



Agroecology for Europe (AE4EU)

Towards the development of agroecology in Europe

Deliverable report D3.1 – Report on public and private funding for agroecology

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1 Abbreviations

AE	Agroecology
CAP	Common Agricultural Policy
EC	European Commission
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
RDP	Rural Development Programme

2 Glossary of key terms used

Term	Definition
Agroecology Source: FAO ¹	<p>Agroecology is a holistic and integrated approach that simultaneously applies ecological and social concepts and principles to the design and management of sustainable agriculture and food systems. It seeks to optimise the interactions between plants, animals, humans, and the environment while also addressing the need for socially equitable food systems within which people can exercise choice over what they eat and how and where it is produced. Agroecology is concurrently a science, a set of practices and a social movement and has evolved as a concept over recent decades to expand in scope from a focus on fields and farms to encompass the entirety of agriculture and food systems. It now represents a transdisciplinary field that includes the ecological, socio-cultural, technological, economic, and political dimensions of food systems, from production to consumption.</p> <p>Agroecology represents an overarching and comprehensive systems framework to guide public policies towards sustainable agriculture and food systems. It enhances public efficiency by fostering integrated and inter-ministerial policy design and implementation, bringing together agricultural and food sectors that are often disaggregated. It actively engages different stakeholders through interdisciplinary mechanisms which favour a responsible and transparent governance of resources. As a result, agroecological transitions can support the simultaneous achievement of multiple sustainability objectives – economic, environmental, social, nutritional, health and cultural – holistically and in integrated manner at different levels and scales while being adapted for different environmental and cultural contexts. Agroecology is based on bottom-up and territorial processes, helping to deliver contextualised solutions to local problems with people at the centre.</p> <p>FAO identifies ten elements of agroecology: Diversity; Co-creation and Sharing of Knowledge; Synergies, Efficiency; Recycling; Resilience; Human and social values; Culture and food traditions; Responsible governance; Circular and solidarity economy.</p> <p>The High-Level Panel of Experts on Food Security and Nutrition of the Committee of World Food Security identified thirteen consolidated principles of agroecology: Recycling; Input reduction; Soil Health; Animal Health;</p>

¹ <https://www.fao.org/agroecology/overview/en/>

Glossary of key terms used

	Biodiversity, Synergy; Economic Diversification; Co-creation of Knowledge; Social Values and Diets; Fairness; Connectivity; Land and Natural Resource Governance; Participation.
Agroforestry ² .	A land use system in which woody vegetation is grown and/or managed in combination with agriculture (livestock rearing and/or crop production) on the same land ³ . More specifically, the practice of deliberately integrating woody vegetation (trees or shrubs) with crop and/or animal systems to benefit from the resulting ecological and economic interactions ⁴ .
Biodynamic Farming. Source: Demeter ⁵	Biodynamic farming embraces a sense of care, responsibility and transparency toward humankind, a fair and respectful approach to its social setting, the needs of communities and the natural world. Each farm is considered unique, and a holistic view is applied. A farm is a living farm organism, with its own individuality, individuality that manifests itself fully when a healthy state of interaction and cooperation has been achieved between the realms of earth, plant, animal, and humankind. Through holistic management practices that acknowledge the needs of all of nature's domains and of human beings, the biodynamic farmer seeks to heighten awareness and stimulate living and healing processes on the farm and to produce high-quality food.
Family Farm Source: European commission ⁶ Family farming Source: FAO ⁷	Family farm refers to any farm under family management where 50 % or more of the regular agricultural labour force is provided by family members. Family Farming is a means of organising agricultural, forestry, fisheries, pastoral and aquaculture production which is managed and operated by a family and predominantly reliant on family labour, both women's and men's. The family and the farm are linked, co-evolve and combine economic, environmental, reproductive, social and cultural functions.
The right to food Source: FAO ⁸	The right to adequate food is realised when every man, woman and child, alone or in community with others, has physical and economic access at all times to adequate food or means for its procurement.

² Modification of Regulation (EU) No 1305/2013 of the European Parliament and of the Council of 17 December 2013 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD) and repealing Council Regulation (EC) No 1698/2005.

³ Modification of Regulation (EU) No 1305/2013 of the European Parliament and of the Council of 17 December 2013 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD) and repealing Council Regulation (EC) No 1698/2005.

⁴ Burgess, P.J., Crous-Duran, J., den Herder, M., Dupraz, C., Fagerholm, N., Freese, D., Garnett, K., Graves, A.R., Hermansen, J.E., Liagre, F., Mirck, J., Moreno, G., Mosquera-Losada, M.R., Palma, J.H.N., Pantera, A., Plieninger, T. & Upton, M. (2015) AGFORWARD Project Periodic Report: January to December 2014. Cranfield University: AGFORWARD. 95 pp. <http://www.agforward.eu/index.php/en/news-reader/id-27-february-2015.html>

⁵ https://demeter.net/wp-content/uploads/2022/05/220414_DEM_INT_brochure_A5_Web.pdf

⁶ <https://ec.europa.eu/eurostat/documents/3217494/12069644/KS-FK-20-001-EN-N.pdf/a7439b01-671b-80ce-85e4-4d803c44340a?t=1608139005821>

⁷ <https://www.fao.org/family-farming/detail/en/c/281545/>

⁸ <https://www.fao.org/right-to-food/en/>



Glossary of key terms used

<p>Food Security Source :FAO ⁹</p>	<p>Food security exists when all people at all times have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.“ This definition has been identified with the four dimensions of food security: availability, access, stability and utilisation. It embodies the food and care-related aspects of good nutrition.</p> <p>The 1996 World Food Summit definition of food security is still widely used and quoted today, with the sole addition of the word “social” to the phrase “physical, social and economic access”. This definition was reaffirmed officially in the 2009 Declaration of the World Summit on Food Security. The Committee on World Food Security (CFS) Reform Document adopted by the FAO Conference at the same time added the following explicit reference to the comprehensive coverage of nutrition in the interpretation of the official definition of food security: “The four pillars of food security are availability, access, utilisation and stability. The nutritional dimension is integral to the concept of food security and to the work of CFS. (CFS: 2009/2 Rev. 2).</p>
<p>Food Sovereignty Nyéléni Declaration 2007 Source: Nyéléni¹⁰</p>	<p>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. It puts the aspirations and needs of those who produce, distribute and consume food at the heart of food systems and policies rather than the demands of markets and corporations. It defends the interests and inclusion of the next generation. It offers a strategy to resist and dismantle the current corporate trade and food regime, and directions for food, farming, pastoral and fisheries systems determined by local producers and users. Food sovereignty prioritises local and national economies and markets and empowers peasant and family farmer-driven agriculture, artisanal - fishing, pastoralist-led grazing, and food production, distribution and consumption based on environmental, social and economic sustainability. Food sovereignty promotes transparent trade that guarantees just incomes to all peoples as well as the rights of consumers to control their food and nutrition. It ensures that the rights to use and manage lands, territories, waters, seeds, livestock and biodiversity are in the hands of those of us who produce food. Food sovereignty implies new social relations free of oppression and inequality between men and women, peoples, racial groups, social and economic classes and generations.</p>
<p>Mixed Farming¹¹</p>	<p>The practice of deliberately integrating crop and livestock production to benefit from the resulting ecological and economic interactions.¹²</p>
<p>Organic production and labelling of organic products¹³ Regulation (EU) 2018/848 of the</p>	<p>Organic production is an certified legal system of farm management and food production that combines best environmental and climate action practices, a high level of biodiversity, the preservation of natural resources and the application of high animal welfare standards and high production standards. Organic is a holistic (organic is derived from the word organism) set of over 1000 regulations, it plays a dual societal role, where, on the one hand, it provides for a specific</p>

⁹ https://www.fao.org/fileadmin/templates/faotaly/documents/pdf/pdf_Food_Security_Coept_Note.pdf

¹⁰ <https://nyeleni.org/IMG/pdf/DeclNyeleni-en.pdf>

¹¹ H2020 project “AGROMIX” <https://cordis.europa.eu/project/id/862993>; <https://www.agromixproject.eu>

¹² H2020 project “AGROMIX” <https://cordis.europa.eu/project/id/862993>; <https://www.agromixproject.eu>

¹³ <https://eur-lex.europa.eu/eli/reg/2018/848/oj>



Glossary of key terms used

European Parliament and of the Council	market responding to consumer demand and, on the other hand, it delivers publicly available goods that contribute to the protection of the environment and animal welfare, as well as to rural development. The law protects the words ‘organic’, ‘biological’ and ‘ecological’ agriculture and all its derivatives for labelling food under this regulation. It sets therefore a baseline of what agroecological practises have to be legally.
Peasant mode of farming ¹⁴	The mode of farming in different forms of agriculture: The fundamental difference between peasant and business entrepreneurial farming is the degree of autonomy and the relationship to nature. Peasants co-evolve with nature. The peasant mode of farming centres essentially on the creation and growth of value added, which at the higher level of aggregation translates into the creation and growth of social wealth; thus, in comparison, peasant farming contributes more to the generation of social wealth than entrepreneurial and corporate farming. In addition, peasant farming produces the highest total amount of gross value added (GVA). This is not only due to the fact that total production per unit of area is higher, but also because within the peasant mode of farming Gross Value Added represents a larger part of Gross Value Produced. If farming is structured according to peasant mode, not only more production and employment are generated, but the peasant mode generates more income.
Peasant Agriculture ¹⁵	Peasant agriculture is built upon the sustainable use of ecological capital. Its primary aim is livelihoods. It embeds many functions beyond food. Whenever possible, it is the family that owns, or has user rights on the land and other means of production, and the family members who work on the farm. What is produced returns to the farm and is sold in the market.
Peasant Agroecology Source: <i>Via Campesina</i> ¹⁶	Peasant Agroecology is a way of life that treats the Earth with respect and care, not as a resource to be exploited. It is a way of life that understands that the intimate relationship that humans have with their local ecologies cannot be reduced to a single value in money, and that understands that doing so leads to disastrous consequences for people and planet. Its culture is built upon the exchange of seeds, the exchange of knowledge, the planting of varieties of crops and recycling of nutrients to keep the health and vitality of the soil.
Permaculture ¹⁷	The conscious design and maintenance of agriculturally productive systems which have the diversity, stability, and resilience of natural ecosystems. It is the harmonious integration of the landscape with people providing their food, energy, shelter and other material and non-material needs in a sustainable way. Permaculture makes greater use of perennial crops in agroecosystems than many other approaches.

¹⁴ Hilmi, A. (2012). Agricultural Transition – a different logic. The More and Better Network. <http://ag-transition.org/1868/agricultural-transition/>

¹⁵ Van der Ploeg, J.D. The New Peasantries- Struggles for Autonomy and Sustainability in an Era of Empire and Globalization. Earthscan, 2009.

¹⁶ https://viacampesina.org/en/wp-content/uploads/sites/2/2018/05/primer_english_print.pdf (p.14)

¹⁷ <https://modernfarmer.com/2016/04/permaculture/#:~:text=Bill%20Mollison%2C%20the%20Tasmanian%20son,and%20resilience%20of%20natural%20ecosystems.>

Glossary of key terms used

<p>Regenerative agriculture¹⁸</p>	<p>Regenerative Agriculture is a holistic land management practice that leverages the power of photosynthesis in plants to close the carbon cycle, and build soil health, crop resilience and nutrient density. Regenerative agriculture improves soil health, primarily through the practices that increase soil organic matter. This not only aids in increasing soil biota diversity and health but increases biodiversity both above and below the soil surface, while increasing both water holding capacity and sequestering carbon at greater depths, thus drawing down climate-damaging levels of atmospheric CO₂, and improving soil structure to reverse civilization-threatening human-caused soil loss.</p>
<p>True Cost Accounting¹⁹</p>	<p>A well-established but still evolving economic accounting method for assessing the ‘true’ costs and benefits of different food production systems with implications for everyone. The true cost varies according to how the food is produced and how well, or poorly, it contributes to a healthy human diet. It is akin to the concept of negative externalities of production or the ‘polluter pays’ principle, but also includes welfare and social values (like Social Return on Investment).</p>

¹⁸ <https://regenerationinternational.org/wp-content/uploads/2017/02/Regen-Ag-Definition-2.23.17-1.pdf>

¹⁹ <https://sustainablefoodtrust.org/key-issues/true-cost-accounting/>

3 Introduction

3.1 Funding agroecology – a part of the solution

Agroecology thinking aims for a radical transformation of food and farming systems for multiple environmental and societal benefits and public goods. Yet an agroecological transition requires investments to be able to break free from the lock-ins to the current food system and support the strengthening of innovative agroecological approaches and opening-up of new opportunities including market development. Funding agroecology is thus a fundamental part of the transition to regenerative ways to provide plentiful food and fibre for all. In Europe, an agroecological transition takes its particular relevance from the current EU flagship policy - the European Green Deal (in combination with the Biodiversity Strategy). The ambitious EU Green Deal focuses on:

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- no net emissions of greenhouse gases by 2050
- economic growth decoupled from resource use
- no person and no place left behind

The European Green Deal is also considered the “*European lifeline out of the COVID-19 pandemic*”²⁰. One third of the 1.8 trillion Euro investments from the Next Generation EU Recovery Plan, as well as the EU’s seven-year budget will contribute to finance the European Green Deal. At its heart is a sustainable food system: The Green Deal’s Farm to Fork strategy²¹. The objective of the Green Deal is a healthy food system for people and the planet. It is the link between healthy people, healthy societies and a healthy planet that puts sustainable food systems at the heart of the European Green Deal.

Healthy people, healthy societies and a healthy planet are the essence and ‘*raison d’être*’ of agroecology and especially of peasant agroecology as a mode of production that centres essentially on the creation and growth of value added, which at the higher level of aggregation translates into the creation and growth of social wealth.

What is not realised for a recognition of agroecology at European level, is for it to be **legally constituted** in incorporated in the country strategic plans. A dedicated budgetary line at the level of the EU-27 national governments and at the level of Europe, would mark a turning point for a sustainable agriculture in Europe, as was the case for organic agriculture and organic processed foods when it was first legally constituted in the EU in 1991.

²⁰ <https://powertechresearch.com/european-climate-law-to-be-the-lifeline-out-of-pandemic/>

²¹ https://ec.europa.eu/food/horizontal-topics/farm-fork-strategy_en

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3.2 The next CAP

The European agriculture and food system, supported by the Common Agricultural Policy²², is aiming to shift towards a sustainable food system that can bring environmental, health and social benefits, as well as offer fairer economic gains. The pandemic, and its recovery, are influencing this shift towards a more sustainable path. Agroecology can be part of the solution.

In the EU goals some principles of agroecology are present and reflected. The EU's goals are to:

- ensure food security in the face of climate change and biodiversity loss
- reduce the environmental and climate footprint of the EU food system
- strengthen the EU food system's resilience
- lead a global transition towards competitive sustainability from farm to fork.

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Agroecological farming strongly contributes to the above. **Peasant agroecology**, part of the roots and origin of agroecology, acknowledged as the most sustainable form of agricultural production by the world's largest farmer movement *La Via Campesina* (LVC), goes even further than this by focusing on solidarity and care over financial profits. **Harmony** among people and the living nature is an equally important concept. Despite this strong values-based focus, those agroecological farms can be equally resourceful and productive as other systems, especially when productivity is correctly measured as a ratio between total inputs and total outputs (including negative outputs) and not as 'productionist' - production of commodity food stuffs, much of it later diverted as food waste.

To consolidate the role of European agriculture for the future, the CAP (Common Agricultural Policy inside member states of the EU) has evolved over the years to meet changing circumstances and citizens' needs. On 1 June 2018, the European Commission presented legislative proposals for a new CAP²³. The proposals outlined a simpler and more efficient policy that will incorporate the sustainable ambitions of the European Green Deal²⁴. An agreement on a new CAP was reached on 25 June 2021. The new CAP is due to be implemented from 1 January 2023, pending final agreement between the European Parliament and the Council of Europe.

For the period 2023-27, the CAP will be built around nine key objectives, all of which are also at the core of agroecology, and presently, despite lack of recognition, attained by thousands of agroecological farmers throughout Europe. Focused on social, environmental, and economic goals, these objectives will be the basis upon which EU countries design their CAP strategic plans.

It is high time to increase awareness and knowledge amongst governments and public officers across Europe, to understand the fundamental role that agroecology, and more specifically its roots and origin *i.e.*, peasant agroecology, can play in reaching the renewed EU farm-to-fork sustainability and resilience goals.

²² https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy_en

²³ https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy/new-cap-2023-27_en

²⁴ https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en

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The 9 new CAP objectives are:

- to ensure a fair income to farmers;
- to increase competitiveness;
- to rebalance the power in the food chain;
- climate change action;
- environmental care;
- to preserve landscapes and biodiversity;
- to support generational renewal;
- vibrant rural areas;
- to protect food and health quality.

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These will not be met at a high scale, without providing the tools (especially legal tools), services (especially public services), and instruments (especially financial instruments), that create an enabling environment for farming communities to fully participate and embrace the programmes that are meant for them. Rather than adding new layers of blueprints telling farmers ‘what they have to do’, for an agroecology transition it will be vital for public institutions to also **listen** to the needs and challenges from collectives and networks on the ground to build strategic plans for the future.

In the past, the CAP had already acknowledged the specificities of farming basing its policies on that²⁵:

“Farming is unlike most other businesses, as the following special considerations apply:

- despite the importance of food production, farmers’ income is around 40% lower compared to non-agricultural income;
- agriculture depends more on the weather and the climate than many other sectors;
- there is an inevitable time gap between consumer demand and farmers being able to supply – growing more wheat or producing more milk inevitably takes time.

While being cost-effective, farmers should work in a sustainable and environmentally friendly manner and maintain our soils and biodiversity.

Business uncertainties and the environmental impact of farming justify the significant role that the public sector plays for our farmers. The CAP takes action with the following measures:

- income support²⁶ through direct payments ensures income stability, and remunerates farmers for environmentally friendly farming and delivering public services not normally paid for by the markets, such as taking care of the countryside;

²⁵ https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy/cap-glance_en

²⁶ https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy/income-support_en

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- market measures²⁷ to deal with difficult market situations such as a sudden drop in demand due to a health scare, or a fall in prices as a result of a temporary oversupply on the market;
- rural development measures²⁸ with national and regional programmes to address the specific needs and challenges facing rural areas.”

These principles have allowed funding for agroecology-related activities at country-level, but financial support remains piecemeal and disconnected. The next step would be to move towards a more **integrated perspective** that allows synergies in the distribution of funds.

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3.3 Where is the missing link? A paradigm shift.

In this structured approach, is there a missing link and where is it? Despite income support, market measures, rural development measures, the situation has remained difficult and precarious for a large majority of European farmers.

The push to commodified food and farming systems has not been able to account for the true cost of food. Ensuring sustainable food systems requires reducing its environmental and health costs while making healthy food affordable to all. Currently many costs (negative outputs) are externalised and not reflected in market prices²⁹. The current ‘externalities’ are estimated to be almost double of the current total food consumption. This means that food is roughly a third cheaper than it would be if these externalities were included in market pricing. The first step to correct these hidden costs is to redefine the value of food through e.g. the True Cost Accounting method. The second step is true pricing: incorporating negative and positive externalities in prices to align market incentives and social values. Such actions conserve the environment and meet fundamental human rights. This can be combined with basic citizen income schemes (e.g. ‘Grundeinkommen’ (unconditional basic income) as voted on in Switzerland³⁰) to make true cost and good food affordable for all.

In the urgent need for a **paradigm shift**, the farm-to-fork policy is a step in the right direction. Contrary other regions of the world, the agricultural context in Europe is largely favourable: Europe has so far maintained much of its rural fabric, with a vast majority (96%) of farms classified as family farms. However, with 4.1 million farms lost between 2005 and 2016, representing a decline of 30%, it is urgent to act now before the rural fabric is further dismantled, and more farms are lost, contributing to further concentration and de-population of the rural landscapes.

²⁷ https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy/market-measures_en

²⁸ https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy/rural-development_en

²⁹ https://sc-fss2021.org/wp-content/uploads/2021/06/UNFSS_true_cost_of_food.pdf

³⁰ <https://www.grundeinkommen.ch>

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The policies of agroecology are about exactly these things: conserving the environment, securing human rights and rehumanising and harmonising landscapes with people and nature.

Here below, are key messages of the 2020 edition of the EUROSTAT Statistical Books³¹ which contextualise and anticipate the role agroecology could play in Europe.

Scientific studies have demonstrated that yields per unit of labour are higher in smaller to medium farms and that these hold the key to healthier, more diverse and productive landscapes. This is due to the fact that family farms, or the peasant mode of production centres, as mentioned earlier, essentially, on the creation and growth of value added, which at the higher level of aggregation translates into the creation and growth of social wealth; thus, in comparison, peasant farming contributes more to the generation of social wealth than large-scale corporate industrial farming. In addition, peasant farming produces the highest total amount of gross value added (GVA). This is not only due to the fact that total production per unit of area is higher, but also because within the peasant mode of farming Gross Value Added represents a larger part of Gross Value Produced. If farming is structured according to the peasant mode, not only more production and employment are generated, but the peasant mode generates more income.

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3.4 Key messages from agricultural statistics

Here we have collated some key messages and numbers from the agricultural statistics in Europe 2016)³². They in itself paint a divers colourful picture and support the arguments made in the first parts of this chapter:

There were 10.3 million agricultural holdings in the EU-27 (2016)

One third (33.3 %) of the EU-27's agricultural holdings are located in **Romania**, with a further one quarter found in **Poland** (13.7 %) and **Italy** (11.1 %).

The vast majority of the EU's farms are family farms

The overwhelming majority (96.3 % in 2016) of the EU's farms are classed as being 'family farms'.

Most of the EU's farms are small in nature

Two thirds of the EU's farms were less than 5 ha (hectares) in size in 2016. Although the average mean size of an agricultural holding in the EU was **15.2 ha** in 2016, only about 16 % of farms were this size or larger. (15.2 ha is a mean value, horticultural units can be a lot smaller (e.g. 1 ha) and

³¹ *Agriculture, forestry and fishery statistics 2020 edition of the EUROSTAT Statistical Books*
<https://ec.europa.eu/eurostat/documents/3217494/12069644/KS-FK-20-001-EN-N.pdf/a7439b01-671b-80ce-85e4-4d803c44340a?t=1608139005821>

³² <https://ec.europa.eu/eurostat/web/agriculture>

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viable businesses, while e.g. extensive livestock grazing will have larger average size (e.g. 50 ha) to support a family farm.

EU farms can be broadly characterised as either (i) semi-subsistence (ii) small and medium-sized farms or (iii) large agricultural enterprises

Of the EU-27's 10.3 million farms, **4 million** had an economic size in terms of standard output below EUR 2,000 per year and were responsible for 0.9 % of the EU's total agricultural economic output. These very small farms are at the **(semi-)subsistence** end of the farming scale; about three quarters of such farms in the EU consumed more than one half of their own production.

A further 3 million farms had an economic output within the range of EUR 2,000-EUR 8,000 per year. Together these **very small** and **small farms** (called peasant farms by some) account for **two thirds (68.3 %)** of all farms in the EU in 2016, and were responsible for 4.6 % the EU's total agricultural economic output.

By contrast, the largest 278,000 farms (2.7 % of the EU total) produced a standard output of EUR 250,000 per year or more in 2016 and were responsible for a majority (54.4 %) of the EU's total agricultural economic output; these farms can be characterised as being large agricultural enterprises. Two in every five of these large farms had a legal or group holding form.

About 60 % of the standard output generated by agriculture across the EU-27 was from farms in France (18.1 %), Italy (15.3 %), Germany (14.5 %), and Spain (11.3 %). Although Romania accounted for one third of the EU's farms, it accounted for only 3.6 % of the EU's standard output.

EU farms remain diverse in terms of what they grow or rear

Mixed farms comprise mixed crop-animal farms, mixed cropping farms and mixed livestock farms. As a whole, **mixed farms** accounted for just over one fifth of all farms (21.4 %). A percentage of farms were not classified.

EU farms used 157 million ha of land for agricultural production in 2016

EU farms used 156.7 million ha of land for agricultural production in 2016. A little over two thirds (68.5 %) of the utilised agricultural area of the EU was based in just six Member States; France used 27.8 million ha for agricultural purposes in 2016, Spain 23.2 million ha, Germany 16.7 million ha, Poland 14.4 million ha, Italy a further 12.6 million ha and Romania 12.5 million ha.

Farms managed about 45 % of the total land area of the EU-27 in 2016

Farms in the EU managed 38.2 % of the total land area of the EU-27 as UAA (usable agricultural area), as well as 6.6 % as wooded areas and 1.6 % as 'other unused land'.

The number of farms in the EU has been in steep decline

Bearing in mind some methodological precautions, there were about 4.1 million fewer farms in the EU-27 in 2016 than in 2005, equivalent to a **decline** of just less than 30 %. The vast majority of the farms lost (about 83 %) were small farms of a size under 5 hectares. During this period, the largest

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reductions in farm numbers were recorded in Poland (loss of 1.1 million farms, or 43 %), Romania (loss of 0.8 million farms, or 20 %) and Italy (loss of 0.6 million farms, or 34 %).

The amount of land used in the EU for agricultural production has remained steady

The consolidation in the amount of agricultural land used in the EU reflects the growth in the number of the largest holdings and the land that they used for agricultural purposes.

The above key messages demonstrate an enormous potential for agroecology in Europe to retain and revive the mosaic of rural territories endowed with thousands of family farms, and reverse the desertification of rural areas. These statistics are often overlooked when contrasting EU agriculture to the farm distribution in the Global South within policy discussions. A better understanding of these facts can help with better policies and funding for agroecology.

4 Overview

This research work focuses (AE4EU – WP3) on one specific portion of the overall picture presented above: a snapshot of recent years of funding for agroecology in different EU countries.

Task 3.1 is about “public funding schemes for agroecology practices and research (regional, national and EU.” The objectives are:

- To build upon the mapping of task 1.2 in WP1 and assess how different countries implemented elements of agroecology in national/regional funding schemes and how they function;
- To scan for any other direct or indirect funding schemes which are supported by public funding (e.g. cities, national parks, communal funding, Local Action Groups, Leader, operational groups within EIP-Agri;
- To include financial data, and analyse trends and correlations;
- To analyse at European level (ERA-NET and COST programmes and framework 5 to 9 programmes (Horizon 2020 and Horizon Europe).

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Secondary data collection and financial analysis from public sources are drawn on for the analysis presented here, as well as primary data collection via targeted expert interviews, where secondary data do not yield sufficient results.

This report discusses the importance of peasant agroecology for sustainable agriculture in Europe; its relevance in the context of the next CAP; the methodology used to collect and analyse data on public funding of agroecology in Europe; funding for agroecology (public and private), both in the context of research funding at European level and qualitative aspects of grassroots funding at country and regional levels.

5 Methodology

In order to fulfil the objectives of T 3.1, a **twin-track approach** was followed: (1) we collected and analysed data available on European online statistical data platforms, and (2) we collected and analysed grassroots information, with the people “on the ground”, directly involved in practicing, funding, and implementing agroecology schemes in different countries.

The first track covers general statistical data and provides a quantitative overview of funding for agroecology in Europe, while the second track provides additional quantitative data (although patchy as reported by questionnaires). Its main value is however, to provide key qualitative information for understanding the actual context, the barriers and opportunities as well as the material realities of agroecology funding from a **grassroots perspective**.

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5.1 Coverage of the terms used

As “agroecology” is not clustered as a separate entity in the country statistics as is the term “organic”. Certified organic/biological/ecological is legislated by EU-Organic Regulation 834/2007, replaced by Regulation 2018/848 on “organic production and labelling of organic compounds”. This includes regulation on the miss-use of words like organic, biological, ecological and agroecological production methods in food labelling and advertising sold in public. For agroecology this is not the case and the first and most pressing need was to frame what is meant or understood by “agroecology” and “agroecology funding” in the different countries.

The term “agroecology” is subject to different interpretations, and for the purpose of this work, the definition used for agroecology is the international one by the FAO (Food and Agriculture Organisation of the United Nations, Roma see FAO/UN in the glossary section). More specifically, agroecology is understood in this research as centrally including peasant agroecology.

To ensure that no aspects of agroecology, and in particular peasant agroecology, would be missed, a set of **five key words (or ‘family of terms’)** were identified, which were used in both tracks of the approach – in search queries and in interviews – as key words to characterise a robust understanding of agroecology:

1. **Organic**
(including organic horticulture, organic livestock, biodynamic)
2. **Agroecology**
(including agroecological farming, peasant agroecology, agro-ecology, agronomy)
3. **Agroforestry**
(including silvopasture, silvoarable)
4. **Territorial**
(including food systems, food justice, CSAs, Food Sovereignty, rural development)
5. **Regenerative Farming**
(including permaculture, regenerative agriculture, soil health).

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5.2 Track one: Statistics and databases at the EU level

Track one covers secondary data collected from EC databases on research budgets and funding allocation, as well as Rural Development Programme (RDP) payments for selected countries. This data provides an overview of the largest cross-national sources of funding that potentially support the development and practice of agroecology. The data reported in this document refers to the years 2014-2020. This timeframe is in line with both the last CAP and the H2020 research and innovation programme. The aim of this approach is to provide an overview of the type of funding available, both in terms of research funding, and RDP payments. The data reported in this document is from reports publicly available from the EC web page³³ on the European agriculture guarantee fund (EAGF):

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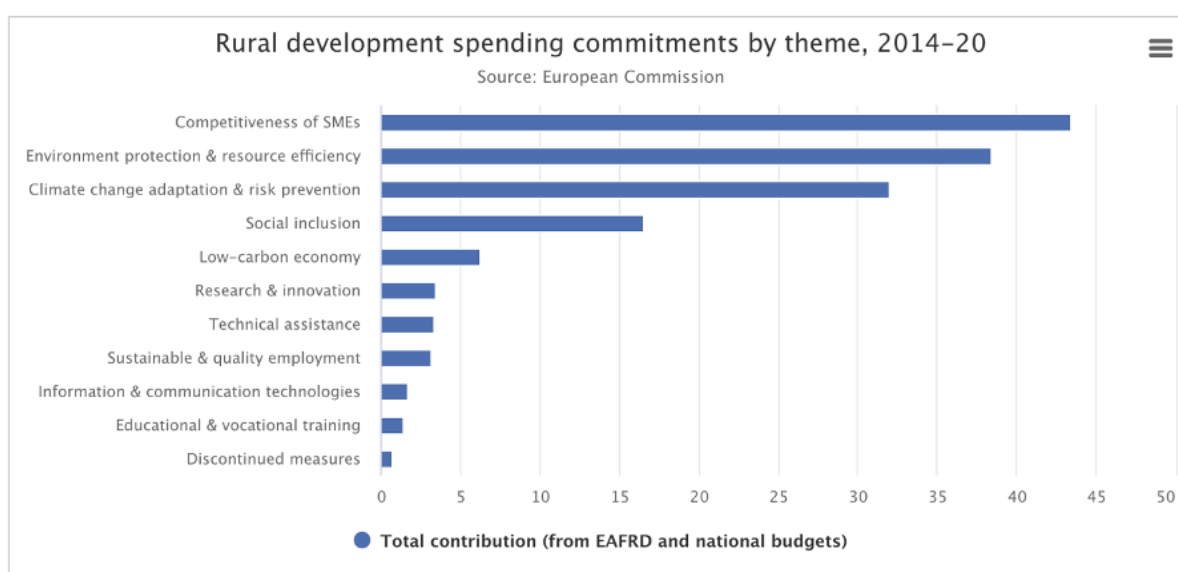


Figure 1. Rural development spending commitments (2014-2020) by theme. Numbers are total contribution from EAFRD and national budgets (Source: European Commission).

³³ https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy/financing-cap/cap-funds_en#eagf

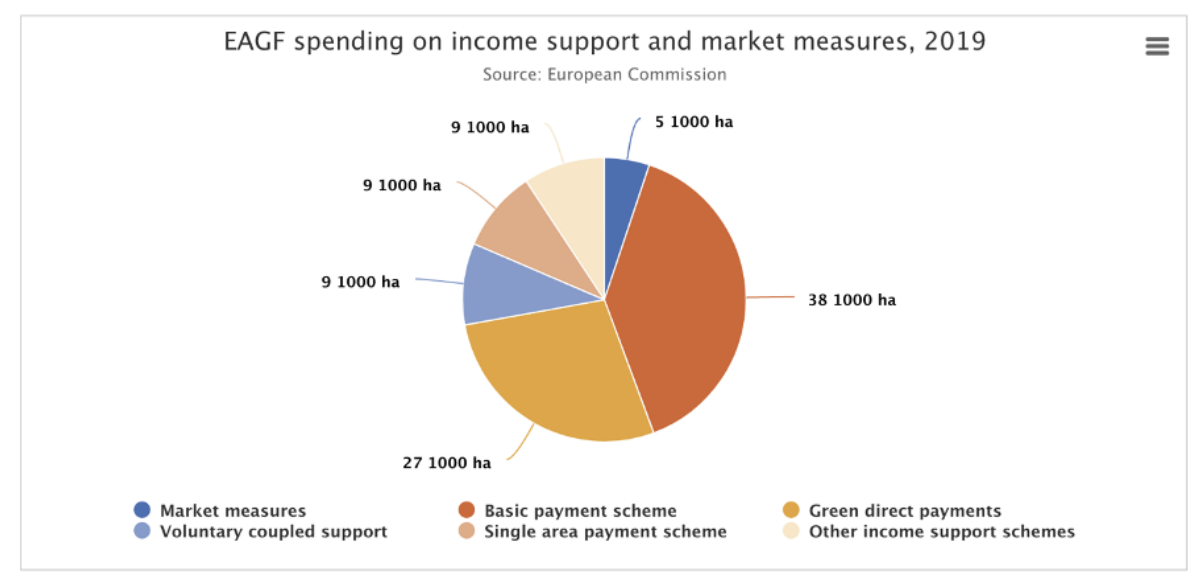


Figure 2. European agriculture guarantee fund (EAGF) spending on income support and market measures in the year 2019. (Source: European Commission).

CAP statistics: Country statistics are reported for income support and market support (CAP payments) for the years 2014-2020. Data has been retrieved from official EC documents^{34,35}. However, this type of data does not contain any direct link to agroecological practices, as agroecology was not formally and explicitly included as one of the objectives of the CAP. As a result, using this data, it is difficult to identify the amount of money that has been used to implement or strengthen agroecological approaches. The data that is more relevant to the aim of this report is that of payments that are part of the RDP. These are however only reflected under the part two on funding for agroecology in selected countries.

H2020 research and innovation programme: This type of data does not contain any direct link to agroecological practices, as agroecology was also not formally and explicitly included as one of the objectives of the H2020 research and innovation programme. It does however provide an overview of the funding available for research that could include elements of agroecology. The data has been collected in 2 stages:

Stage 1: The keywords selected during the experts’ panel were searched on databases (e.g. Cordis, EU-COST)

³⁴ CAP payments per country per year: https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy/financing-cap/beneficiaries_en

³⁵ Income support per year: https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy/financing-cap/beneficiaries/direct-aid-breakdown_en

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Stage 2: It was decided to select the funding calls under Societal Challenge 2 (SC2) – ‘Food Security, Sustainable Agriculture and Forestry, Marine, Maritime and Inland Water Research and the Bioeconomy’ as these research areas are highly relevant to agroecology.

The 5 keyword groups were also searched directly in the texts of the 3 work programmes for H2020. Additionally, results from the Stage 1 searches were cross-checked against the H2020 programmes from 2014 to 2020. The aggregated information was divided by programme: 2014-2015³⁶; 2016-2017³⁷; and 2018-2020³⁸. The data shown include Type of action, Funding allocated, Number of projects awarded, Number of projects relevant to agroecology and Keywords the relevant projects fall under. This approach was chosen to provide a mapping of agroecology-relevant projects against the overall research funding for SC2, based on the keywords selected by the experts’ panel.

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EU-COST: For other databases a pragmatic approach was used. The EU-COST database has all projects funded, through this measure. This covers the time frame of 25 years from 1995-2020. As seen in results this earlier inclusion showed very few relevant hits, and therefore including it confirmed the only recent interest in the 5 families of terms. In EU-COST database, as so little was found, other words were also searched. These are ‘biological pest control’, ‘biological fertilisers’ in the ‘Organic word family’ and ‘forestry’ (without agro-forestry) in the ‘Agroforestry word family’. If a project was relevant to the current understanding of the words (but have not mentioned the words specifically), they are also included. This inclusion was based on expert knowledge.

5.3 Track two: Grassroots level- agroecology in practice

Track two covers both primary and secondary data in different countries. The method has been constructed iteratively, adjusted through feedback loops. As described above, track two was based on the five criteria (families of words) that would allow to best capture the essence of agroecology, and more specifically of peasant agroecology, especially whenever the term was not being used specifically.

The grassroots approach provides insights into different ways in which countries and regions are funding agroecology, or agroecology-related practices. These constitute important learnings for strategic planning on agroecology be it at region, country, or European level.

5.3.1 Design of online questionnaires

A detailed questionnaire (see Annex 2) was designed on a user-friendly platform “online surveys BOS” (including the required EU data protection measures). It collects information for mapping public funding for agroecology at local, regional, and national level. It is divided into two sections as follows:

³⁶ https://ec.europa.eu/research/participants/data/ref/h2020/wp/2014_2015/main/h2020-wp1415-food_en.pdf

³⁷ https://ec.europa.eu/research/participants/data/ref/h2020/wp/2016_2017/main/h2020-wp1617-food_en.pdf

³⁸ https://ec.europa.eu/research/participants/data/ref/h2020/wp/2018-2020/main/h2020-wp1820-food_en.pdf

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Section 1 - quantitative data: figures at local, regional, and national level

1. *“How much funding is available from the local government/public institution for agroecology each year?”* A table is provided with data for each of the five categories described above. The data covers the period 2015 to 2020 with flexibility for the respondent to provide data where available. The respondent has also the space to provide additional information as to what, in his/her own interpretation can be included under the term “agroecology”. For example, the title/reference/description of the sub-measures under the country RDP that have been included.

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In addition, the respondent can add information on the figures, provide links to different public funding sources, and provide information on the total given to agriculture per year, as a basis for comparison.

In the same way, tables and questions are provided to analyse funding at regional and national levels:

2. *“How much funding is available from the regional government for agroecology each year?”*.
As above.
3. *“How much funding is available from the national government for agroecology each year?”*.
As above.

Section 2 - qualitative data

This section explores the views of the respondent on the major bottlenecks and barriers to funding for agroecology in the country, and any critical gaps associated. It also gives a space to check any unintended negative consequences to public funding. An additional question asks to provide, if available, links to private funding sources.

Besides providing information on major gaps and bottlenecks, the respondent is invited to provide his/her own dream vision of what a good agroecology support system in the country could be. He/she can also suggest better ways to channel the funds to ensure that they reach those they are intended for.

5.3.2 Selection of respondents

A diversity of stakeholders from different organisations were contacted. These included public institutions, academia, private organisations, as well as Civil Society Organisations (CSOs), NGOs, and other agroecology platforms and networks. The criteria for the people selected were their role in their organisations as well as their familiarity and knowledge of agroecology in practice. The choice of contacts was facilitated by the large pool of active

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participants in the H2020 BOND project³⁹ on collective action. The project worked from 2017 to 2020 with hundreds of agroecology farmers' organisations across Europe.

A total of 42 participants were contacted from 30 countries to fill in the full online survey and a further 20 participants were contacted to fill in the shorter survey with only the qualitative questions.

In addition, one person, each from the AE4EU partners of different partner countries, namely Belgium, Italy, Germany, Spain, Sweden, Netherlands, France, Romania, and Greece, were contacted to fill in the online survey and undertake interviews in their countries. The numbers of respondents are provided in the next section.

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5.3.3 Personal interviews pre-and post-survey

All survey respondents were initially contacted by telephone or email in order to explain the purpose and scope of the research. For those agreeing to fill in the online questionnaire, a follow-up interview was arranged to clarify potential issues, and to gather additional information, especially on qualitative aspects of funding agroecology in their countries. The interviews were recorded, following EU data protection requirements, and summaries prepared for each one, for further data consolidation and analysis.

5.3.4 Ministries data on public funding

In view of the feedback received from the majority of respondents, about how difficult it was for them to access public data on actual funding flows, a letter was sent to ministries and other public funding bodies in all the EU countries. The letter (see Annex 1) puts special emphasis on collecting quantitative public data. 171 ministries and funding bodies had been contacted.

5.3.5 Country summaries and internet search

The information collected from the different sources presented above was organised in tables and in country summaries, to provide a European as well as an individual country understanding, based on the information provided by respondents. Research was undertaken from online sources to complement gaps in data. Data from different countries was reviewed, analysed and structured according to recurring themes. Main positive initiatives/best practice, gaps and bottlenecks for agroecology funding were identified.

Data was collected from the following 26 countries: Albania, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, France, Finland, Italy, Latvia, Lithuania, Macedonia, Malta, Moldova, Netherlands, Norway, Poland, Portugal, Slovakia, Spain, Switzerland, Romania and UK. The focus was on EU countries, but the data collection was expanded to non-EU countries where experiences

³⁹ <https://www.bondproject.eu>

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on funding agroecology were found of relevance for the analysis, providing lessons learned for the other countries.

5.3.6 Data availability and constraints

The feedback provided by respondents shows a number of hurdles in collecting the data on agroecological funding in the different countries. The following were identified as major difficulties encountered by respondents:

- identify which public institution(s) could be funding agroecology/agroecology-related programmes;
- find the right person(s) able to provide the information;
- lack of dedicated budgetary line in the national and regional budgets;
- ignorance of the term “agroecology”;
- necessity to spend time to finding a common understanding on what is meant by “agroecology and what it means at the level of that particular countries in terms of principal emphasis in funding”;
- dependency on EC budgetary pre-determined budget lines for the strategic country programming;
- separation/silos of the different ministries and institutions financing different aspects of agroecology (ministry of agriculture, of forestry, of trade, of social affairs, of the environment etc.);
- different scales in the coverage of the data and insufficient detail (level of data disaggregation);
- difficulty to get the data for the same years, or time frames, meaning difficulty to have comparable results;
- few years since the integration of the notion of agroecology, meaning inability to step back and see the whole picture (impact of agroecology) in a wider context;
- difficulty to access reports, tables and statistical data at country level;
- diversity of measures which provide data that cannot be aggregated or compared.

In view of the struggle of many respondents to find the required quantitative data, a second online survey⁴⁰ (see Annex 2) was designed, focusing on the qualitative aspects of agroecology funding at the national level, drawing on the practical experiences of respondents who were first line funding beneficiaries or who had searched or applied to funding themselves.

⁴⁰ <https://coventry.onlinesurveys.ac.uk/short-public-funding-for-agroecology-eu>

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5.3.7 Sample overview

The outcome of the data collection shows that: overall, 74 people were contacted from 30 countries to fill in the online surveys and 171 people were contacted in ministries and funding bodies to fill in the letter questionnaire. Of these, as of June 2022 were:

- 12 respondents from 10 countries filled the detailed online survey (1): Albania, Croatia, France, Greece, Moldova, Netherlands, Portugal, Romania, Slovakia and Switzerland.
- 12 respondents from 9 countries filled the short online survey (2): Bulgaria, Croatia, France, Macedonia, Moldova, Netherlands, Poland, Spain and United Kingdom.
- 16 respondents did in-depth online interviews from 12 countries: Albania, Croatia, Finland, France, Italy, Moldova, Netherlands, Norway, Portugal, Romania, Slovakia, Spain and United Kingdom.
- 11 Ministries responded to the letter with the relevant data: Croatia, Czech Republic, Estonia, Finland, Latvia, Lithuania, Macedonia, Malta, Norway, Romania and United Kingdom.

6 Results and Analysis - Track 1: online statistical data

6.1 EU level funding

6.1.1 Stage 1

A search has been carried out using the keywords and criteria described in the methods section and shown in Table 1. This was done to identify projects awarded funding under the Horizon 2020 programme 2014-2020. The results were then cross-checked against the three Horizon 2020 working programmes to obtain an estimate of the proportion of funding that has been awarded to projects and activities that could be linked to agroecology and related areas.

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6.1.2 CORDIS

The search on CORDIS⁴¹ has produced results that have highlighted challenges in identifying which projects do contribute to agroecology and which projects may be only partially contributing. The results of the searches are summarised in Table 1.

Table 1. Summary of projects funded under H2020 falling under keyword families ‘Organic’, ‘Agroecology’, ‘Agroforestry’, ‘Territories’, and ‘Regenerative’.

Keyword families	No. of Projects
Organic food & farming	59
Agroecology	95
Agroforestry	16
Territorial food systems	49
Regenerative farming	5
TOTAL	224

We show further detailed results tables in the Appendix as this reduces the flow of reading. Overall we found 95 projects, when searching for projects categorised as “**agroecology**” on CORDIS under H2020 and Societal Challenges. Conversely, the result for “**organic**” was 59 projects. However, when taking a closer look there are indications that suggest that the use of the term “agroecology” could be limited to the environmental side of food systems, with the socio-economic and policy sides being addressed in projects using terminology linked to territorial food systems. While this is not negative per se, it can be a sign that agroecology is narrowed down to focus on practices exclusively.

⁴¹ <https://cordis.europa.eu/>

Results and Analysis - Track 1: online statistical data

When checking the individual project pages on CORDIS, 10 out of first 19 projects that appear under both searches do not mention agroecology and 1 out of 19 mentions “agro-ecosystems”. This suggests that the categorisation of projects and metadata associated with the webpages uses “agroecology practices” synonymies with “organic farming”. One possible explanation for these results is that a number of projects that do not explicitly work on agroecology (in the FAO definition) have been considered in the recent CORDIS Results Pack ‘Agroecology: Transitioning toward sustainable, climate and ecosystem-friendly farming and food systems’⁴² that highlights projects that are demonstrating potential for sustainable alternatives in farming. An example of this is the project OK-Net EcoFeed⁴³ it has organic as the first word of the title (‘Organic Knowledge Network on Monogastric Animal Feed’), but the project does not explicitly work on agroecology, it neither claims to do so.

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This is a key issue in analysing funding research, as it highlights a discrepancy in what is considered agroecology (agroecological practices briefly) in the CORDIS results pack and what is being conceived and planned as a collaborative research project without specifically mentioning agroecology (as defined by the FAO).

In other words, can a project ‘deliver agroecology’ without even mentioning it -this could be the case, however it requires an analysis of the project’s delivered results.

Or conversely how agroecological are projects who drop in the word at several opportunities? For this equally further critical analysis is required.

The area “territories” that includes research on food systems, community supported agriculture, food justice, is also attracting a considerable amount of funding and a large number of projects (45 during the years 2014-2020). This result is likely linked to the broad range of topics that were included under the umbrella of territories and territorial food systems. We do not consider a limitation of the search, as agroecology does encompass areas that go beyond the practices directly linked to food production, and therefore it is important to consider the wider context.

Interestingly, even though the concept of “regenerative agriculture” has some similarities with that of agroecology, at least the five principles of regenerative agriculture can be considered as part of basic agroecological practices, the terminology is rarely used in research projects, with only 5 projects funded during H2020. Finally, “agroforestry” has appeared in the search on 16 projects, although other funding opportunities are also heavily used, such as EIP-Agri focus groups and thematic networks, having a more practical approach to engaging and exchanging knowledge with farmers and other stakeholders, without necessarily carrying out scientific research activities.

⁴² <https://cordis.europa.eu/article/id/430692-agroecology-transitioning-toward-sustainable-climate-and-ecosystem-friendly-farming-and-food>

⁴³ <https://cordis.europa.eu/project/id/773911>

6.1.3 COST-Actions

As described in the methods, for the COST-Actions⁴⁴ a longer timeframe was used, spanning 1995-2020. It shows that in the early years of this period none of the 5 word-families were used; not even the word organic. And even then, only limited projects were found for 'organic', none for 'agroecology', few for forestry (with some relevance to agroforestry). Equally few were on 'territorial' and food sovereignty. There was only one project using the term 'regenerative' (Rethinking sustainability towards a regenerative economy) and this was mainly on 'regenerative buildings' inside a regenerative economy and not on 'regenerative farming' and hence this project is shown, but excluded from the analysis.

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The earliest projects found relevant to organic used the term biological control of weed, biological control of pest insects and mites and sustainable low-input cereals. The first project dedicated exclusively to organic and with the word in the title is BioGreenhouse (2012-2016). It is on certified organic production in greenhouses and tunnels with the strapline 'Towards sustainable and productive EU organic greenhouse horticulture'. Horticulture is often seen as fringe by mainstream organic (and conventional) agriculture. This is because it uses so little land, despite its socio-economic weight. Therefore, it is interesting to note that COST (where applications are **subject-free i.e. not based on current calls**) created an opportunity for this fringe to form a network. Further 'Organic' projects on fruit storage, legume forage and grapevine trunk disease continue with this 'fridge aspect'. COST could therefore be of **specific value to those knowledge networks** as it provides a critical mass within EU and near neighbouring countries for the subject progress, which have not been picked up in Horizon 2020, and again not yet Horizon Europe. Subjects with good networks in COST could be invited to develop RIAs (Research and Innovation Actions) and IAs (Innovation Actions) within Horizon Europe.

The analysis found 14 projects with a total of 5.25 million Euro. 4 projects had no or only annual financial data on [COST-action database](#), but since most 4-year projects are on average 0.5 million Euro this can be used as missing value estimate. With the 4 missing values the total is about 7.2 million.

7 projects were in the organic family, 4 on forestry with at least some relevance to agroforestry. The decision that these forestry projects might have at least some relevance to agroforestry was based on expert judgement. There was however no project specifically on 'Agroforestry'. The 3 projects on 'Territory' are also 'a bit of a stretch', as no project is exactly on e.g. food sovereignty. However, projects on Urban Agriculture including urban metabolism, non-territorial autonomy and a programme to study European rural societies are nevertheless relevant to the emerging understanding of the keywords in the 'Territory' word family. Further details are shown in the table below.

⁴⁴ www.cost.eu

Table 2. Projects funded under the COST-action programme for five keyword families: ‘Organic’, ‘Agroecology’, ‘Agroforestry’, ‘Territory’ and ‘Regenerative’. Missing values were replaced with average COST project value assumption of 0.5 million Euro. Both summary results are shown: data with missing value and data with missing value replaced. Raw data were sourced from the public database on www.cost.eu (September 2021).

Duration COST action	Acronym - Title	Keyword family	Further keywords	Topic	Project Budget	Project Budget (0.5m for missing)
01/02/1995 - 01/01/2000	Biological control of weeds in Europe	Organic	Biological pest control	Biological control of weeds in Europe	no data	€ 500,000
15/12/2000 - 15/06/2005	Biological control of pest insects and mites with	Organic	Biological pest control	Biological control of pest insects and mites with special	no data	€ 500,000
18/03/2004- 10/05/2008	Sustainable low-input cereal production	Organic	Arable, cereals	Sustainable low-input cereal production : required varietal	€ 474,545	€ 474,545
19/04/2012 - 18/04/2016	BioGreenhouse	Organic	Vegetables, fruit, green	Towards a sustainable and productive EU organic	€ 537,215	€ 537,215
23/01/2004 - 22/01/2009	Enhancement and Preservation of Quality and Health	Organic	Fruit, apple, storage	Enhancement and Preservation of Quality and Health	€ 339,918	€ 339,918
01/10/2001 - 30/11/2006	Quality Legume-Based Forage Systems for Contrasting	Organic	Legumes party organic	Quality Legume-Based Forage Systems for Contrasting	€ 334,559	€ 334,559
22/10/2013 - 21/10/2017	Sustainable control of grapevine trunk diseases	Organic	Grapevine trunk disease	Sustainable control of grapevine trunk diseases	€ 494,593	€ 494,593
09/04/2013 - 08/04/2017	European non-wood forest products network (NWFPs)	Forestry (agroforestry)	Value chain products	According to the FAO definition (FAO, 1999) non-wood	€ 639,332	€ 639,332
16/10/2013 - 15/10/2017	Innovative management and multifunctional utilization	Forestry (agroforestry)	Forestry, Agroforestry	Innovative management and multifunctional utilization of	€ 662,735	€ 662,735
14/02/2013 - 30/04/2017	Green Infrastructure approach: linking environmental	Forestry (agroforestry)	Urban Forests	Green Infrastructure approach: linking environmental with	€ 767,965	€ 767,965
18/10/2016 - 17/04/2021	Payments for Ecosystem Services (Forest for water)	Forestry (agroforestry)	Forestry Ecosystem	Payments for Ecosystem Services (Forest for water)	€ 620,375	€ 620,375
20/01/2012 - 13/03/2016	Urban Agriculture Europe	Sovereignty	Territorial (urban)	WG 1 - Urban Agriculture definitions and Common	no data	€ 500,000
28/02/2019 - 27/02/2023	ENTAN – the European Non-Territorial Autonomy	Sovereignty	non-territorial, inter-	ENTAN – the European Non-Territorial Autonomy Network	no data	€ 500,000
21/04/2005 - 26/10/2009	(PROGRESSORE) Programme for the Study of European	Sovereignty	Rural Peasant	The main objective of the Action is to provide the	€ 326,221	€ 326,221
09/03/2017 - 09/03/2019	REthinking Sustainability TOwards a Regenerative	Regenerative	Regenerative buildings	REthinking Sustainability TOwards a Regenerative	€ 591,029	€ 591,029
		Organic		7 projects	€ 2,180,829	€ 3,180,829
		Forestry (agroforestry)		4 projects	€ 2,690,408	€ 2,690,408
		Sovereignty		3 projects	€ 326,221	€ 1,326,221
		Regenerative		None applicable project	€ 0	€ 0
			Total	14 projects	€ 5,197,458	€ 7,197,458

6.1.4 Stage 2

The projects highlighted by the keyword searches have also been cross-checked against the funding calls within Societal Challenge 2 ('Food Security, Sustainable Agriculture and Forestry, Marine, Maritime and Inland Water Research and the Bioeconomy'). The keywords have been searched within the Societal Challenge 2 working programmes for 2014-2015⁴⁵, 2016-2017⁴⁶, and 2018-2020⁴⁷. Preliminary results show there is a consistent increase in the words used in our 5 word-families.

It is also interesting to note that the words 'agroecology' and 'agroforestry' appeared first as **hyphenated** words, i.e. **agro-ecology**, **agro-forestry**, as if they were not fully established and not yet understood as a concept in their own right. While the word agro-ecology did not exist in 2014-2015, it emerged as hyphenated word in 2016-17, and in 2018-2020 was mainly used without hyphens, although some proposals text use both. For agro-forestry the same pattern was found, however it emerged as word besides forestry already in a 2014/2015 call, two years before agro-ecology in 2017. Project applications must follow proposal text wordings closely, as this is advisable in order to be successful. Therefore, the working programmes can be credited to introduce the words into calls and make them accessible to a much wider audience. In recent calls the word "agroecology", lost its hyphen, and was also given a definition in a footnote, referring to the FAO 10 elements of agroecology. This is welcomed too as it provides clarity and an international definition which goes beyond the EU. As Horizon 2020 was, and Horizon Europe is, open to most countries in the world, the EU's internally agreed definition is appropriate.

⁴⁵ https://ec.europa.eu/research/participants/data/ref/h2020/wp/2014_2015/main/h2020-wp1415-food_en.pdf

⁴⁶ https://ec.europa.eu/research/participants/data/ref/h2020/wp/2016_2017/main/h2020-wp1617-food_en.pdf

⁴⁷ https://ec.europa.eu/research/participants/data/ref/h2020/wp/2018-2020/main/h2020-wp1820-food_en.pdf



Results and Analysis - Track 1: online statistical data

Table 3. Horizon 2020 funding in 2014-2015, 2016-2017, and 2018-2020, with the 5 word families and funding totals.

Duration	Acronym - Title	Organic	Agroecology	Agroforestry	Territories, Food systems, Rural	Regenerative, Permaculture	Type	Project Budget (€ million)	Organic	Agroecology	Agroforestry	Territories, Food systems, Rural	Regenerative, Permaculture	Organic only
H2020 2014-15	SFS-3-2014: Practical solutions for native and alien pests affecting plants. B.	Organic					RIA	€ 3.0	3					
	SFS-4-2014: Soil quality and function	Organic					RIA	€ 5.0	5					
	SFS-7-2014/2015: Genetic resources and agricultural diversity for food security,	Organic		Agro-forestry			RIA	€ 3.5	4		4			
	SFS-7-2014/2015: Genetic resources and agricultural diversity for food security,	Organic		Agro-forestry			RIA	€ 7.0	7		7			
	SFS-10-2014/2015: Tackling disease related challenges and threats faced by	Organic					RIA	€ 7.0	7					
	SFS-13-2015: Biological contamination of crops and the food chain	Organic					RIA	€ 5.0	5					
	SFS-20-2015: Sustainable food chains through public policies: the cases of the	Organic					RIA	€ 7.0	7					
	ISIB-1-2014: Provision of public goods by EU agriculture and forestry: Putting			Forestry			RIA	€ 3.0			3			
	ISIB-4-2014/2015: Improved data and management models for sustainable			Forestry			RIA	€ 5.0			5			
	ISIB-4-2014/2015: Improved data and management models for sustainable			Forestry			RIA	€ 4.0			4			
	SFS-6-2014: Sustainable intensification pathways of agro-food systems in				Food system		CSA	€ 1.0				1		
	SFS-18-2015: Small farms but global markets: the role of small and family				Food system		RIA	€ 5.0				5		
	ISIB-12-2014/2015: Public-Public Partnerships in the bioeconomy				Food system		ERA-N	€ 5.0				5		
	ISIB-12-2014/2015: Public-Public Partnerships in the bioeconomy				Food system		RIA	€ 5.0				5		
	SFS-20-2015: Sustainable food chains through public policies: the cases of the				Food system		RIA	€ 7.0				7		
ISIB-3-2015: Unlocking the growth potential of rural areas through enhanced				Rural		RIA	€ 6.0				6			
ISIB-2-2014/2015: Closing the research and innovation divide: the crucial role of				Rural		CSA	€ 2.0				2			
H2020 2016-17	SFS-07-2016-2017: Organic breeding – Increasing the competitiveness of the	Organic	Organic only				RIA	€ 6.0	6					6
	SFS-08-2017: Organic inputs – contentions inputs in organic farming	Organic	Organic only				RIA	€ 4.0	4					4
	SFS-01-2016: Solutions to multiple and combined stresses in crop production	Organic		Agro-forestry			RIA	€ 6.0	6		6			
	SFS-02-2016: Teaming up for good: Exploiting the benefits of species diversity	Organic		Agro-forestry			RIA	€ 5.0	5		5			
	SFS-06-2016: Weeding - strategies, tools and technologies for sustainable	Organic					RIA	€ 7.0	7					
	SFS-09-2016: Spotlight on critical outbreak of pests: the case of Xylella	Organic					RIA	€ 7.0	7					
	SFS-10-2017: Research and approaches for emerging diseases and pests in			Forestry			RIA	€ 5.0			5			
	SFS-15-2016-2017: Breeding livestock for resilience and efficiency	Organic					RIA	€ 7.0	7					
	SFS-19-2016-2017: ERA-NET Cofund: Public-Public Partnerships in the	Organic	Organic only				ERA-N	no data	no data					no data
	SFS-19-2016-2017: ERA-NET Cofund: Public-Public Partnerships in the			Forestry			ERA-N	no data		no data		no data		
	SFS-26-2016: Legumes - transition paths to sustainable legume-based farming	Organic					RIA	€ 5.0	5					
	SFS-28-2017: Functional biodiversity – productivity gains through functional	Organic		Agro-ecology			Permaculture, Mix	€ 10.0	10	10				10
	SFS-29-2017: Socio-eco-economics – socio-economics in ecological approaches	Organic		Agro-forestry			RIA	€ 5.0	5		5			
	SFS-30-2017: Closing loops at farm and regional levels to mitigate GHG	Organic		Agro-ecology			RIA	€ 7.0	7	7				
	SFS-41-2016: EU-Africa Research and Innovation partnership on food and	Organic					ERA-N	€ 10.0	10					
	SFS-42-2016: Promoting food and nutrition security and sustainable agriculture	Organic					RIA	€ 5.0	5					
	SFS-44-2016: A joint plant breeding programme to decrease the EU's and	Organic					RIA	€ 5.0	5					
	RUR-06-2016: Crop diversification systems for the delivery of food, feed,	Organic					RIA	€ 10.0	10					
	RUR-08-2016: Demonstration of integrated logistics centres for food and non-	Organic					IA	€ 6.0	6					
	RUR-12-2017: Networking European farms to boost thematic knowledge			Agro-ecology			CSA	€ 7.0		7				
	RUR-03-2017: Towards 2030 - policies and decision support tools for an			Forestry	Rural		RIA	€ 7.0			7	7		
	RUR-05-2017: Novel public policies, business models and mechanisms for the			Forestry	Rural		IA	€ 4.0			4	4		
	RUR-08-2016: Demonstration of integrated logistics centres for food and non-			Forestry	Rural		IA	€ 6.0			6	6		
	RUR-10-2016-2017: Thematic Networks compiling knowledge ready for			Forestry	Rural		CSA	€ 2.0			2	2		
	RUR-11-2016: On-farm demonstrations: deepening farmer-to-farmer learning			Forestry	Rural		CSA	€ 2.0			2	2		
RUR-12-2017: Networking European farms to boost thematic knowledge			Forestry	Rural		CSA	€ 7.0			7	7			
RUR-13-2017: Building a future science and education system fit to deliver to			Forestry	Rural		RIA	€ 7.0			7	7			
RUR-15-2017: The benefits of working with others – fostering social capital in				Rural		CSA	€ 3.0				3			
RUR-16-2017: Optimising interactive innovation project approaches and the			Forestry	Rural		RIA	€ 5.0			5	5			
BB-03-2017: Adaptive tree breeding strategies and tools for forest production			Forestry			RIA	€ 6.0			6				
H2020 2018-20	SFS-40-2020: Healthy soils for healthy food production	Organic	Agro-ecology	Agroforestry			RIA	€ 5.0	5	5	5			
	SFS-35-2019-2020: Sustainable intensification in Africa. Scope: A. [2019]:	Organic	Agroecology	Agroforestry			RIA	€ 7.5	8	8	8			
	FNR-01-2020: Strengthening the European agro-ecological research and		Agro-ecology				CSA	€ 2.0		2				
	CE-SFS-39-2019: High-quality organic fertilisers from biogas digestate	Organic					IA	€ 5.0	5					
	SFS-04-2019-2020: Integrated health approaches and alternatives to pesticide	Organic					IA	€ 5.0	5					
	SFS-06-2018-2020: Stepping up integrated pest management. B. [2020]	Organic		Forestry			CSA	€ 6.0	6		6			
	SFS-08-2018-2019: Improving animal welfare. Scope: A. [2018] Organic and low	Organic	Organic only				RIA	€ 10.0	10	10				10
	SFS-11-2018-2019: Anti-microbials and animal production. Scope: A. [2018]	Organic					RIA	€ 6.0	6					
	SFS-11-2018-2019: Anti-microbials and animal production. Scope: B. [2019]	Organic					IA	€ 6.0	6					
	SFS-16-2018: Towards healthier and sustainable food	Organic					RIA	€ 7.0	7					
	LC-SFS-19-2018-2019: Climate-smart and resilient farming. B. [2019] Efficiency	Organic		Agroforestry			RIA	€ 7.0	7		7			
	SFS-29-2018: Innovations in plant variety testing	Organic					RIA	€ 8.0	8					
	SFS-31-2019: ERANETs in agri-food. A. [2019] ICT-enabled agri-food systems	Organic					ERA-N	€ 5.0	5					
	LC-SFS-34-2019: Food Systems Africa	Organic					RIA	€ 7.0	7					
	SFS-35-2019-2020: Sustainable Intensification in Africa. Scope: A. [2019]:	Organic	Agroecology	Agroforestry			RIA	€ 7.5	8	8	8			
	DT-BG-04-2018-2019: Sustainable European aquaculture 4.0: nutrition and	Organic					IA	€ 6.0	6					
	CE-RUR-08-2018-2019-2020: Closing nutrient cycles. A.[2018] Understanding	Organic					RIA	€ 6.0	6					
	CE-RUR-08-2018-2019-2020: Closing nutrient cycles. B.[2019] Bio-based	Organic					IA	€ 8.0	8					
	CE-RUR-08-2018-2019-2020: Closing nutrient cycles. C.[2020] Bio-based	Organic					IA	€ 8.0	8					
	CE-RUR-08-2018-2019-2020: Closing nutrient cycles. D.[2020] Bio-based	Organic					RIA	€ 6.0	6					
RUR-05-2020: Connecting consumers and producers in innovative agri-food				Food systems		CSA	€ 3.0				3			
							H2020 2014-15	€ 80.5	38	0	23	31	0	0
							H2020 2016-17	€ 166.0	105	24	67	43	10	10
							H2020 2018-20	€ 131.0	126	32	33	3	0	10
							Total	€ 377.5	269	56	123	77	10	20
							H2020 2014-15		41%	0%	25%	34%	0%	0%
							H2020 2016-17		41%	9%	26%	17%	4%	4%
							H2020 2018-20		62%	16%	16%	1%	0%	5%
							Total		48%	10%	22%	14%	2%	4%



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The projects have then been compared and contrasted with the total funding allocated within H2020 and its 3 work programmes. The purpose of this is two-fold: firstly, it provides an example of the types of funding calls that institutions can apply for to continue researching in agroecology, or elements of it; and secondly, it gives an overview of the proportion of research funding currently awarded to projects that could be working on agroecology. However, it is important to note that agroecology is often combined with organic farming in funding calls. Therefore, it is difficult to obtain for each project the exact amount of funding allocated to, on the one hand, agroecology as a more social science connected to territorial food systems and food governance (food system level) and, on the other hand, agroecology as a natural science connected to agricultural farming practices (agroecosystem level). By using the 5 different keywords we attempted to capture a wider understanding of agroecology.

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Table 4. Horizon 2020 funding in 2014-2015, 2016-2017, and 2018-2020, with the 5 word families and funding totals (details of analysis in Table 3)

EU Horizon 2020 period	Total Project Budget (€ million)	Organic	Agroecology	Agroforestry	Territories, Food systems, Rural	Regenerative, Permaculture	Organic specific
H2020 2014-15	€ 80.5	€ 37.5	€ 0.0	€ 22.5	€ 31.0	€ 0.0	€ 0.0
H2020 2016-17	€ 170.0	€ 109.0	€ 24.0	€ 67.0	€ 43.0	€ 10.0	€ 14.0
H2020 2018-20	€ 131.0	€ 126.0	€ 32.0	€ 33.0	€ 3.0	€ 0.0	€ 10.0
Total		€ 272.5	€ 56.0	€ 122.5	€ 77.0	€ 10.0	€ 24.0
H2020 2014-15		41%	0%	25%	34%	0%	0%
H2020 2016-17		41%	9%	25%	16%	4%	5%
H2020 2018-20		62%	16%	16%	1%	0%	5%
Total		48%	10%	22%	14%	2%	4%

Additionally, results from the Stage 1 searches suggest that agroecology and organic farming are often combined in projects, hence the need to take a closer look at selected projects to clarify whether they include work related to the different aspects of agroecology e.g. following 5 different levels which are seen as increasingly better with higher numbers⁴⁸ or other attempts to categorise and classify agroecology. Projects may use the word organic a lot and research at the agroecological food system level, others may use the word agroecology a lot and not address this level at all.

Also interesting to note is that projects specifically addressing problems within certified organic farming systems are rare 4% (Table 3 and 4). This is despite the fact that Organic is often (48%) mentioned together with the need to address issues in both farming systems (organic and conventional). Both the use of the word organic in general, organic specific and agroecology have increased over time which is positive to note. Agroforestry and Territorial food systems have declined. Regenerative and permaculture were not mentioned and also not biodynamic as part of organic farming.

⁴⁸ Gliessman, S.R. (2016) Transforming food systems with agroecology. *Agroecol Sustain Food Syst* 40(3):187–189. <https://doi.org/10.1080/21683565.2015.1130765>

6.2 Conclusions from the analysis

The analysis shows that all five key word families appear in funding calls. The word families **‘Organic’** and **‘Agroecology’** are used and funded most frequently. There is equally funding for **‘Agroforestry’** and **‘Territorial Food Systems’**. While **‘Regenerative agriculture’** returned very few mentions, although one could argue many projects for conventional agriculture (e.g. reducing herbicide use) also benefit regenerative agriculture. Projects for **Conventional agricultural** which do not mention any of the five word families were not picked up in the research, but it can be assumed that there might be additional projects which nonetheless support agroecology in some form, this was shown in the COST databank analysis where biological pest control and forestry (not agroforestry) were included in the search and projects were identified, which are of value to organic (biological pest control) or agroforestry (short rotation crops funded under forestry), respectively.

As outlined before, we can also trace the arrival of the different words throughout the decades. Organic appeared first, as put in law in 1991 by the first EU regulation on organic agriculture, however originally with very little funding. It re-emerged in the 2000s and grew stronger in the 2010s and is still increasing. The words biological agriculture and ecological agriculture are not used, although protected by the EU regulation. Agroecology and Agroforestry only emerged in the 2010s and both first as hyphenated words **agro-ecology** and **agro-forestry**. This could be seen by some, as if they were not yet understood or recognised as a full concept in its own right. But even if the hyphen carries no wider meaning, the orthography changed in the later part of the 2010s and both are now used mostly without hyphen. Although agro-ecology is still sometimes found, mainly to denote agro-ecological practises (synonymous with organic practice, if certification is required). This use of the hyphenated word may act as a delineation of agroecology from the more holistic definition of the FAO, and maybe also to make a distinction between agro-ecology and **political agroecology** and **peasant agroecology** (both including social, political and governance/power) questions. In **‘Territorial food systems’** this distinction is not found, as the term denotes systems that are social and political by nature. The research in the 2000s and 2010s has mainly focused on rural issues but recently in the mid 2010s also included **peri-urban, urban** and **metropolitan** food systems.

‘Regenerative agriculture’ has few mentions so far, however this could change given the increasing interest in the practice. **Permaculture** and **biodynamic** have not made it into funding calls at all, although some projects use biodynamic and permaculture approaches. **Vegan organic**, another emerging concept, has also not yet been found in any calls, the later 2020s will show if this changes as the concept could increase in significance.

As mentioned before many conventional projects could in principle benefit agroecology and in the 2010s a particular sentence appears in the impact requirements of funding calls: *‘results should benefit both conventional and organic systems’*. This has helped to insert an organic/agroecological opening in project design. It is however unclear what *‘benefit both’* means: equally as in 50/50 or

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could this be just in minor ways for organic systems? It would seem fair that if there are **dedicated projects for conventional agriculture** e.g. for practices not allowed in organic/agroecology (like e.g. bio-economy manure treatments of intensive livestock units), equally **dedicated projects for agroecology** should be commissioned to balance the consumer/tax-payer needs for public research.

When comparing funding for research and funding for agroecology on farms (see also the sections on Track 2 of our study), it becomes clear that research funding is less patchy and that a considerable amount of funding has been given and new concepts have been added and funding has been increasing. Researchers should not be unhappy about the funding available from the EU administered programmes, as e.g. compared to what is offered individual states. For some there is considerable additional government funding (e.g. Denmark, Norway, Switzerland Germany), for others EU funding is nearly the only option for agroecology (e.g. United Kingdom).

As will be shown in the following sections on Track 2 of our study, funding directly for farms practicing agroecology and especially for innovative farmers working on practical solution for agroecology is sparse.

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6.3 Recommendations for discussion based on the analysis and expert-knowledge

Based on our results and conclusion using our long-time expert-knowledge with delivering projects, we propose the following insights and recommendations for further discussion:

1. Consider funding more projects **dedicated to agroecology** which include all five levels of food system transformation.
2. Avoid **too large projects** (beyond 10-15 million), as it could concentrate power in conglomerates.
3. If calls require relevance to organic and conventional in the call text **make clear** is this either 50/50 or at 25/75, based on expected land use of this system, otherwise organic and agroecological approached could be marginalised in combined teams with conventional colleagues.
4. Funding projects which are tackling issues relevant for both organic/agroecological and conventional systems can be useful to **create learning** and ‘cross fertilisation’, however dedicated calls for each system are equally important to innovate within each system.
5. Always fund **at least two (or more) projects** to give diversity of views and a level playing field in applications. Calls with one project funded might eliminate creative discussion and plurality of views. This is detrimental to all. Two pairs of eyes have a wider field of view, can see more spatial movements and give a sharper view. In science confirming the same results by different teams has value in itself, hence the paired approach make sense.
6. For sector bodies in Brussels **consider direct funding**. Direct funding of sector bodies can be legitimate provided they have democratic representation across Europe, and they themselves benefit the whole of Europe equally.
7. Consider a mechanism where certain **successful projects can continue**, after evaluation and add new partners.

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8. Encourage more leads from European peripheral countries (the ones not close to the EU centres of Brussels, Luxemburg, and Strasbourg).
9. Have additional networking funding to link and cluster projects.
10. Avoid too much ‘multi-actor and just networking to discuss known problems again’, also fund research which has the potential to **actually fix known problems** and innovate.
11. **Measure outcomes in real landscape features**, e.g. more insects, less pollution, higher welfare, more small-scale enterprises, eco-tourism. There is a tendency to measure impact only with words, website hits, meetings organised, but not so much in the real physical changes in the landscape.
12. Consider **reducing project overhead** (indirect costs) share from 25% to 15% to make administration leaner and deliver more research, innovation and cooperation.
13. Make project researchers legally responsible for their overheads, otherwise researchers have little influence on how they are spent.
14. Include specific **easy access funding for grass-root organisations**. Make claims simple, personal and transparent (e.g. like in the COST or EIP focus groups claim system). This makes EU funding **more direct taxpayer accountable** and partly independent from host organisations, which could potentially interfere in the work and financial flows with internal hierarchies, which are not linked to the tasks of the funding.

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7.1 Qualitative results

In what follows, we summarise the qualitative results of our surveys and interviews as part of Track 2, with a focus on the barriers and opportunities of current funding mechanisms and supporting policies at EU and individual country levels. Specific and interesting cases in different countries are shown in grey boxes.

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After presenting details on the number of respondents and their profiles, key messages are organised under five thematic headings, which emerged from the data through an iterative process of analysis in which we paid particular attention to commonalities (shared by several or all country respondents) as well as differences and contradictions. We enquired into responses from EU countries and non-EU countries separately to identify potential discrepancies. No major differences could be identified apart from the availability of EU-specific finance via the CAP.

After discussing the results under each heading, we distil a set of recommendations to provide the basis for strategic public funding for agroecology at the EU level. We provide best practice examples from a selection of countries in text boxes throughout this section.

7.1.1 Age and gender in the online surveys:

Age ranges	Survey 1	Survey 2	Total
18-34	3	4	7
35-50	7	3	10
51+	2	2	4
Genders			
Female	5	5	10
Male	7	3	10
Prefer not to say		1	1

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Of the two rounds of 21 online survey responses, there was an equal split of genders. 10 identified as women and 10 as men, with one preferring not to say. 50% were in the age range 35-50, 35% were under 35 and 15% were over 50.

The survey was oriented to practitioners with the aim of collecting grassroots data of people with knowledge on agroecology. 70 % belonged to farmer groups. The remaining 30 % were researchers or belonged to national ministries of agriculture.

7.1.2 Understanding agroecology and data constraints

In almost all countries – with some important exceptions, such as France – agroecology as a term is rarely, if ever, used. There is hence confusion around its definition, and by consequence, agroecology is poorly recognised. This does not only lead to a lack of data available on financial support for agroecology, but in many cases also to a lack of financial support at all.

While in some countries, data is available on finance for organic agriculture or environmental measures (such as biodiversity-enhancing practices or water conservation), this is often only available piecemeal or in highly aggregated form. This lack of data on agroecology spending is compounded by diverse reporting mechanisms and periods, both within and between countries, making cross-comparability difficult if not impossible.

7.1.3 Funding sources and channels

While some countries have additional funding schemes, e.g. via national or regional agricultural funds for discrete initiatives, the bulk of funding that might support agroecology on the ground is – in the EU context – financial contributions via the CAP, pillars 1 and 2.

Several respondents commented that biodiversity- and climate-focused funding schemes, sometimes open for applications from food producers and land owners, can contribute to agroecological initiatives. However, there is still a strong dichotomy between environment and climate on the one side, and food production on the other, often materially manifested in the separation of governmental institutions and ministries along these lines. Conversations have hence remained siloed, contributing to the failure to recognise the multiple values of agroecological production and their holistic/integrated dimensions.

While serious limitations remain, agri-environment measures, including the eco-schemes of the reformed CAP are seen by most respondents as potentially supportive of agroecological initiatives. However, some have pointed out that such measures can also work to undermine agroecological development by creating ‘*contra-productive incentives*’, such as the removal of old-growth hedgerows to be able to qualify for funds for planting new hedgerows.

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Respondents overwhelmingly pointed to the local scale as the ideal scale for funding local initiatives, underlining the important role of municipal governments in the distribution of funds. Yet this channel of funding is unevenly used: not all municipalities in all countries administer funding for agricultural development. Funding via the LEADER approach and Local Action Groups was highly praised by multiple respondents, supporting the view that the local scale is crucial to effecting agroecological transitions.

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Similarly, it was pointed out that smaller amounts of funding for small initiatives, small groups or cooperatives generally have a stronger impact on enhancing agroecological development than large-scale funding for large programmes, often only accessible to large farms and businesses due to the transaction costs involved in the application.

The Liberec region in the Czech Republic

Local awareness is developing and pressure to improve current farming practices is coming from the people, locally. Liberec region has now established a fund for the district, totalling for the first season in 2021, 25,000 Euros taken from the regional public budget. Practitioners comment that **even small amounts can make a big difference for local producers**. And they also acknowledge the fact that agroecological farmers are not able to access funds from national budgets. The new system makes it very easy for farmers to access money quickly and easily. Farmers can ask any amount **below 10,000 Euros**. They usually ask between 1 to 3,000 Euros. The money is dedicated to “small family ecology base farming”. How does it work? All farmers receive an email to inform about the fund; the application form is very simple, only 2 pages; **50% is given up-front**; it is quick, the money is available in less than 2 months; the selection process is transparent, points appear with score as it is being filled in.

7.1.4 Barriers to funding for agroecological development

7.1.5 Farm size

The most fundamental barrier to making funding work for agroecology which has been pointed out by our respondents is that there is no level playing field – from farm subsidies to calls for funding, the system is geared towards the large scale, a problem that has often been pointed out. Part of the problem is not just lack of support for small scale or agroecological farmers but the existing support for conventional, large scale, industrial production (organic or not), which creates an environment of unfair competition in which the larger the farm and the larger the economic enterprise, the more

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financial support it can access. This holds true both for public funding, via the CAP, as well as private investments and loans from financial institutions.

Farm size is a hurdle to subsidies: In some EU member states farms smaller than 3 ha (or 5 ha as was the case in the UK during CAP) are not entitled to CAP payments, yet many European countries have many small farms of this size.

Subsidies support mostly hectares cultivated and less the quality of production or the provision of environmental services and public goods. This means that farmers are rewarded for their land size or crop and not for their ecological services or their service of providing healthy food for all. Results-based payments, when properly monitored, could change this, and the CAP reform is meant to overcome some of these limitations, but we are yet to see outcomes of the changes.

Moreover, receiving subsidies via the CAP comes with administrative difficulties: transaction costs, time effort, complexity of bureaucracy – the effort involved in the application is often higher for small scale agroecological farmers due to higher diversity in field and smaller plots, all of which needs to be accounted for and registered. At the same time, financial return on their application is lower when compared to large scale farmers – simply for reasons of payments still being linked to hectares cultivated. Large farms are often able to contract consultants to fill in the required applications, which comes at a cost that smaller farms are unable to bear.

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The Podkarpacki region in Poland

A successful scheme has been implemented in the last 5 years. Farmers with grazing receive 50€/ha/year. They report it makes a considerable difference for them. The money comes from the local government. It works well because an **intermediate organisation**: the Horb Foundation, does the paperwork (fills in the administrative requirements for farmers and helps deliver the funds). For farmers to access the funds they **must attend a training course**. For 2021, it will be a 3-day course about agroforestry, organic production, biodiversity and economics of production. The course aim is to protect biodiversity. In the last round of funding, the foundation **delivered funds for 1,427 ha in the region**. Reasons for success: easy to access (simple criteria); no administrative burden; intermediate organisation; money provided in advance.

Furthermore, overly burdensome administrative requirements of funding exist not only at the application stage, but also during project implementation and evaluation, creating disincentives for smaller-scale, economically more marginalised farms. The co-financing requirements of certain funding opportunities often exclude small farmers and new entrants for lack of savings.

Similarly, specific funding for equipment is generally geared towards large, industrial farms and rarely takes into account the needs of smaller, agroecological ones who need very different tools or infrastructure.

7.1.6 Systemic understanding of agroecological practices and their time-scale

Overall, more **flexibility in funding** is needed, or more contextual awareness: many opportunities to support agroecological innovations are missed because these do not fit neatly into the restrictive funding schemes – e.g. agroforestry rules require scattered trees in fields rather than rows, making it more difficult for vegetable growers to include trees in their systems; vice versa orchards need to be planted in rows to qualify for CAP subsidies, limiting a more diverse ‘food forest’ approach as practised in permaculture.

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Portugal

In 2018, the Portuguese government enacted a law that allows positive public funding discrimination for family farms. The Family Farming Statute (FFS) was established by law in August 2018 with the publication of Decree-Law n.º 64/2018 (see Annex 4). It enshrines the recognition of a **set of rights and support** accessible to small and medium-sized farms that use family labour for more than 50% of their work. Family farming: “the way of organising productive activities, managing the environment and supporting social life in rural territories”.

The articulation of the **law is transversal, involving ten ministries**, which demonstrates to society the importance of farmers to the nation. These are, Ministry of: Agriculture; Environment and Climate Action; Territorial Cohesion; Education; Economy and Digital Transition; Finance; Justice; State Modernisation and Public Administration; Planning; Health and Labour, Solidarity and Social Security.

Respondents also underlined the importance of **funding the transition** away from conventional, monoculture-oriented farming to more diversified, organic systems. As often this transition is accompanied by an initial yield reduction, **many farmers consider the transition too risky without financial support**. Moreover, it was highlighted that the compartmentalised approach currently practised undermines agroecology: in this sense, we might see financial support for reduced water use by a farmer whose practice is reliant on extensive pesticide application. Funding should be used to support systemic, connected or holistic change and not minor, incremental and atomised efforts.

Time-scale was also brought up as an important aspect of making funding work. In this sense, long-term funding for agroecological research is needed, to allow the full benefits of agroecological production to come to light and be evidenced.

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7.1.7 Awareness, technical capacity and training

According to respondents, there is a **lack of awareness of agroecology and its benefits amongst all stakeholders**: farmers, government at all scales, food sector workers and the wider public. Additionally, there is a **lack of awareness of existing evidence of these benefits and an insufficient transfer of knowledge** from research to practitioners, as well as vice versa from practitioners to researchers, and then to the wider public.

Italy

National level: Every year the Ministry of Agriculture issues a call for school canteens using organic products locally produced. The municipalities can apply, and they are funded to ensure that they provide locally produced organic food to the children. Public local procurement is considered a main component of agroecology. The recent call was in March 2021.

Regional level: in Lazio, Rome region, there is a regional law ('Law 11 Biodistretti' 12 July 2019), on a territorial approach for **Biodistricts**. On the first of October 2021 a call was issued to support a 3-year plan. Districts make a **3-year territorial plan** with mandatory components such as: expansion of organic agriculture; reduction of the use of pesticides; a territorial approach.

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Maybe more problematic is also a significant lack of technical support and capacity. Public **advisory services** have been characterised as often poor or under-resourced, and commercial advisory services can be biased or even directly in the interest of or organised by agricultural input companies, creating a strong bias against agroecology.

This underlines the urgent need for **financial and capacity support** for training and education on sustainable, ecological, and/or regenerative agriculture – both to respond to farmers and farm workers' needs, as well as to educate their advisors. Similarly, non-monetary resourcing (capacity building, demonstrations, exchanges) is needed to further generate and transfer and exchange knowledge in the farming community.

Interestingly, it was pointed out by one respondent that the requirements, rules and application forms for funding often change, which makes learning to navigate these difficult and knowledge sharing often irrelevant for future applications. This is seen as making successful applications more complicated and less accessible.

Transylvania, Romania

The Sancraiu municipality, in Transylvania endowed with a great diversity of farming landscapes, channels EU funds towards small/medium farmers, ecotourism, local gastronomy, and the use of the commons. The commons are pasture lands managed collectively between the municipality and small-scale cattle farmers who share the grazing land and maintain it as “**high nature value farms**” with a common objective of not overexploiting it through extensive cow herding. Subsidies (ecosystem service payments) given to high-nature-value-farms are well marketed out in the municipality so that farmers can access these funds. In the diverse southern plains of Transylvania, in Hosman, CAP funds are directed to maintain the presence of small farmers. Through the high-nature-value subsidy schemes, small farmers receive an extra benefit for keeping their input low, and their impact low, and maintain the pastures and the meadows.

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7.1.8 Wider system issues

Many respondents indicated that they experienced a wide, cross-sectoral **disinterest in supporting small farmers** – they felt strongly the value of small-scale agroecological work is not recognised, and that concomitantly large farmers have disproportionate agenda-setting power. It was also pointed out that in countries in which the cultural importance of farming is recognised, financial and other support is better organised and more readily available.

Respondents cited also the priorities of financial institutions, that is their focus on conventional farms and high returns, and the high indebtedness of farmers as important bottlenecks and the reason why many farmers would find it difficult or impossible to change practice. It is thus important to note that banks play a crucial role in locking farmers into the old paradigm – and could play a role in undoing these lock-ins to provide incentives for change. For the time being, global market demands and price volatility incentivise production intensification, which runs counter to agroecological development. The organic market can be or can appear to be more insecure, reinforcing financial institutions and investors proclivity to support ‘safer’ conventional agriculture. Respondents also criticised the fact that, while in some countries organic production is financially and institutionally supported, this is to a large extent for export or perceived as only for ‘the wealthy’, rather than meant as a way to leverage systemic change of the entire agricultural sector.

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Spain

The Region of Valencia (GVA Generalitat Valenciana) developed an Ecological- Organic Plan for the period 2016-2020 with the objective of: “*Promote local and ecological agricultural production*”, with a differentiating focus, based on Valencian family agriculture, connecting it with initiatives that work with more conscious and responsible consumption, to give impetus to true production and transformation of quality food, thus favouring food sovereignty in the territory and being an example of an economically profitable agricultural activity in the long term, environmentally clean and socially fair, that is, sustainable. **78 million Euro** have been allocated to the plan. The specific budgetary lines include: Promotion of conscious, responsible and ecological consumption; Promotion of organic production; Promotion of the commercialisation and transformation of organic food; Promote Valencian agroecological knowledge; Improve governance and transparency in the sector; Cross-government policies.

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A further crucial bottleneck for agroecology is the development of local and/or **short food supply chains**, including local public procurement which are not always in place. This also speaks for the need to support the marketing of agroecological products and a more systemic approach to supporting agroecological development, that is, not only at the food production level, but beyond to distribution and transformation.

Because of these systemic conditions which thwart efforts to support agroecological change, several respondents pointed to the need for long term, integrated and holistic vision and strategy to develop regulation which supports a paradigm shift, rather than just fragmented improvements for partial and temporary fixes.

7.2 Funding table

This table collates the information obtained and quantitative data from the qualitative research methods use. The data show information is patchy and not everywhere complete, however it nevertheless gives an interesting insight and starting point for further questioning, debate and data collection (Table 5).

Table 5. Funding in Euro or million Euro for ‘Organic’, ‘Agroecology’, ‘Agroforestry’, ‘Food-territory’, ‘Regenerative soil’ and ‘Forestry’ in selected countries in Europe. Data for different countries, regions, federal states or municipalities are shown, based on the availability in the surveys (for numbers below 1 million (m) “,” indicates 1000-separation).

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Euro or million (m) Euro	Organic	Agroecology	Agroforestry	Food- territory	Regene-soil	All with agroforestry	All Agriculture	Forestry
Albania								
Shkodra municipality		15,613	134,229	11,864	278,593	440,299		
Korça municipality		43,861	229,952	45,500		319,313		
IPARD PROGRAMME						1.472 m		
National funding		42.08 m		47.28 m	162,298	89.53 m		
North Macedonia								
in 2019	1.69 m	181,650				2 m	130-150 m	
in 2017	1.45 m	97,500						
Switzerland								
National funding				7.7 m		141 m		
Croatia								
Zagreb County	527,000						866,000	
National funding	40 m					40 m	370 m	
Ministry research	245,418	346,499	24,397	81,392	197,784	895,490	1.74 m	444,938
Greece								
National funding	536 m					536 m	2153 m	48 m
Netherlands								
Friesland					150,000		8.8 m	
National							4.5 m	
Portugal								
National	26.4 m		24.2 m	90 m			600 m	318 m
France								
Bretagne		135,000						

Results and Analysis Track 2: grassroots information

7.3 Conclusions and recommendations on grassroots agroecology funding

Based on this study, we recommend the following actions to be taken by policy makers at the EU and country levels, in order to provide a robust foundation for the development of funding mechanisms enabling a European agroecological transition of food and farming systems:

Think and act systemically

1. Overcome siloed conversations, **connect institutions**, build integrated thinking and underline the multiple benefits, ecological services and public goods provided by agroecological farming
2. Integrate **long-term thinking** into funding strategies and allow for the building of transformative results over time
3. Fund systemic, connected **and holistic change** rather than incremental, atomised initiatives

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Build understanding of and capacity for agroecology

4. Pro-actively support **participatory agroecological research**, and researcher-practitioner partnerships
5. Educate and build agroecological capacity of **public advisors and advisory services**
6. Introduce agroecological expertise into agricultural colleges and training programmes
7. Support **farmer-to-farmer knowledge** exchanges and farmer field schools for agroecological transition

Create intelligent and responsive funding mechanisms

8. Simplify application procedures and offer **free or low-cost advisory services for small farms** to be able to access subsidies and funding, and support recipients in project evaluation and reporting
9. Create **more small-scale funding opportunities** with simplified application procedures to catalyse the potential of small farms and enterprises
10. Fund farmers at all scales to **transition towards agroecological practice**
11. Develop **results-based payments**, not just size or practice-based payments – i.e. reward evidenced results (e.g. increasing soil carbon content) rather than practices (e.g. no-till).
12. Analyse effects of eco-schemes by investigating the way on-the-ground practices change and adjust measures as needed
13. **Empower local government and municipalities** to dispense more funds to local initiatives, and continue to build and provide funding via the LEADER approach
14. Enable **agroecological innovations** by creating flexible funding schemes which empower applicants to experiment with agroecological principles (e.g. recognise food forests as a production method)
15. Mainstream agroecology reporting to collect data for monitoring and evaluation of funds dispensed

Create an enabling environment for agroecology

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16. **Value and support small agroecological farms** and enterprises, including those under 1 ha in size
17. Actively strengthen the development of local markets and **short food supply chains**, including **public procurement of agroecological produce** for vibrant local food economies
18. **Support new entrants** to start from the outset with agroecological practices through incentives and enabling policies
19. Help overhaul banks' agricultural lending strategies and educate bank personnel on agroecological potential

8 Appendix

Table a. Projects funded under the H2020 programme: keyword area “agroforestry”. Source: CORDIS (<https://cordis.europa.eu/>).

Duration	Acronym - Title	Funder	Topic	Project Budget	EU Contribution	Type	Coordinating Country	Coordinator Type
October 2016 - March 2021	REHAP Systemic approach to Reduce Energy demand and CO ₂ emissions of processes that transform agroforestry waste into High Added value Products	H2020-EU.2.1.5.3.	SPIRE-03-2016 - Industrial technologies for the valorisation of European bio-resources into high added value process streams	€ 8,157,789.30	€ 6,743,545.00	IA - Innovation action	Spain	Academic
December 2016 - November 2021	LEAP-AGRI A long term EU-Africa research and innovation partnership on food and nutrition security and sustainable agriculture	H2020-SFS-2016-1	SFS-41-2016 - EU-Africa Research and Innovation partnership on food and nutrition security and sustainable agriculture	€ 27,950,695.00	€ 9,223,729.35	ERA-NET-Cofund - ERA-NET Cofund	France	Academic
January 2017 - December 2019	AFINET Agroforestry Innovation Networks	H2020-EU.3.2.4., H2020-EU.3.2.1., H2020-EU.3.2.2.	RUR-10-2016-2017 - Thematic Networks compiling knowledge ready for practice	€ 1,999,987.50	€ 1,999,987.51	CSA - Coordination and support action	Spain	Academic
July 2017 - December 2021	Marginal lands for Growing Industrial Crops (MAGIC): Turning a burden into an opportunity	H2020-RUR-2016-2	RUR-07-2016 - Resource-efficient and profitable industrial crops on marginal land	€ 5,999,987.50	€ 5,999,987.50	RIA - Research and Innovation action	Greece	Multi-actor
June 2017 - May 2021	BREEDing Coffee for AgroForestry Systems (BREEDCAFS)	H2020-EU.3.2.1.1	SFS-03-2016 - Testing and breeding for sustainability and resilience in crops	€ 6,368,786.25	€ 4,200,000.00	RiA - Research and Innovation action	France	Academic
September 2018 - June 2020	Examining the Agroforestry Landscape Resilience in India to inform Social-Ecological Sustainability in the Tropics (EARNEST)	H2020-EU.1.3.2.	MSCA-IF-2017 - Individual Fellowships	€ 171,022.95	€ 171,022.95	MSCA-IF-EF-ST - Standard EF	United Kingdom	Academic
November 2018 - October 2022	Mapping and Assessment for Integrated ecosystem Accounting (MAIA)	H2020-EU.3.5.2.	SC5-18-2018 - Valuing nature: mainstreaming natural capital in policies and in business decision-making	€ 3,002,007.50	€ 3,002,007.50	CSA - Coordination and support action	Netherlands	Academic
May 2018 - April 2022	Organic-PLUS Pathways to phase-out contentious inputs from organic agriculture in Europe	H2020-SFS-2017-2	SFS-08-2017 - Organic inputs – contentious inputs in organic farming	€ 4,121,527.25	€ 4,091,526.00	RIA - Research and Innovation action	United Kingdom	Academic
June 2019 - May 2021	Examining pan-neotropical diasporas (EXPAND)	H2020-MSCA-IF-2018	MSCA-IF-2018 - Individual Fellowships	€ 160,932.48	€ 160,932.48	MSCA-IF-EF-ST - Standard EF	Spain	Academic
September 2020 - August 2025	Sustainable intensification of food production through resilient farming systems in West & North Africa (SustInAfrica)	H2020-EU.3.2.1.1	SFS-35-2019-2020 - Sustainable Intensification in Africa	€ 6,997,318.74	€ 6,997,318.74	RIA - Research and Innovation action	Finland	Academic

(continued)

Duration	Acronym - Title	Funder	Topic	Project Budget	EU Contribution	Type	Coordinating Country	Coordinator Type
January 2020 - December 2023	UNDERTREES Creating knowledge for UNDERSTANDING ecosystem services of agroforestry systems through a holistic methodological framework	H2020-EU.1.3.3.	MSCA-RISE-2019 - Research and Innovation Staff Exchange	€ 1,228,200.00	€ 1,228,201.00	MSCA-RISE - Marie Skłodowska-Curie Research and Innovation Staff Exchange (RISE)	Italy	Academic
June 2020 - May 2023	NextLand Next Generation Land Management services for Agriculture and Forestry	H2020-EU.3.5.5.	SC5-16-2019 - Development of commercial activities and services through the use of GEOSS and Copernicus data	€ 3,420,571.43	€ 2,806,000.00	IA - Innovation action	Portugal	Academic
October 2020 - September 2024	EWA - BELT Linking East and West African farming systems experience into a BELT of sustainable intensification	H2020-EU.3.2.1.1	SFS-35-2019-2020 - Sustainable Intensification in Africa	€ 7,499,518.75	€ 7,499,456.25	RIA - Research and Innovation action	Italy	Academic
October 2020 - September 2024	MIXED Multi-actor and transdisciplinary development of efficient and resilient MIXED farming and agroforestry-systems	H2020-EU.3.2.1.2	LC-SFS-19-2018-2019 - Climate-smart and resilient farming	€ 6,999,508.75	€ 6,999,508.75	RIA - Research and Innovation action	Denmark	Academic
November 2020 - October 2024	AGROMIX AGROforestry and MIXed farming systems - Participatory research to drive the transition to a resilient and efficient land use in Europe	H2020-SFS-2019-2	LC-SFS-19-2018-2019 - Climate-smart and resilient farming	€ 6,999,256.01	€ 6,999,254.99	RIA - Research and Innovation action	United Kingdom	Academic
September 2021 - August 2024	TREES4CLIMA Enabling carbon accounting of trees on farms for agroforestry-based climate action	H2020-EU.1.3.2.	MSCA-IF-2019 - Individual Fellowships	€ 286,921.92	€ 286,921.92	MSCA-IF-GF - Global Fellowships	Denmark	Academic
			Sum	€ 91,364,031.33	€ 68,409,399.94			

Table b. Projects funded under the H2020 programme: keyword area “territorial food systems”. Source: CORDIS (<https://cordis.europa.eu/>).

Duration	Acronym - Title	Funder	Topic	Project Budget	EU Contribution	Type	Coordinating Country	Coordinator Type
March 2015 - August 2018	Flourish Aerial Data Collection and Analysis, and Automated Ground Intervention for Precision Farming	H2020-EU.2.1.1.5.	ICT-23-2014 - Robotics	€ 4,780,047.50	€ 3,560,870.00	RIA - Research and Innovation action	Switzerland	Academic
March 2015 - February 2019	DIVERSIFOOD Embedding crop diversity and networking for local high quality food systems	H2020-EU.3.2.	SFS-07a-2014 - Traditional resources for agricultural diversity and the food chain	€ 4,107,405.75	€ 3,429,908.75	RIA - Research and Innovation action	France	Academic
March 2015 - February 2020	Sustainable and Resilient agriculture for food and non-food systems (FACCE SURPLUS)	H2020-EU.3.2.	ISIB-12a-2014 - Sustainable and resilient agriculture for food and non-food systems	€ 15,151,515.10	€ 5,000,000.00	ERA-NET-Cofund - ERA-NET Cofund	Germany	Academic
April 2015 - March 2017	PROIntensAfrica Towards a long-term Africa-EU partnership to raise sustainable food and nutrition security in Africa	H2020-EU.3.2.	SFS-06-2014 - Sustainable intensification pathways of agro-food systems in Africa	€ 1,777,873.75	€ 1,047,005.00	CSA - Coordination and support action	Netherlands	Academic
April 2015 - March 2019	SUSFANS Metrics, Models and Foresight for European Sustainable Food and Nutrition Security	H2020-EU.3.2.	SFS-19-2014 - Sustainable food and nutrition security through evidence based EU agro-food policy	€ 5,299,993.64	€ 4,999,993.00	RIA - Research and Innovation action	Netherlands	Academic
September 2015 - September 2017	NuFEAST Optimising Nutritional Health and Wellbeing Through Local Sustainable Food Systems - NuFEAST (Nutrition - Food (for) Everyone's health, Available, Sustainable and Trusted)	H2020-EU.1.3.2.	MSCA-IF-2014-EF - Marie Skłodowska-Curie Individual Fellowships (IF-EF)	€ 195,454.80	€ 195,454.80	MSCA-IF-EF-ST - Standard EF	United Kingdom	Academic

(continued)

Duration	Acronym - Title	Funder	Topic	Project Budget	EU Contribution	Type	Coordinating Country	Coordinator Type
October 2015 - September 2017	NANOLIPID Understanding key factors for the use of bioactive lipid nanoparticles to modulate the functionality of complex food systems	H2020-EU.1.3.2.	MSCA-IF-2014-EF - Marie Skłodowska-Curie Individual Fellowships (IF-EF)	€ 160,800.00	€ 160,800.00	MSCA-IF-EF-ST - Standard EF	Belgium	Academic
March 2016 - May 2021	Strength2Food Strengthening European Food Chain Sustainability by Quality and Procurement Policy	H2020-EU.3.2.	SFS-20-2015 - Sustainable food chains through public policies: the cases of the EU quality policy and of public sector food procurement	€ 6,911,876.25	€ 6,904,226.25	RIA - Research and Innovation action	United Kingdom	Academic
April 2016 - July 2020	SALSA Small farms, small food businesses and sustainable food security	H2020-EU.3.2.	SFS-18-2015 - Small farms but global markets: the role of small and family farms in food and nutrition security	€ 4,958,172.50	€ 4,958,172.50	RIA - Research and Innovation action	Portugal	Academic
January 2016 - June 2018	CAPSELLA Collective Awareness PlatformS for Environmentally-sound Land management based on data technoLogies and Agrobiodiversity	H2020-EU.2.1.1.	ICT-10-2015 - Collective Awareness Platforms for Sustainability and Social Innovation	€ 2,056,750.00	€ 2,056,750.00	RIA - Research and Innovation action	Greece	Academic
June 2016 - May 2018	SustUrbanFoods Integrated sustainability assessment of social and technological innovations towards urban food systems	H2020-EU.1.3.2.	MSCA-IF-2015-EF - Marie Skłodowska-Curie Individual Fellowships (IF-EF)	€ 168,277.20	€ 168,277.20	MSCA-IF-EF-ST - Standard EF	Italy	Academic
June 2016 - October 2021	EnvJustice A GLOBAL MOVEMENT FOR ENVIRONMENTAL JUSTICE: The EJAtlas	H2020-EU.1.1.	ERC-ADG-2015 - ERC Advanced Grant	€ 1,910,811.00	€ 1,910,811.00	ERC-ADG - Advanced Grant	Spain	Academic

(continued)

Duration	Acronym - Title	Funder	Topic	Project Budget	EU Contribution	Type	Coordinating Country	Coordinator Type
November 2016 - October 2019	CERERE Cereal Renaissance in Rural Europe: embedding diversity in organic and low-input food systems	H2020-EU.3.2.4. H2020-EU.3.2.1. H2020-EU.3.2.2.	RUR-10-2016-2017 - Thematic Networks compiling knowledge ready for practice	€ 1,997,550.00	€ 1,997,550.00	CSA - Coordination and support action	United Kingdom	Academic
January 2017 - June 2022	SUSFOOD2 ERA-Net Cofund on Sustainable Food production and consumption (SUSFOOD2)	H2020-EU.3.2.1. H2020-EU.3.2.2.	SFS-19-2016-2017 - ERA-NET Cofund: Public-Public Partnerships in the bioeconomy	€ 14269217	€ 4,708,841.61	ERA-NET-Cofund - ERA-NET Cofund	Germany	State agency
April 2017 - September 2021	TRUE Transition paths to sustainable legume based systems in Europe	H2020-EU.3.2.1.1. H2020-EU.3.2.2.3.	SFS-26-2016 - Legumes - transition paths to sustainable legume-based farming systems and agri-feed and food chains	€ 4,999,927.50	€ 4,999,927.50	RIA - Research and Innovation action	United Kingdom	Academic
June 2017 - September 2021	VALUMICS Understanding food value chains and network dynamics	H2020-EU.3.2.2.3.	SFS-33-2016 - Understanding food value chain and network dynamics	€ 6,327,922.49	€ 5,999,999.99	RIA - Research and Innovation action	Iceland	Academic
June 2017 - November 2021	InnovAfrica Innovations in Technology, Institutional and Extension Approaches towards Sustainable Agriculture and enhanced Food and Nutritional Security in Africa	H2020-EU.3.2.1.1. H2020-EU.3.2.1.3.	SFS-42-2016 - Promoting food and nutrition security and sustainable agriculture in Africa: the role of innovation	€ 4,794,632.50	€ 4,794,632.50	RIA - Research and Innovation action	Norway	Academic
June 2017 - May 2021	ROBUST Rural-Urban Outlooks: Unlocking Synergies	H2020-EU.3.2.1.3	RUR-01-2016 - Consolidated policy framework and governance models for synergies in rural-urban linkages	€ 5,999,937.50	€ 5,999,934.00	RIA - Research and Innovation action	The Netherlands	Academic

(continued)

Duration	Acronym - Title	Funder	Topic	Project Budget	EU Contribution	Type	Coordinating Country	Coordinator Type
January 2017 - June 2022	IMAJINE Integrative Mechanisms for Addressing Spatial Justice and Territorial Inequalities in Europe	H2020-EU.3.6.1.2. H2020-EU.3.6.1.4.	REV-INEQUAL-07-2016 - Spatial justice, social cohesion and territorial inequalities	€ 4,995,182.50	€ 4,768,397.50	RIA - Research and Innovation action	United Kingdom	Academic
November 2017 - December 2020	FIT4FOOD2030 Fostering Integration and Transformation for FOOD 2030	H2020-EU.3.2.2.	SFS-18-2017 - Support to the development and implementation of FOOD 2030 - a European research and innovation policy framework for food and nutrition security	€ 3,999,998.75	€ 3,999,998.75	CSA - Coordination and support action	Netherlands	Academic
December 2017 - September 2018	FOOD 2030 FLAGSHIP FOOD 2030 Flagship Conference on Research and Innovation for Food and Nutrition Security and Quality Empowerment	H2020-EU.3.2.	SC2-Presidency-2017 - SC2-Presidency Event for Food 2030	€ 125,000.00	€ 100,000.00	CSA - Coordination and support action	Bulgaria	State agency
January 2018 - December 2021	GOLF EC-Asia Research Network on Integration of Global and Local Agri-Food Supply Chains Towards Sustainable Food Security	H2020-EU.1.3.3.	MSCA-RISE-2017 - Research and Innovation Staff Exchange	€ 1,255,500.00	€ 1,003,500.00	MSCA-RISE - Marie Skłodowska-Curie Research and Innovation Staff Exchange (RISE)	United Kingdom	Academic
May 2018 - April 2021	UNISECO Understanding and improving the sustainability of agro-ecological farming systems in the EU	H2020-EU.3.2.1.1.	SFS-29-2017 - Socio-economics – socio-economics in ecological approaches	€ 4,924,771.00	€ 4,924,771.00	RIA - Research and Innovation action	Germany	Academic

(continued)

Duration	Acronym - Title	Funder	Topic	Project Budget	EU Contribution	Type	Coordinating Country	Coordinator Type
May 2018 - October 2021	LIVERUR Living Lab research concept in Rural Areas	H2020-EU.3.2.1.3. H2020-EU.3.2.2.3. H2020-EU.3.2.4.1.	RUR-09-2017 - Business models for modern rural economies	€ 4,107,005.00	€ 4,107,005.00	RIA - Research and Innovation action	Spain	Academic
November 2018 - October 2022	SIMBA Sustainable innovation of microbiome applications in food system	H2020-EU.3.2.3.3. H2020-EU.3.2.2.	LC-SFS-03-2018 - Microbiome applications for sustainable food systems	€ 10,391,412.48	€ 9,999,999.77	IA - Innovation action	Finland	Academic
November 2018 - October 2022	MicrobiomeSupport Towards coordinated microbiome R&I activities in the food system to support (EU and) international bioeconomy goals	H2020-EU.3.2.1.1. H2020-EU.3.2.3.2. H2020-EU.3.2.5.3. H2020-EU.3.2.3.3. H2020-EU.3.2.5.2. H2020-EU.3.2.2.2. H2020-EU.3.2.3.1. H2020-EU.3.2.1.4. H2020-EU.3.2.5.1.	SFS-32-2018 - Supporting microbiome coordination and the International Bioeconomy Forum	€ 3,590,466.25	€ 3,520,466.25	CSA - Coordination and support action	Austria	Academic
November 2018 - October 2023	CIRCLES Controlling mIcRobiomes CircuLations for bEttEr food Systems	H2020-EU.3.2.3.3. H2020-EU.3.2.2.	LC-SFS-03-2018 - Microbiome applications for sustainable food systems	€ 11,087,508.75	€ 9,999,964.88	IA - Innovation action	Italy	Academic
January 2019 - December 2022	HoloFood Holistic solution to improve animal food production through deconstructing the biomolecular interactions between feed, gut microorganisms and animals in relation to performance parameters	H2020-EU.3.2.3.3. H2020-EU.3.2.2.	LC-SFS-03-2018 - Microbiome applications for sustainable food systems	€ 10,825,325.00	€ 9,863,093.00	IA - Innovation action	Denmark	Academic
October 2019 - September 2023	FNS-Cloud Food Nutrition Security Cloud	H2020-EU.3.2.2.3.	DT-SFS-26-2019 - Food Cloud demonstrators	€ 10,912,775.10	€ 10,189,549.92	IA - Innovation action	Austria	Academic

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(continued)

Duration	Acronym - Title	Funder	Topic	Project Budget	EU Contribution	Type	Coordinating Country	Coordinator Type
October 2019 - September 2024	FOSC Food System and Climate (FOSC): Assessing the impact of climate change on food and nutrition security and designing more sustainable and resilient food systems in Europe and beyond	H2020-EU.3.2.1.1. H2020-EU.3.2.1.4.	SFS-31-2019 - ERANETs in agri-food	€ 15,151,515.00	€ 4,999,999.95	ERA-NET-Cofund - ERA-NET Cofund	France	State agency
February 2020 - June 2023	WildRice Wild Rice Culture and Indigenous Food Sovereignty in North America	H2020-EU.1.3.2.	MSCA-IF-2018 - Individual Fellowships	€ 337,400.64	€ 337,400.64	MSCA-IF-EF-CAR - CAR - Career Restart panel	United Kingdom	Academic
May 2020 - April 2025	INCREASE Intelligent Collections of Food Legumes Genetic Resources for European Agrofood Systems	H2020-EU.3.2.1.1.	SFS-28-2018-2019-2020 - Genetic resources and pre-breeding communities	€ 8,826,824.50	€ 6,999,999.50	RIA - Research and Innovation action	Italy	Academic
June 2020 - November 2024	HealthyFoodAfrica Improving nutrition in Africa by strengthening the diversity, sustainability, resilience and connectivity of food systems	H2020-EU.3.2.2.3. H2020-EU.3.2.2.2.	LC-SFS-34-2019 - Food Systems Africa	€ 6,917,551.25	€ 6,917,551.25	RIA - Research and Innovation action	Finland	Academic
August 2020 - March 2021	SESAM Sense, Science and the Magic of Food	H2020-EU.1.3.5.	MSCA-NIGHT-2020 - European Researchers' Night	€ 160,785.00	€ 160,785.00	CSA - Coordination and support action	Denmark	Academic
August 2020 - July 2023	InnoFoodAfrica Locally-driven co-development of plant-based value chains towards more sustainable African food system with healthier diets and export potential	H2020-EU.3.2.2.3. H2020-EU.3.2.2.2.	LC-SFS-34-2019 - Food Systems Africa	€ 6,465,893.75	€ 6,465,893.75	RIA - Research and Innovation action	Finland	Academic

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Duration	Acronym - Title	Funder	Topic	Project Budget	EU Contribution	Type	Coordinating Country	Coordinator Type
September 2020 - August 2024	FOODLAND FOOD and Local, Agricultural, and Nutritional Diversity	H2020-EU.3.2.2.3. H2020-EU.3.2.2.2.	LC-SFS-34-2019 - Food Systems Africa	€ 6,999,086.75	€ 6,999,086.75	RIA - Research and Innovation action	Italy	Academic
October 2020 - September 2024	CITIES2030 Co-creating resilient and sustainable food systems towards FOOD2030	H2020-EU.3.2.2.	CE-FNR-07-2020 - FOOD 2030 - Empowering cities as agents of food system transformation	€ 12,513,955.75	€ 11,779,827.25	IA - Innovation action	Italy	Academic
October 2020 - October 2024	FOOD TRAILS Building pathways towards FOOD 2030-led urban food policies	H2020-EU.3.2.2.	CE-FNR-07-2020 - FOOD 2030 - Empowering cities as agents of food system transformation	€ 12,185,827.14	€ 11,937,057.50	IA - Innovation action	Italy	Municipality
November 2020 - October 2023	COACH Collaborative Agri-food Chains: Driving Innovation in Territorial Food Systems and Improving Outcomes for Producers and Consumers	H2020-EU.3.2.1.3	RUR-05-2020 - Connecting consumers and producers in innovative agri-food supply chains	€ 3,021,762.50	€ 3,021,762.50	CSA - Coordination and support action	United Kingdom	Academic
November 2020 - April 2024	FOODRUS AN INNOVATIVE COLLABORATIVE CIRCULAR FOOD SYSTEM TO REDUCE FOOD WASTE AND LOSSES IN THE AGRIFOOD CHAIN	H2020-EU.3.2.2.3.	RUR-07-2020 - Reducing food losses and waste along the agri-food value chain	€ 6,710,338.75	€ 5,999,207.51	IA - Innovation action	Spain	Academic
November 2020 - October 2024	FAIRCHAIN Innovative technological, organisational and social solutions for FAIRer dairy and fruit and vegetable value CHAINS	H2020-EU.3.2.1.3.	RUR-06-2020 - Innovative agri-food value chains: boosting sustainability-oriented competitiveness	€ 8,036,566.25	€ 6,996,636.00	IA - Innovation action	France	Academic

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Duration	Acronym - Title	Funder	Topic	Project Budget	EU Contribution	Type	Coordinating Country	Coordinator Type
January 2021 - December 2024	FUSILLI Fostering the Urban food System Transformation through Innovative Living Labs Implementation	H2020-EU.3.2.2.	CE-FNR-07-2020 - FOOD 2030 - Empowering cities as agents of food system transformation	€ 12,796,056.25	€ 12,160,305.63	IA - Innovation action	Spain	Academic
May 2021 - April 2025	ATTER Agroecological Transitions for Territorial Food Systems	H2020-EU.1.3.3.	MSCA-RISE-2020 - Research and Innovation Staff Exchange	€ 1,223,600.00	€ 1,030,400.00	MSCA-RISE - Marie Skłodowska-Curie Research and Innovation Staff Exchange (RISE)	France	Academic
			Sum	€ 251,666,463.09	€ 222,367,384.02			

Table c. Projects funded under the H2020 programme: keyword area “regenerative farming”. Source: CORDIS (<https://cordis.europa.eu/>).

Duration	Acronym - Title	Funder	Topic	Project Budget	EU Contribution	Type	Coordinating Country	Coordinator Type
May 2015 - April 2020	iSQAPER - Interactive Soil Quality Assessment in Europe and China for Agricultural Productivity and Environmental Resilience	H2020-EU.3.2.	SFS-04-2014 - Soil quality and function	€ 6,876,625.00	€ 5,375,375.00	RIA - Research and Innovation action	Netherlands	Academic
November 2016 - October 2019	GROW - GROW Observatory	H2020-EU.3.5.5.	SC5-17-2015 - Demonstrating the concept of 'Citizen Observatories'	€ 5,379,290,58	€ 5,096,919.64	IA - Innovation Action	United Kingdom	Academic
August 2018 - November 2018	MYFOOD - An Innovative Smart Greenhouse System based on Aquaponics, Bioponics and Permaculture for Self-Production of Safe and Ultra-Fresh Food.	H2020-EU.3.; H2020-EU.2.3.; H2020-EU.2.1.	EIC-SMEInst-2018-2020 - SME Instrument	€ 71,429.00	€ 50,000.00	SME-1 - SME instrument phase 1	France	Multi-Actor
January 2021 - December 2023	RESET - Restarting the Economy in Support of Environment, through Technology	H2020-EU.1.2.2.	FETPROACT-EIC-08-2020 - Environmental Intelligence	€ 2,116,200.00	€ 2,110,200.00	RIA - Research and Innovation Action	United Kingdom	Academic
January 2021 - December 2023	AgriCapture - Developing EO-powered services to promote soil carbon sequestration through regenerative agriculture	H2020.EU.2.1.6.1; H2020-EU.2.1.6.3.	DT-Space-01-EO-2018-2020 - Copernicus market uptake	€ 3,441,374.50	€ 2,972,324.50	IA - Innovation Action	Serbia	Multi-Actor
			Sum	€ 12,505,628.50	€ 15,604,819.14			