decent income.
- Providing incentives for sustainable livestock models and local sustainable feed production, whilst avoiding simply transplanting industrial soybean production into Europe.
- Making specific support for small farmers mandatory and complementary to other income

support measures to ensure the long-term viability of these farms.

- Prioritising market regulations such as flexible supply management to prevent and address crises, ensure decent prices and stabilise income for small and medium-scale producers.
- Implementing import protection measures to ensure that environmental and health standards match those adhered to by EU producers.
- Creating a clear active farmer definition that includes small-scale producers and excludes speculative investors and prevents the financialisation of arable land.
- Increasing the proposed budget for Pillar 2.
- Ensuring that CAP funds from Pillar 2 are not diverted to private insurance firms under risk management measures.
- Phasing out of subsidies for biofuel and biogas.
- Supporting research and innovation that is embedded within agroecological and food sovereign systems, and builds upon the many low-tech grassroots innovations already in existence.
- Orienting farm advisory services towards a small-scale agroecological transition, which would include farmer to farmer exchange programmes.
- Introducing a direct payment measure for producers supplying local and regional markets.
- Making it mandatory to provide rural development funds for rural-urban collaborations to develop short supply chains.
- Making it mandatory to provide rural development funds for the infrastructure required to develop short supply chains, such as local storage, processing and marketing facilities.
- Creating a tenth overall CAP objective on encouraging the development of sustainable family

farming in developing countries, and at the very least avoiding harm to local producers, as put forward by the Committee of the Regions.

- Ensuring that CAP objectives and National Strategic Plans adhere to the recently adopted UN Declaration on the Rights of Peasants and Other People Working in Rural Areas.

## Sustainable consumption, diets and lifestyles

The new CAP must facilitate more sustainable consumption, diets, and lifestyles that:

- a) Ensures safe, healthy and nutritious food for all in the EU.
- b) Maintains the quality and diversity of agricultural and food products.
- c) Fosters seasonal, local, culturally appropriate and affordable diets.
- d) Encourages a level of meat and dairy consumption that is aligned with sustainable livestock production models.

### Instruments to achieve this would include:

- Implementing school schemes based on models of sustainable public procurement that favour healthy produce from local small-scale producers, and support the development of participatory guarantee systems (PGS) to certify producers against participatory quality standards.
- Directing CAP-funded promotion campaigns towards healthy and nutritious produce.
- Supporting the development of sustainable urban food policies in cities across the EU.
- Providing incentives for diverse fruit and vegetable production and consumption.
- Implementing effective education programmes on the link between nutrition, health and the way in which food is produced.
- Making the provision of CAP funding conditional upon having fiscal policies in place designed to enhance the relative affordability of healthy foods.

## The right to natural resources and the commons

The right to commonly-owned knowledge, innovations, and healthy and accessible land and natural resources must be upheld in a manner that:

- a) Protects the environment in all rural areas.
- b) Conserves soil organic matter and soil biodiversity.
- c) Halts the reliance on synthetic chemical pesticides and mineral fertilisers that harm ecosystems on land and in rivers, estuaries, coastal areas and at sea.
- d) Radically reduces emissions from farming and ensures a transition towards a resilient food and farming systems.
- e) Prevents and minimises food waste throughout the food chain.
- f) Restores and prevents further loss of biodiversity.
- g) Encourages conservation and active use of genetic biodiversity.
- h) Halts food and feed imports linked to deforestation.
- i) Ensures that animal health and welfare are effectively respected.
- j) Protects the health and wellbeing of farmers, farm workers and rural populations.
- k) Ensures that commons are valorised and managed through collective, democratic and community control.

### Instruments to achieve this would include:

- Replacing untargeted area-based payments with payments conditional on the delivery of positive environmental and social outcomes.
- Removing coupled support for intensive livestock production models reliant on feed imports.
- Setting ambitious quantifiable targets for reducing synthetic agrochemical use, and setting up a robust monitoring system to track progress.
- Ensuring that eco-scheme payments and other environmental and climate incentives remunerate producers beyond simply the costs incurred and income foregone, with a minimum of 30% of the direct payments budget allocated to this.
- Providing sustainable transition schemes for conventional producers who want to move towards holistic agroecological management systems.
- Supporting peasant animal farming systems with high animal welfare standards.
- Making CAP payments conditional to meeting agreed environmental, climate, biodiversity, and antibiotic use reduction targets.
- Providing rural development funds for improving the quality of life and public services in rural areas.
- Ensuring that only research and innovation that

enhances rather than erodes the autonomy of producers is eligible for Horizon Europe funding.

- Ensuring that new GMOs are not allowed in the EU for cultivation, and that imported GMO foodstuffs are specifically labelled, as decided in European Court of Justice case C-528/16.

- Facilitating the production, marketing and exchange of locally adapted, open pollinated and peasant seed varieties.

- Creating a European Land Directive in order to implement the Voluntary Guidelines on the Responsible Governance of Tenure (VGGTs), as recommended by the Committee of World Food Security, and facilitate access to land for small-scale sustainable producers.

## Democratic decision-making processes

The CAP and other relevant policies must be subject to transparent and open decision-making processes that:

- a) Are based on the meaningful involvement of all groups of actors affected.

- b) Provides meaningful access and inclusion for vulnerable groups.

- c) Provides accountability.

- d) Guards against undue influence from corporate lobbying.

- e) Prioritises the defence of common goods and values, serving communities and people, rather than the interests of corporations.

### **This would involve:**

- Participatory development of the National Strategic Plans of each member state, including local authorities and civil society organisations.

- Explicitly seeking the participation of farmers, farm workers, pastoralists and other food producers that support agroecology in the development of National Strategic Plans.

- Explicitly seeking the participation of other actors affected by the CAP such as small-scale fishers.

- Making CAP funding conditional on Member States delivering on the entire set of objectives set by the new CAP, with clear impact indicators used to set goals and track performance.

- Binding safeguards prohibiting interventions deemed harmful for the environment, animal welfare, and the rights and health of small-scale farmers and workers.

- Binding consequences for failure to meet environmental and social targets.

- Strict and transparent monitoring of how funds are spent at national level, with binding consequences for mismanagement.

It is clear that many of these issues are interlinked. For example, making direct payments conditional to various social and environmental standards contributes towards a broad range of public goods, as well as encouraging a low-input approach that can increase incomes and financial autonomy for producers. It is therefore logical that a coordinated overarching policy framework that captures these linkages would be beneficial. The Nyéléni Europe Network therefore supports the growing calls for the development of a Common Food Policy for the EU [216].



# Possibilities to engage in the ongoing CAP reform

The proposals for the post-2020 CAP outline a structure in which individual member states will have to submit their own National Strategic Plans. This provides an opportunity for producer and civil society groups to influence the content of the CAP in their country, and put small-scale sustainable producers in the spotlight.

**Targets and evaluation tools:** National Strategic Plans will have to demonstrate how they will work towards the main overall objectives set at the EU level. As part of this, they will need to set their own targets and tools for monitoring progress. National civil society groups can push for ambitious targets that are oriented around a transition towards agroecology and food sovereignty, as well as robust monitoring systems that capture progress in a holistic manner.

**Definitions:** as part of the new reform proposals, Member States will need to define terms such as *genuine farmer*, *small farmer*, *young farmer*, *agricultural area* and *agricultural activity*. These definitions will dictate who can qualify for CAP support. National civil society actors can push for definitions that favour small-scale sustainable producers, include those operating on marginal areas

such as non-herbaceous grazing lands, and do not allow speculative investors to receive support.

**Eco-scheme content:** the new reform proposals make it mandatory to offer eco-schemes that offer support to farmers that implement practices beneficial for the climate and environment. National civil society actors can actively engage in the design of these schemes, ensuring that they are allocated at least 30% of the Pillar 1 budget, and support the transition towards holistic agroecological production systems, as opposed to simply providing measures that industrial producers can comply with.

The coinciding of the CAP reforms with the growing momentum behind the food sovereignty movement provides an opportune moment for meaningful change. Now is the time to act to claim a food and agricultural policy that serves the needs of the people, not corporate agribusiness!

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# 1 References

- 1 ETCC Group (2017). *Who will feed us? The Industrial food chain vs the peasant food web*. Val David: ETC Group.
- 2 IPBES (2018). *Media Release: Worsening worldwide land degradation now 'critical', undermining well-being of 3.2 billion people*. [Online]. Available at: <https://www.ipbes.net/news/media-release-worsening-worldwide-land-degradation-now-%E2%80%98critical%E2%80%99-undermining-well-being-32> [last accessed: 01/02/2019].
- 3 UNCTAD (2013). *Trade and environment review 2013: Wake up before it is too late*. New York: United Nations.
- 4 FAO, IFAD, UNICEF, WFP and WHO. 2018. *The State of Food Security and Nutrition in the World 2018: Building climate resilience for food security and nutrition*. Rome: FAO.
- 5 DW (2019). *In Berlin 35,000 call for eco-sustainable harvests during Green Week*. [Online]. Available at: <https://www.dw.com/en/in-berlin-35000-call-for-eco-sustainable-harvests-during-green-week/a-47153241> [last accessed: 01/02/2019].
- 6 European Coordination Via Campesina (2019). *Democracy instead of corporate power. Food Sovereignty instead of Free Trade: European peasant movement demands in Belgian-German border*. [Online]. Available at: <https://www.eurovia.org/democracy-instead-of-corporate-power-food-sovereignty-instead-of-free-trade-european-peasant-movement-demands-in-belgian-german-border/>
- 7 FAO (2018). *Agroecology can help change the world's food production for the better*. [Online]. Available at: <http://www.fao.org/news/story/en/item/1113475/icode/> [last accessed: 01/02/2019].
- 8 European Commission (2019). *The common agricultural policy at a glance*. [Online]. Available at: [https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy/cap-glance\\_en](https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy/cap-glance_en) [last accessed: 11/02/2019].
- 9 European Commission (2019). *Timeline*. [Online]. Available at: [https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy/cap-glance\\_en#Timeline](https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy/cap-glance_en#Timeline) [last accessed: 14/02/2019].
- 10 European Commission (2017). *CAP explained: Direct payments for farmers 2015-2020*. Brussels: European Commission.
- 11 European Parliament (2019). *Ensuring continuity of support for EU farmers in 2019 and 2020*. [Online]. Available at: [http://www.europarl.europa.eu/RegData/etudes/ATAG/2019/630355/EPRS\\_ATA\(2019\)630355\\_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/ATAG/2019/630355/EPRS_ATA(2019)630355_EN.pdf) [last accessed: 14/02/2019].
- 12 European Commission (2017). *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: The Future of Food and Farming*. Brussels: European Commission.
- 13 European Commission (2018). *EU Budget: the Common Agricultural Policy beyond 2020*. [Online]. Available at: [http://europa.eu/rapid/press-release\\_MEMO-18-3974\\_en.htm](http://europa.eu/rapid/press-release_MEMO-18-3974_en.htm) [last accessed: 12/02/2019].
- 14 European Parliament (2018). *Confusing EU Budget figures: What are the real cuts and increases?* [Online]. Available at: <http://www.europarl.europa.eu/news/en/press-room/20180523IPR04141/confusing-eu-budget-figures-what-are-the-real-cuts-and-increases> [last accessed: 26/02/2019].
- 15 European Commission (2018). *EU Budget: The CAP after 2020*. [Online]. Available at: [https://ec.europa.eu/commission/sites/beta-political/files/budget-may2018-modernising-cap\\_en.pdf](https://ec.europa.eu/commission/sites/beta-political/files/budget-may2018-modernising-cap_en.pdf) [last accessed: 12/02/2019].
- 16 European Commission (2019). *Future of the common agricultural policy*. [Online]. Available at: [https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy/future-cap\\_en](https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy/future-cap_en) [last accessed: 26/02/2019].
- 17 European Commission (2018). *The post-2020 Common Agricultural Policy: Environmental benefits and simplification*. [Online]. Available at: [https://ec.europa.eu/info/sites/info/files/food-farming-fisheries/key\\_policies/documents/cap-post-2020-enviro-benefits-simplification.pdf](https://ec.europa.eu/info/sites/info/files/food-farming-fisheries/key_policies/documents/cap-post-2020-enviro-benefits-simplification.pdf) [last accessed: 14/02/2019].
- 18 Agricultural Markets Taskforce (2016). *Improving market outcomes: Enhancing the position of farmers in the supply chain*. Brussels: European Commission.
- 19 IPES Food (2016). *From University to Diversity: A paradigm shift from industrial agriculture to diversified agroecological systems*. [Online]. Available at: [http://www.ipes-food.org/\\_img/upload/files/UniformityToDiversity\\_ExecSummary.pdf](http://www.ipes-food.org/_img/upload/files/UniformityToDiversity_ExecSummary.pdf) [last accessed: 25/01/2015].
- 20 ETC Group (2017). *Who will feed us? The Industrial food chain vs the peasant food web*.
- 21 IPES Food (2017). *Too big to feed: Exploring the impacts of mega-mergers, consolidation and concentration of power in the agri-food sector*. [Online]. Available at: [http://www.ipes-food.org/\\_img/upload/files/Concentration\\_FullReport.pdf](http://www.ipes-food.org/_img/upload/files/Concentration_FullReport.pdf) [last accessed: 28/01/2019].
- 22 Eurostat (2018). *Agricultural holdings by agricultural area*. [Online]. Available at: [http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ef\\_m\\_farmleg&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ef_m_farmleg&lang=en) [last accessed: 14/02/2019].

- 23 Hendrickson, M.K. and James, H.S. (2005). The ethics of constrained choice: how the industrialization of agriculture impacts farming and farmer behaviour. *Journal of Agricultural and Environmental Ethics*, 2005 (18), pp. 269-291.
- 24 Hendrickson, M. (2015). Resilience in a concentrated and consolidated food system. *Journal of Environmental Studies and Sciences*, 5 (3), pp. 418-431.
- 25 Confédération Paysanne (2015). *Carte de l'industrialisation de l'agriculture : Une dérive destructrice pour les paysans*. [Online]. Available at: <http://www.confederationpaysanne.fr/actu.php?id=3347&PHPSESSID=n79v9ds53f7sq12fjiv3vdf8i2> [last accessed: 21/01/2019].
- 26 The Bureau of Investigative Journalism (2017). *The rise of the 'Megafarm': How British meat is made*. [Online]. Available at: <https://www.thebureauinvestigates.com/stories/2017-07-17/megafarms-uk-intensive-farming-meat> [last accessed: 21/01/2019].
- 27 Bieleman, J. (2010). *Five centuries of farming*. In *Five centuries of farming: A short history of Dutch agriculture 1500–2000*. Wageningen, Netherlands: Wageningen Academic Publishers.
- 28 Euractiv (2018). *EU takes Germany to court over high nitrate levels*. [Online]. Available at: <https://www.euractiv.com/section/agriculture-food/news/eu-takes-germany-to-court-over-high-nitrate-levels/> [last accessed: 28/01/2019].
- 29 European Commission (2018). *REPORT FROM THE COMMISSION TO THE COUNCIL AND THE EUROPEAN PARLIAMENT on the implementation of Council Directive 91/676/EEC concerning the protection of waters against pollution caused by nitrates from agricultural sources based on Member State reports for the period 2012–2015*. Brussels: European Commission.
- 30 Malaj, E., von der Ohe, P.C., Grote, M., Kuhne, R., Mondy, C. P., Usseglio-Polatera, P., Brack, W. and Schafer, R. B. (2014). Organic chemicals jeopardize the health of freshwater ecosystems on the continental scale. *Proceedings of the National Academy of Sciences*, 111 (26), pp. 9549-9554.
- 31 Silva, V. Mol, H.G.J., Zomer, P., Tienstra, M., Ritsema, C.J., Geissen, V. (2019). Pesticide residues in European agricultural soils – A hidden reality unfolded. *Science of the Total Environment*, 653, pp. 1532-1545.
- 32 Compendium voor de Leefomgeving (2016). *Mestproductie bij gebruiksnormen: bedrijven met overproductie, 2000-2015*. [Online]. Available at: <https://www.clo.nl/indicatoren/nl052811-mestproductie-bij-gebruiksnormen-bedrijven-met-overproductie> [last accessed: 28/01/2019].
- 33 The Guardian (2018). *Dutch cow poo overload causes an environmental stink*. [Online]. Available at: <https://www.theguardian.com/environment/2018/feb/16/dutch-cow-poo-overload-causes-an-environmental-stink> [last accessed: 28/01/2019].
- 34 DW (2016). *High levels of nitrate in German groundwater, drinking water*. [Online]. Available at: <https://www.dw.com/en/high-levels-of-nitrate-in-german-groundwater-drinking-water/a-19557211> [last accessed: 29/01/2019].
- 35 IPES Food (2019). *Towards a Common Food Policy for the European Union: The policy reform and realignment that is required to build sustainable food systems in Europe*. [Online]. Available at: [http://www.ipes-food.org/\\_img/upload/files/CFP\\_FullReport.pdf](http://www.ipes-food.org/_img/upload/files/CFP_FullReport.pdf) [last accessed: 12/02/2019].
- 36 European Environmental Agency (2013). *The European grassland butterfly indicator: 1990-2011*. Luxembourg: Publications Office of the European Union.
- 37 Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (2018). *The regional assessment report on biodiversity and ecosystem services for Europe and Central Asia: Summary for policymakers*. Bonn: IPBES.
- 38 CNRS (2018). *Where have all the farmland birds gone?* [Online]. Available at: <https://news.cnrs.fr/articles/where-have-all-the-farmland-birds-gone> [last accessed: 28/01/2019].
- 39 Freyhof, J. and Brooks, E. (2011). *European Red List of Freshwater Fishes*. Luxembourg: Publications Office of the European Union.
- 40 European Court of Auditors (2017). *Greening: a more complex income support scheme, not yet environmentally effective*. Luxembourg City: European Court of Auditors.
- 41 Alliance Environment and the Thünen Institute (2017). *Evaluation study of the payment for agricultural practices beneficial for the climate and the environment*. Brussels: European Commission.
- 42 PanEuropean Common Bird Monitoring Scheme (2018). *European indicators*. [Online]. Available at: [https://pecbms.info/trends-and-indicators/indicators/indicators/EU1\\_Fa/](https://pecbms.info/trends-and-indicators/indicators/indicators/EU1_Fa/) [last accessed: 28/01/2019].
- 43 Hallmann, C.A., Sorg, M., Jongejans, E., Siepel, H., Hofland, N., Schwan, H. et al. (2017). More than 75 percent decline over 27 years in total flying insect biomass in protected areas. *PLoS ONE* 12(10).
- 44 Sanchez-Bayo, F. and Wyckhuys, K.A.G. (2019). Worldwide decline of the entomofauna: A review of its drivers. *Biological Conservation*, 232, pp. 8-27.
- 45 Woodcock, B.A., Bullock, J.M., Shore, R.F., Heard, M.S., Pereira, M.G., Redhead, J. et al. (2017). Country-specific effects of neonicotinoid pesticides on honey bees and wild bees. *Science*, 356 (6345), pp. 1393-1395.

- 46 Tsvetkov, N., Samson-Robert, O., Sood, K., Patel, H.S., Malena, D.A., Gajiwala, P.H. et al. (2017). Chronic exposure to neonicotinoids reduces honey bee health near corn crops. *Science*, 356 (6345), pp. 1395-1397.
- 47 European Food Safety Authority (2018). *Q&A: Conclusions on neonicotinoids 2018*. [Online]. Available at: <https://www.efsa.europa.eu/sites/default/files/news/180228-QA-Neonics.pdf> [last accessed: 27/02/2019].
- 48 Hallmann, C.A. et al. (2017). More than 75 percent decline over 27 years in total flying insect biomass in protected areas.
- 49 European Parliament (2016). *Biodiversity and agriculture*. [Online]. Available at: [http://www.europarl.europa.eu/RegData/etudes/BRIE/2016/583842/EPRS\\_BRI\(2016\)583842\\_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/BRIE/2016/583842/EPRS_BRI(2016)583842_EN.pdf) [last accessed: 19/03/2019].
- 50 European Academies Science Advisory Council (2018). *Opportunities for soil sustainability in Europe*. [Online]. Available at: [https://easac.eu/fileadmin/PDF\\_s/reports\\_statements/EASAC\\_Soils\\_complete\\_Web-ready\\_210918.pdf](https://easac.eu/fileadmin/PDF_s/reports_statements/EASAC_Soils_complete_Web-ready_210918.pdf) [last accessed: 25/02/2019]
- 51 Panagos, P., Standardi, G., Borrelli, P., Lugato, E., Montanarella, L., and Bosello, F. (2018). Cost of agricultural productivity loss due to soil erosion in the European Union: From direct cost evaluation approaches to the use of macroeconomic models. *Land Degradation and Development*, 29 (3), pp. 471-484.
- 52 Friends of the Earth Europe (2018). *Soy Alert: How to increase the EU's plant protein production in a sustainable and agroecological way? The role of an EU-wide Protein Plan*. Brussels: Friends of the Earth Europe.
- 53 Oliveira, G.d.L.T. (2016). The geopolitics of Brazilian soybeans. *The Journal of Peasant Studies*, 43(2), 348-372.
- 54 FERN (2017). *Agriculture and deforestation: The EU Common Agricultural Policy, soy, and forest destruction*. Brussels: FERN.
- 55 WWF. (2014). *Soy Report Card: Assessing the use of responsible soy for animal feed in Europe*. Gland: WWF.
- 56 Elgert, L. (2016). 'More soy on fewer farms' in Paraguay: challenging neoliberal agriculture's claims to sustainability. *The Journal of Peasant Studies*, 43(2), 537-561.
- 57 Ecoruralis and European Coordination Via Campesina (2018). *The trouble with soy: the threats to small-scale producers across Europe*. [Online]. Available at: <https://www.eurovia.org/wp-content/uploads/2018/08/Report-The-trouble-with-soy-2018-compressed.pdf> [last accessed: 30/01/2019].
- 58 The Economics of Ecosystems and Biodiversity (2018). *Measuring what matters in agriculture and food systems: a synthesis of the results and recommendations of TEEB for Agriculture and Food's Scientific and Economic Foundations report*. Geneva: UN Environment.
- 59 European Commission (2013). *The impact of EU consumption on deforestation: Comprehensive analysis of the impact of EU consumption on deforestation*. Brussels: European Union.
- 60 COWI A/S (2018). *Feasibility study on options to step up EU action against deforestation*. Brussels: European Union.
- 61 Warner, J.X., Dickerson, R.R., Wei, Z., Strow, L.L., Wang, Y. and Liang, Q. (2018). Increased atmospheric ammonia over the world's major agricultural areas detected from space. *Geophysical Research Letters*, 44, pp. 2875-2882.
- 62 Heinrich Boll Foundation and Friends of the Earth Europe (2014). *Meat Atlas: Facts and figures about the animals we eat*. [Online]. Available at: [http://www.foeeurope.org/sites/default/files/publications/foee\\_hbf\\_meatatlas\\_jan2014.pdf](http://www.foeeurope.org/sites/default/files/publications/foee_hbf_meatatlas_jan2014.pdf). [Last accessed: 11/02/2019].
- 63 GRAIN and Institute for Agriculture and Trade Policy (2018). *Emissions impossible: How big meat and dairy are heating up the planet*. [Online]. Available at: <https://www.grain.org/article/entries/5976-emissions-impossible-how-big-meat-and-dairy-are-heating-up-the-planet> [last accessed: 01/02/2018].
- 64 Leip, A., Billen, G., Garnier, J., Grizzetti, B., Lassaletta, L. and Reis, S. et al. (2015). Impacts of European livestock production: nitrogen, sulphur, phosphorus and greenhouse gas emissions, land-use, water eutrophication and biodiversity. *Environmental Research Letters*, 10 (11).
- 65 European Parliament (2017). *Food waste: the problem in the EU in numbers*. [Online]. Available at: <http://www.europarl.europa.eu/news/en/headlines/society/20170505STO73528/food-waste-the-problem-in-the-eu-in-numbers-infographic> [last accessed: 29/01/2019].
- 66 Fusions (2016). *Estimates of European food waste levels*. Stockholm: European Commission.
- 67 Schweitzer, J.-P., Gionfra, S., Pantzar, M., Mottershead, D., Watkins, E., Petsinaris, F. et al. (2018). *Unwrapped: How throwaway plastic is failing to solve Europe's food waste problem (and what we need to do instead)*. Brussels: Institute for European Environmental Policy (IEEP).
- 68 IPES Food (2017). *Unravelling the food-health nexus: Addressing practices, political economy, and power relations to build healthier food systems*. [Online]. Available at: [http://www.ipes-food.org/\\_img/upload/files/Health\\_FullReport\(1\).pdf](http://www.ipes-food.org/_img/upload/files/Health_FullReport(1).pdf) [last accessed: 29/01/2019].
- 69 International Agency for Research on Cancer. (2017). *IARC Monographs Volume 112: evaluation of five organophosphate insecticides and herbicides*. Lyon: IARC.
- 70 Parris, K. (2011). Impact of agriculture on water pollution in OECD countries: Recent trends and future prospects. *International Journal of Water Resources Development*, 27 (1), pp. 33-52.

- 71 European Environmental Agency (2018). *European waters: Assessment of status and pressures 2018*. Brussels: European Environmental Agency.
- 72 Fernández-Luqueño, F., López-Valdez, F., Gamero-Melo, P., Luna-Suárez, S., Aguilera-González, E.N., and Martínez, A.I., et al. (2013). Heavy metal pollution in drinking water: A global risk for human health: A review. *African Journal of Environmental Science and Technology*, 7 (7), pp. 567-584.
- 73 Iowa Environmental Council (2016). *Nitrate in Drinking Water: A Public Health Concern for All Iowans*. Des Moines: Iowa Environmental Council.
- 74 European Food Safety Authority (2018). *EFSA explains Zoonotic diseases: Food-borne zoonoses*. [Online]. Available at: [https://www.efsa.europa.eu/sites/default/files/corporate\\_publications/files/factsheetfoodbornezoonoses.pdf](https://www.efsa.europa.eu/sites/default/files/corporate_publications/files/factsheetfoodbornezoonoses.pdf)
- 75 IPES Food (2017). *Unravelling the food–health nexus: Addressing practices, political economy, and power relations to build healthier food systems*.
- 76 Living with Resistance Project (2018). Antibiotic and pesticide susceptibility and the Anthropocene operating space. *Nature Sustainability*, 1, pp. 632-641.
- 77 Compassion in World Farming (2011). *Antibiotics in animal farming: Public health and animal welfare*. [Online]. Available at: <https://www.ciwf.org.uk/media/3758863/Antibiotics-in-Animal-Farming-Public-Health-and-Animal-Welfare.pdf> [last accessed: 25/02/2019].
- 78 Khoury, K., Bjorkman, A.D., Dempewolf, H., Ramirez-Villegas, J., Guarino, L. and Jarvis, A. et al. (2014). Increasing homogeneity in global food supplies and the implications for food security. *Proceedings of the National Academy of Sciences*, March 2014, 201313490.
- 79 Heinrich Boll Foundation and Friends of the Earth Europe (2014). *Meat Atlas: Facts and figures about the animals we eat*.
- 80 Willet, W., Rockstrom, J., Loken, B., Springmann, M., Land, T. and Vermeulen, S., et al. (2019). *Food in the Anthropocene: the EAT-Lancet Commission on healthy diets from sustainable food systems*.
- 81 Monteiro, C.A., Moubarac, J.-C., Levy, R. and Silva Canella, D. (2017). Household availability of ultra-processed foods and obesity in nineteen European countries. *Public Health Nutrition*, 21 (Special Issue 1), pp. 18-26.
- 82 Changing Markets Foundation (2018). *Growing the good: The case for low-carbon transition in the food sector*. [Online]. Available at: <http://changingmarkets.org/wp-content/uploads/2018/10/Growing-the-Good-report-v3.pdf> [last accessed: 25/02/2019].
- 83 European Public Health Association (2017). *Healthy and sustainable diets for European countries*. [Online]. Available at: [https://eupha.org/repository/advocacy/EUPHA\\_report\\_on\\_healthy\\_and\\_sustainable\\_diets\\_20-05-2017.pdf](https://eupha.org/repository/advocacy/EUPHA_report_on_healthy_and_sustainable_diets_20-05-2017.pdf) [last accessed: 25/02/2019].
- 84 Eurostat (2018). *Statistics explained: Overweight and obesity - BMI statistics*. [Online]. Available at: [https://ec.europa.eu/eurostat/statistics-explained/index.php/Overweight\\_and\\_obesity\\_-\\_BMI\\_statistics#Main\\_statistical\\_findings](https://ec.europa.eu/eurostat/statistics-explained/index.php/Overweight_and_obesity_-_BMI_statistics#Main_statistical_findings) [last accessed: 29/01/2019].
- 85 WHO Regional Office for Europe (2018). *Obesity: Data and statistics*. [Online]. Available at: <http://www.euro.who.int/en/health-topics/noncommunicable-diseases/obesity/data-and-statistics> [last accessed: 29/01/2019].
- 86 Eurostat (2018). *Statistics explained: Overweight and obesity - BMI statistics*.
- 87 Willet, W. et al. (2019). *Food in the Anthropocene: the EAT-Lancet Commission on healthy diets from sustainable food systems*.
- 88 European Heart Network (2017). *Transforming European food and drink policies for cardiovascular health*. [Online]. Available at: <http://www.ehnheart.org/publications-and-papers/publications/1093:transforming-european-food-and-drinks-policies-for-cardiovascular-health.html> [last accessed: 23/02/2019].
- 89 IPES Food (2019). *Towards a Common Food Policy for the European Union: The policy reform and realignment that is required to build sustainable food systems in Europe*.
- 90 IPES Food (2017). *Unravelling the food–health nexus: Addressing practices, political economy, and power relations to build healthier food systems*.
- 91 Dangour, A.D., Mace, G. and Shankar, B. (2017). *Food systems, nutrition, health and the environment*. *The Lancet*, 1 (1), pp. 8-9.
- 92 Muller, M., Tagtow, A., Roberts, S.L. and MacDougall, E. (2009). Aligning Food Systems Policies to Advance Public Health. *Journal of Hunger and Environmental Nutrition*, 4 (3-4), pp. 225-240.
- 93 European Parliamentary Research Service (2016). *Short food supply chains and local food systems in the EU*. Brussels: European Parliament.
- 94 European Parliamentary Research Service (2016). *Short food supply chains and local food systems in the EU*.
- 95 Euractiv (2017). Dairy farmers demand EU action on milk prices. [Online]. Available at: <https://www.euractiv.com/section/agriculture-food/news/dairy-farmers-demand-eu-action-on-milk-prices/> [last accessed: 29/01/2019].



- 96 EuroNatur and ABL (2017). *For an agricultural policy that is supported by society: Remodelling the EU agricultural policy with a view to a quality strategy*. [Online]. Available at: <http://www.arc2020.eu/wp-content/uploads/2017/05/000000-German-Platform-for-another-CAP-March-2017.pdf>
- 97 Euractiv (2018). *Europe should protect its farmers, not big food multinationals*. [Online]. Available at: <https://www.euractiv.com/section/agriculture-food/opinion/thurs-europe-should-protect-its-farmers-not-big-food-multinationals/> [last accessed: 13/02/2019].
- 98 The Guardian (2015). *Lidl has received almost \$1bn in public development funding*. [Online]. Available at: <https://www.theguardian.com/business/2015/jul/02/lidl-1bn-public-development-funding-supermarket-world-bank-eastern-europe> [last accessed: 19/03/2019].
- 99 FAO (2015). *Trucost reveals \$3 trillion environmental cost of farming*. [Online]. Available at: <https://www.trucost.com/trucost-news/trucost-reveals-3-trillion-environmental-cost-farming/> [last accessed: 29/01/2019].
- 100 The Economics of Ecosystems and Biodiversity (2018). *Measuring what matters in agriculture and food systems: a synthesis of the results and recommendations of TEEB for Agriculture and Food's Scientific and Economic Foundations report*.
- 101 ETC Group (2017). *Who will feed us? The Industrial food chain vs the peasant food web*.
- 102 Compassion in World Farming (2016). *Cheap food costs dear*. [Online]. Available at: <https://www.ciwf.org.uk/media/7426410/cheap-food-costs-dear.pdf> [last accessed: 29/01/2019].
- 103 Sustainable Food Trust (2017). *The hidden cost of UK food*. [Online]. Available at: <http://sustainablefoodtrust.org/wp-content/uploads/2013/04/HCOF-Report-online-version-1.pdf> [last accessed: 29/01/2019].
- 104 Die Tafeln (2016). *Die Tafeln nach Zahlen: Migration und Integration: Ergebnisse der Tafel-Umfrage 2016*. [Online]. Available at: [https://www.tafel.de/fileadmin/media/Presse/Pressemappen/2016\\_Tafel-Umfrage.pdf](https://www.tafel.de/fileadmin/media/Presse/Pressemappen/2016_Tafel-Umfrage.pdf) [last accessed: 13/02/2019].
- 105 The Trussel Trust (2018). *More people than ever expected through foodbank doors this Christmas, as charity releases new figures*. [Online]. Available at: <https://www.trusselltrust.org/2018/11/27/foodbanks-christmas-2018/> [last accessed: 13/02/2019].
- 106 IPES Food (2016). *From University to Diversity: A paradigm shift from industrial agriculture to diversified agroecological systems*.
- 107 Liechti, K. and Biber, J.-P. (2016). *Pastoralism in Europe: characteristics and challenges of highland-lowland transhumance*. *Revue Scientifique et Technique*, 35 (2), pp. 561-575.
- 108 McGahey, D., Davies, J., Hagelberg, N. and Ouedraogo, R. (2014). *Pastoralism and the Green Economy – a natural nexus?* Nairobi: IUCN and UNEP.
- 109 McGuinness, T. and Grimwood, G. (2017). *Migrant workers in agriculture*. [Online]. Available at: <https://researchbriefings.parliament.uk/ResearchBriefing/Summary/CBP-7987#fullreport> [last accessed: 06/02/2019].
- 110 Corrado, A. (2017). *Migrant crop pickers in Italy and Spain*. [Online]. Available at: [https://www.boell.de/sites/default/files/e-paper\\_migrant-crop-pickers-in-italy-and-spain\\_1.pdf?dimension1=division\\_ip](https://www.boell.de/sites/default/files/e-paper_migrant-crop-pickers-in-italy-and-spain_1.pdf?dimension1=division_ip) [last accessed: 06/02/2019].
- 111 Mori, S. (2016). *The agricultural migrant labourer caught between exploitation and irregularity: stories from Southern Europe*. [Online]. Available at: <http://www.croceviaterra.it/lotte-contadine/migration-and-agricultural-labour-force-in-italy-and-europe/> [last accessed: 06/02/2019].
- 112 Gangmasters & Labour Abuse Authority (2018). *The nature and scale of labour exploitation across all sectors within the United Kingdom*. [Online]. Available at: <http://www.gla.gov.uk/media/3537/external-nature-and-scale-of-labour-exploitation-report-final-version-may-2018.pdf> [last accessed: 06/02/2019].
- 113 Clark, N. (2013). *Detecting and tackling forced labour in Europe*. [Online]. Available at: <https://www.jrf.org.uk/report/detecting-and-tackling-forced-labour-europe> [last accessed: 06/02/2019].
- 114 Equal Times (2017). *Subcontracting exploitation in the German meat industry*. [Online]. Available at: <https://www.equaltimes.org/subcontracting-exploitation-in-the?lang=en#XFq2eLVKJIU> [last accessed: 06/02/2019].
- 115 The Local (2016). *Spain's salad growers demand end to exploitation*. [Online]. Available at: <https://www.thelocal.es/20160217/spains-salad-growers-exploitation> [last accessed: 06/02/2019].
- 116 MEDU (2018). *The wretched of the earth: A report on the working and living conditions of the agricultural laborers in the Piana di Gioia Tauro region*. [Online]. Available at: <http://www.mediciperidiritiumani.org/wp-content/uploads/2018/06/THE-WRETCHED-OF-THE-EARTH.pdf> [last accessed: 06/02/2019].
- 117 US Department of State (2019). *Trafficking in persons report*. [Online]. Available at: <https://www.state.gov/documents/organization/282798.pdf> [last accessed: 06/02/2019].
- 118 Politico (2018). *'Modern-day slavery' on the rise in Europe: report*. [Online]. Available at: <https://www.politico.eu/article/labor-trafficking-exploitation-modern-day-slavery-on-the-rise-in-europe-report/> [last accessed: 06/02/2019].
- 119 Directorate General for Internal Policies (2017). *The vulnerability to exploitation of women migrant workers in agriculture in the EU: the need for a Human Rights and Gender based approach*. Brussels: European Parliament.

- 120 Palumbo, L. and Sciarba, A. (2015). Vulnerability to Forced Labour and Trafficking: The case of Romanian women in the agricultural sector in Sicily. *Anti-Trafficking Review*, 5, pp. 89-108.
- 121 Goodison, P. (2015). *The impact of EU poultry sector policies on sub-Saharan African countries*. Copenhagen: IHU.
- 122 Politico (2018). *How EU milk is sinking Africa's farmers*. [Online]. Available at: <https://www.politico.eu/article/eus-milk-scramble-for-africa/> [last accessed: 17/02/2019].
- 123 TNI (2013). *Land concentration, land grabbing and people's struggles in Europe*. Amsterdam: TNI.
- 124 Committee on Agriculture and Rural Development (2017). *REPORT on the state of play of farmland concentration in the EU: how to facilitate the access to land for farmers (2016/2141(INI))*. Brussels: European Parliament.
- 125 Kay, S. (2016). *Land grabbing and land concentration in Europe: A Research Brief*. Amsterdam: TNI.
- 126 The Greens European Free Alliance (2016). *Land rush: The sellout of Europe's farmland*. Brussels: Maria Heubuch.
- 127 European Commission (2017). *Direct payments to agricultural producers - graphs and figures: Financial year 2017*. [Online]. Available at: [https://ec.europa.eu/agriculture/sites/agriculture/files/cap-funding/beneficiaries/direct-aid/pdf/direct-aid-report-2017\\_en.pdf](https://ec.europa.eu/agriculture/sites/agriculture/files/cap-funding/beneficiaries/direct-aid/pdf/direct-aid-report-2017_en.pdf) [last accessed: 14/02/2019].
- 128 Mammana, I. (2014). *Concentration of market power in the EU seed market*. [Online]. Available at: <https://www.greens-efa.eu/files/doc/docs/056cb230ebaf0357706c3996a7c68d1d.pdf> [last accessed: 01/02/2019].
- 129 Wesseler, J., Bonanno, A., Drabik, D., Matera, V.C., Malatugi, L., Meyer, M. and Venus, T.J. (2015). *Overview of the agricultural inputs sector in the EU*. Brussels: European Parliament.
- 130 European Economic and Social Committee (2015). *OPINION of the European Economic and Social Committee on Land grabbing – a warning for Europe and a threat to family farming (own-initiative opinion)*. Brussels: European Economic and Social Committee.
- 131 Kay, S., Peuch, J. and Franco, J. (2015). *Extent of farmland grabbing in the EU*. Brussels: European Parliament.
- 132 Eco Ruralis (2016). *Land Grabbing in Romania: Rabobank - Over 21,000 hectares*. [Online]. Available at: [https://drive.google.com/file/d/0B\\_x9XeYoYkWUGd6cclJbkstQ2s/view](https://drive.google.com/file/d/0B_x9XeYoYkWUGd6cclJbkstQ2s/view)
- 133 FAO (2012). *Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests*. Rome: FAO.
- 134 European Economic and Social Committee (2015). *OPINION of the European Economic and Social Committee on Land grabbing – a warning for Europe and a threat to family farming (own-initiative opinion)*.
- 135 Filardi, M. and Prato, S. (2018). Reclaiming the future of food: Challenging the dematerialization of food systems. In: Right to Food and Nutrition Watch (Ed.), *When food becomes immaterial: Confronting the digital age*, pp. 6-13. Germany: FIAN International & Brot für die Welt.
- 136 DW (2016). *Agrispeculation in Eastern Europe*. [Online]. Available at: <https://www.dw.com/en/agrispeculation-in-eastern-europe/a-38273403> [last accessed: 30/01/2019].
- 137 Ecoruralis and European Coordination Via Campesina (2018). *The trouble with soy: the threats to small-scale producers across Europe*.
- 138 Filardi, M. and Prato, S. (2018). *Reclaiming the future of food: Challenging the dematerialization of food systems*.
- 139 Heinrich Boll Foundation, Rosa Luxembourg Foundation, and Friends of the Earth Europe. (2017). *Agrifood Atlas: Facts and figures about the corporations that control what we eat*. Brussels: Heinrich Boll Foundation, Rosa Luxembourg Foundation and FoEE.
- 140 Foodwatch (2011). *The hunger-makers: How Deutsche Bank, Goldman Sachs and other financial institutions are speculating with food at the expense of the poorest*. [Online]. Available at: [https://www.foodwatch.org/fileadmin/foodwatch\\_international/reports/2011-10\\_foodwatch-Report\\_The-Hunger-Makers.pdf](https://www.foodwatch.org/fileadmin/foodwatch_international/reports/2011-10_foodwatch-Report_The-Hunger-Makers.pdf) [last accessed: 23/02/2019].
- 141 IPES Food (2017). *Too big to feed: Exploring the impacts of mega-mergers, consolidation and concentration of power in the agri-food sector*.
- 142 ETC Group (2018). *Blocking the chain: Industrial food chain concentration, Big Data platforms and food sovereignty*. Val David: ETC Group.
- 143 Friends of the Earth Europe (2018). *Open letter from civil society calling for the Bayer-Monsanto merger to be rejected*. [Online]. Available at: <http://www.foeeurope.org/civil-society-letter-bayer-monsanto-merger-200318> [last accessed: 26/02/2019].
- 144 European Commission (2019). *A new tool to increase the sustainable use of nutrients across the EU*. [Online]. Available at: [https://ec.europa.eu/info/news/new-tool-increase-sustainable-use-nutrients-across-eu-2019-feb-19\\_en](https://ec.europa.eu/info/news/new-tool-increase-sustainable-use-nutrients-across-eu-2019-feb-19_en) [last accessed: 27/02/2019].
- 145 Nyeleni (2007). *Declaration of Nyeleni*. [Online]. Available at: <https://nyeleni.org/IMG/pdf/DeclNyeleni-en.pdf> [last accessed: 14/02/2019].

- 146 Eco Ruralis (2017). *Small Farms in Europe: Time for a Re-Definition*. [Online]. Available at: [https://www.accesstoland.eu/IMG/pdf/comparative\\_analysis\\_of\\_small\\_farms\\_in\\_europe.pdf](https://www.accesstoland.eu/IMG/pdf/comparative_analysis_of_small_farms_in_europe.pdf) [last accessed: 01/02/2019].
- 147 Eurostat (2018). *Farm structure survey 2016*. [Online]. Available at: <https://ec.europa.eu/eurostat/documents/2995521/9028470/5-28062018-AP-EN.pdf/8d97f49b-81c0-4f87-bdde-03fe8c3b8ec2> [last accessed: 16/02/2019].
- 148 Eurostat (2019). *Organic farming statistics*. [Online]. Available at: [https://ec.europa.eu/eurostat/statistics-explained/index.php/Organic\\_farming\\_statistics](https://ec.europa.eu/eurostat/statistics-explained/index.php/Organic_farming_statistics) [last accessed: 14/02/2019].
- 149 Trouw (2018). *Boer wil verduurzamen om uit de crisis te komen*. [Online]. Available at: <https://www.trouw.nl/groen/boer-wil-verduurzamen-om-uit-de-crisis-te-komen~a9091ad5/> [last accessed: 24/01/2019].
- 150 Willet, W., Rockstrom, J., Loken, B., Springmann, M., Land, T., Vermeulen, S., et al. (2019). *Food in the Anthropocene: the EAT-Lancet Commission on healthy diets from sustainable food systems*. London: The Lancet.
- 151 FAO (2014). *Agroecology for food security and nutrition: Proceedings of the FAO International Symposium*. Rome: FAO.
- 152 FAO (2015). *Healthy soils are the basis for healthy food production*. Rome: FAO.
- 153 ETC Group. *Who will feed us? The Industrial food chain vs the peasant food web*.
- 154 Wijeratna, A. (2012). *Fed up: Now's the time to invest in agro-ecology*. [Online]. Available at: [http://www.actionaid.org/sites/files/actionaid/ifsn\\_fed\\_up.pdf](http://www.actionaid.org/sites/files/actionaid/ifsn_fed_up.pdf) [last accessed: 30/01/2019].
- 155 IPES Food (2017). *Unravelling the food–health nexus: Addressing practices, political economy, and power relations to build healthier food systems*. [Online]. Available at: [http://www.ipes-food.org/\\_img/upload/files/Health\\_FullReport\(1\).pdf](http://www.ipes-food.org/_img/upload/files/Health_FullReport(1).pdf) [last accessed: 29/01/2019].
- 156 van der Ploeg, J.D. (2010). The peasantries of the twenty-first century: the commoditisation debate revisited. *Journal of Peasant Studies*, 37(1), 1-30.
- 157 Pretty, J., Toulmin, C. and Williams, S. (2011). Sustainable intensification in African agriculture. *International Journal of Agricultural Sustainability*, 9 (1), pp. 5-24.
- 158 Rodale Institute (2011). *The Farming Systems Trial: Celebrating 30 Years*. [Online]. Available at: <https://rodaleinstitute.org/wp-content/uploads/fst-30-year-report.pdf>
- 159 Rodale Institute (2016). *Organic systems show improved soil organic matter; conventional remain unchanged*. [Online]. Available at: <https://rodaleinstitute.org/science/articles/organic-systems-improve-soil-organic-matter-conventional-remain-unchanged/> [last accessed: 01/02/2019].
- 160 Friends of the Earth International (2018). *Agroecology: Innovating for sustainable agriculture and food systems*. Amsterdam: The Netherlands.
- 161 Wijeratna, A. (2012). *Fed up: Now's the time to invest in agro-ecology*.
- 162 The Guardian (2018). *Return of strip-field farming creates haven for rare species in south Wales*. [Online]. Available at: <https://www.theguardian.com/environment/2018/aug/29/return-of-strip-field-farming-creates-haven-for-rare-species-in-south-wales> [last accessed: 01/02/2019].
- 163 Belfrage K., Björklund J. and Salomonsson L. (2006). The Effects of Farm size and organic farming on diversity of birds, pollinators, and plants in Swedish landscape. *Ambio*, 34(8), pp. 582-588.
- 164 Bavec, M. and Bavec, F. (2014). Impact of Organic Farming on Biodiversity. In: Y-H Lo, J.A. Blanco and S. Roy eds. *Biodiversity in Ecosystems*. IntechOpen. Available at: <https://www.intechopen.com/books/biodiversity-in-ecosystems-linking-structure-and-function/impact-of-organic-farming-on-biodiversity>
- 165 IFOAM and IUCN (2010). *Organic farming and biodiversity in Europe: Examples from the polar circle to the Mediterranean regions*. Brussels: IFOAM.
- 166 FAO (2016). *Policy analysis paper: Mainstreaming of biodiversity and ecosystem services with a focus on pollination*. Rome: FAO.
- 167 Christmann, S., Aw-Hassan, A., Rajabov, T., Khamraev, A. and Tselikas, A. (2017). Farming with Alternative Pollinators increases yields and incomes of cucumber and sour cherry. *Agronomy for Sustainable Development*, 37: 24.
- 168 LaCanne, C.E. and Lundgren, J.G. (2018). Regenerative agriculture: merging farming and natural resource conservation profitably. *PeerJ*, 6 (e4428).
- 169 VSF International (2014). *Small-scale livestock farming and food sovereignty*. [Online]. Available at: [http://vsf-international.org/wp-content/uploads/2015/02/1\\_VSF-SSLF-Food-Sovereignty\\_EN\\_SHORT.pdf](http://vsf-international.org/wp-content/uploads/2015/02/1_VSF-SSLF-Food-Sovereignty_EN_SHORT.pdf) [last accessed: 14/02/2019].
- 170 Basche, A.D. (2017). Improving water resilience with more perennially based agriculture. *Agroecology and Sustainable Food Systems*, 41 (7), pp. 799-824.
- 171 Palomo-Campesino, S., Gonzalez, J.A., and Garcia-Llorente, M. (2018). Exploring the connections between agroecological practices and ecosystem services: A systematic literature review. *Sustainability*, 10 (12).

- 172 Holt-Gimenez E (2002). Measuring farmers' agroecological resistance after Hurricane Mitch in Nicaragua: A case study in participatory, sustainable land management impact monitoring. *Agriculture, Ecosystems & Environment*, 93 (1-3), pp.87-105.
- 173 ETC Group (2017). *Who will feed us? The Industrial food chain vs the peasant food web*.
- 174 Rodale Institute (2011). *The Farming Systems Trial: Celebrating 30 Years*.
- 175 Wijeratna, A. (2012). *Fed up: Now's the time to invest in agro-ecology*.
- 176 Lal, R. (2004). Soil carbon sequestration impacts on global climate change and food security. *Science*, 304 (5677), pp 1623-1627.
- 177 Rumpel, C., Amiraslani, F., Koutika, L., Smith, P., Whitehead, D. and Wollenberg, E. (2018). Put more carbon in soils to meet Paris climate pledges. *Nature*, 564, pp 32-34.
- 178 Rodale Institute (2011). *The Farming Systems Trial: Celebrating 30 Years*.
- 179 Ghabbour, E.A., Davies, G., Misiewicz, T., Alami, R.A., Askounis, E.M., and Cuozzo, N.P. et al. (2017). Chapter One - National Comparison of the Total and Sequestered Organic Matter Contents of Conventional and Organic Farm Soils. *Advances in Agronomy*, 146, pp. 1-35.
- 180 Kahlon, M.S., Lal, R. and Ann-Varughese, M. (2013). Twenty two years of tillage and mulching impacts on soil physical characteristics and carbon sequestration in Central Ohio. *Soil and Tillage Research*, 126, pp. 151-158.
- 181 FAO (2018). *FAO's work on agroecology: A pathway to achieving the SDGs*. Rome: FAO.
- 182 LaCanne, C.E. and Lundgren, J.G. (2018). Regenerative agriculture: merging farming and natural resource conservation profitably.
- 183 Eurostat (2011). *Statistics in focus: Large farms in Europe*. [Online]. Available at: <https://ec.europa.eu/eurostat/documents/3433488/5578740/KS-SF-11-018-EN.PDF/4330ef6b-9501-4af5-b4d4-139c04273561> [last accessed: 01/02/2019].
- 184 CIDSE (2018). *The climate urgency: Setting sail for a new paradigm*. [Online]. Available at: <https://www.cidse.org/publications/climate-justice/food-and-climate/the-climate-urgency-setting-sail-for-a-new-paradigm.html> [last accessed: 14/02/2019].
- 185 Loughton, R. (2017). *A matter of scale: A study of the productivity, financial viability and multifunctional benefits of small farms (20ha and less)*. Coventry: Landworkers' Alliance and Centre for Agroecology, Coventry University.
- 186 IPES Food (2018). *Breaking away from industrial food and farming systems: Seven case studies of agroecological transition*. [Online]. Available at: [http://www.ipes-food.org/\\_img/upload/files/CS2\\_web.pdf](http://www.ipes-food.org/_img/upload/files/CS2_web.pdf) [last accessed: 01/02/2019].
- 187 Loughton, R. (2017). *A matter of scale: A study of the productivity, financial viability and multifunctional benefits of small farms (20ha and less)*.
- 188 Brigance, C., Soto Mas, F., Sanchez, V. and Handal, A.J. (2018). The Mental Health of the Organic Farmer: Psychosocial and Contextual Actors. *Workplace Health & Safety*, 66 (12), pp. 606-616.
- 189 Loue, S., Karges, R.R. and Carlton, C. (2014). The Therapeutic Farm Community: An innovative intervention for mental illness. *Procedia - Social and Behavioral Sciences*, 149, pp. 503-507.
- 190 European Network for Rural Development (2010). *Overview of social farming and rural development policy in selected EU Member States*. Brussels: European Communities.
- 191 IPES Food (2018). *Breaking away from industrial food and farming systems: Seven case studies of agroecological transition*.
- 192 Bui, S. (2015). *Pour une approche territoriale des transitions écologiques - Analyse de la transition vers l'agroécologie dans la Biovallée (1970-2015)*. PhD thesis, Agroparistech.
- 193 Garcia-Llorente, M., Rubio-Olivar, R. and Gutierrez-Briceño, I. (2018). Farming for life quality and sustainability: A literature review of green care research trends in Europe. *International Journal of Environmental Research and Public Health*, 15 (6).
- 194 FAO (2018). *FAO's work on agroecology: A pathway to achieving the SDGs*.
- 195 Anderson, C.R., Maughan, C. and Pimbert, M.P. (2018). Transformative agroecology learning in Europe: building consciousness, skills and collective capacity for food sovereignty. *Agriculture and Human Values*, Special Issue, pp. 1-17.
- 196 Khadse, A. (2017). *Women, agroecology and gender equality*. New Delhi: Focus on the Global South.
- 197 Oliver, B. (2016). "The Earth Gives Us So Much": Agroecology and Rural Women's Leadership in Uruguay. *Culture, Agriculture, Food and Environment*, 38 (1), pp. 38-47.
- 198 Rivera, M. and Alvarez, I. (2017). *From a market approach to the centrality of life: An urgent change for women*. [Online]. Available at: <https://www.righttofoodandnutrition.org/files/R t F a N W 2017 ENG 3.pdf> [last accessed: 27/02/2019].
- 199 IFAD (2016). *Rural Development Report 2016*. Rome: IFAD.
- 200 Renting, H., Schermer, M. and Rossi, A. (2012). Building Food Democracy: Exploring Civic Food Networks and Newly Emerging Forms of Food Citizenship. *International Journal of Sociology of Agriculture & Food*, 19 (3), pp. 289-307.

- 201 Agroecology Europe (2017). *Better and different: Transforming food systems through agroecology*. [Online]. Available at: [http://www.agroecology-europe.org/wp-content/uploads/2017/09/BetterAndDifferent\\_TransformingFoodSystems\\_pdf.pdf](http://www.agroecology-europe.org/wp-content/uploads/2017/09/BetterAndDifferent_TransformingFoodSystems_pdf.pdf) [last accessed: 14/02/2019].
- 202 European Parliamentary Research Service (2016). *Short food supply chains and local food systems in the EU*.
- 203 URGENCI (2016). *Overview of Community Supported Agriculture in Europe*. [Online]. Available at: <http://urgenci.net/wp-content/uploads/2016/05/Overview-of-Community-Supported-Agriculture-in-Europe-F.pdf> [last accessed: 14/02/2019].
- 204 Milestad, R., Westberg, L., Geber, U. and Björklund, J. (2010). Enhancing Adaptive Capacity in Food Systems: Learning at Farmers' Markets in Sweden. *Ecology and Society*, 15 (3).
- 205 Food Smart Cities for Development (2017). *Food Smart Cities for Development: Recommendations and Good Practices*. [Online]. Available at: <http://www.milanurbanfoodpolicyact.org/wp-content/uploads/2017/02/FSC4D-Recommendation-and-good-practices.pdf>
- 206 De Cunto, A., Tegoni, C., Sonnino, R., Michel, C., Lajili-Djalai, F. (2017). *Food in cities: study on innovation for a sustainable and healthy production, delivery, and consumption of food in cities*. Brussels: European Commission.
- 207 Gent en Garde and Klimaatstad Gent (2016). *From strategic to operational goals for the Gent en Garde food policy: Recommendations of the food policy council*. [Online]. Available at: [https://stad.gent/sites/default/files/page/documents/20160913\\_PU\\_Gent%20en%20garde\\_operationele%20doelstellingen\\_Engels\\_web.pdf](https://stad.gent/sites/default/files/page/documents/20160913_PU_Gent%20en%20garde_operationele%20doelstellingen_Engels_web.pdf) [last accessed: 01/02/2019].
- 208 van der Ploeg, J.D., and J. Ye., 2016. *China's peasant agriculture and rural society: Changing paradigms of farming*. Oxon: Routledge.
- 209 Rodale Institute (2011). *The Farming Systems Trial: Celebrating 30 Years*.
- 210 Pretty, J., Toulmin, C. and Williams, S. (2011). Sustainable intensification in African agriculture.
- 211 FAO (2014). *Building a common vision for sustainable food and agriculture: Principles and approaches*. Rome: FAO.
- 212 Poux, X. and Aubert, P-M. (2018). *Une Europe agroécologique en 2050: une agriculture multifonctionnelle pour une alimentation saine*. Paris: IDDRI.
- 213 TEEB (2018). *TEEB for Agriculture & Food: Scientific and Economic Foundations*. Geneva: UN Environment.
- 214 IPES Food (2019). *Towards a Common Food Policy for the European Union: The policy reform and realignment that is required to build sustainable food systems in Europe*.
- 215 La Via Campesina (2016). *Zero Budget Natural Farming in India*. [Online]. Available at: <http://www.fao.org/3/a-bl990e.pdf> [last accessed: 01/02/2019].
- 216 IPES Food (2019). *Towards a Common Food Policy for the European Union: The policy reform and realignment that is required to build sustainable food systems in Europe*.

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- i. For more detail, see: [https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy/future-cap\\_en](https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy/future-cap_en) or [http://europa.eu/rapid/press-release MEMO-18-3974\\_en.htm](http://europa.eu/rapid/press-release_MEMO-18-3974_en.htm)
- ii. Own-conversion based on exchange rate at the time the relevant study was published.
- iii. Own calculation using data from: Eurostat (2018). Agricultural holdings by agricultural area. Available at: [http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ef\\_m\\_farmleg&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ef_m_farmleg&lang=en)
- iv. Concentration in the seed market for individual crops it is often far higher. See: <https://www.greens-efa.eu/files/doc/docs/056cb230ebaf0357706c3996a7c68d1d.pdf>
- v. Adapted from definition of 'peasants' in: [http://www.foodsovereignty.org/wp-content/uploads/2016/10/ENGLISH\\_spreads\\_lowRes\\_.pdf](http://www.foodsovereignty.org/wp-content/uploads/2016/10/ENGLISH_spreads_lowRes_.pdf)
- vi. See: <http://www.foodsovereignty.org/wp-content/uploads/2015/02/Download-declaration-Agroecology-Nyeleni-2015.pdf>
- vii. Own calculation using data from: Eurostat (2018). Agricultural holdings by agricultural area. Available at: [http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ef\\_kvaareg&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ef_kvaareg&lang=en)
- viii. This indicator was not included in subsequent surveys. See: [https://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Standard\\_gross\\_margin\\_%28SGM%29](https://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Standard_gross_margin_%28SGM%29)
- ix. SGM is defined as: 'the difference between the value of the agricultural output (crops or livestock) and the cost of inputs required to produce that output'. See: <https://ec.europa.eu/eurostat/documents/3433488/5578740/KS-SF-11-018-EN.PDF/4330ef6b-9501-4af5-b4d4-139c04273561>
- x. AWU 'corresponds to the work performed by one person who is occupied on an agricultural holding on a full-time basis'. See: [https://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Annual\\_work\\_unit\\_%28AWU%29](https://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Annual_work_unit_%28AWU%29)





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**that serves**  
**the needs**  
**of the**  
**PEOPLE**  
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