



Agroecology for Europe (AE4EU)

Towards the development of agroecology in Europe

Deliverable report D1.2 – European Report on Agroecology Initiatives and Policies, and difference between countries

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Abbreviations and Definitions

AE	Agroecology as a science, a practice, and a movement defined by FAO 10 principles
ALL	Agroecological Living Labs
CAP	Common Agricultural Policy of the European Union for the member states of the union
COP	Annual ‘Conference Of Parties’ of the United Nations Framework Convention on Climate Change
EC	European Commission
ENoLL	European Network of Living Labs
EU	European Union
FAO	Food and Agriculture Organisation of the United Nations
GHG	Green House Gases: mainly Water (H ₂ O) Carbon dioxide (CO ₂), Methane (CH ₄), Nitrous oxide (N ₂ O), Ozone (O ₃) and Chlorofluorocarbons and others
Greenwashing	i) “Greenwashing” is defined as using words, like “agroecological”, “organic”, “biological”, “regenerative”, “100% natural” without meeting legal minimum criteria of the EU regulations since 1991 on agroecological and organic farming and food processing. ii) In addition, it is used if falling short of the FAO’s definition of the principles of agroecology. These principles add to the farming and food processing practices defined by EU regulation and elements of food system thinking including food sovereignty (these principles are not, yet, added to the EU regulation as they are politically controversial and a EU-wide consensus is needed to get this enshrined in law. iii) Greenwashing also includes using the word “sustainable” without external third-party verification of “sustainable” and clear and transparent criteria how sustainable is measured, rather than ‘self-declared’ sustainable.
LL	Living Labs e.g. as defined by ENoLL





NbS	Nature-based solutions
RDP	Rural Development Programme
RI	Research Infrastructures, they can be technical/physical or social, or both
SDGs	Sustainable Development Goals
UN	United Nations
UNDF	United Nations Decade of Family Farming
UNDROP	United Nations Declaration on the Rights of Peasants and other People Working in Rural Areas
UNFCCC	United Nations Framework Convention on Climate Change

1 Executive Summary

A state-of-the-art analysis of international, national and regional policies for agroecology relevant to Europe has been made. This is based on (i) the available online data from the different European countries; (ii) the results of previous AE4EU tasks and in particular the mapping and funding-related tasks with additional data analysis; (iii) data collected through Horizon 2020 sister projects; and (iv) authors' expert knowledge in the field. A larger range of policy schemes and initiatives in different European countries has been reviewed. The degree to which they refer to agroecological principles and practices, has been assessed. The qualitative and quantitative analysis was conducted during 2021-2023. It starts with a wide-lens review, then zooms in to specific cases and innovative cases, followed by reflection on missing policy links and executive recommendations for CAP reform, collective action and institutional actors for a roadmap to foster more 'Agroecology for Europe'.

Wide lens review - On the international side, major global instruments are analysed such as the Sustainable Development Goals, Climate Smart Agriculture, IPCC, COP, Global Research Alliance, Global Alliance for Climate Smart Agriculture, as well as pan-European ministerial conferences, pan-European biodiversity and landscape strategies, the EU strategy for sustainable development and bio-economy, and European Climate Change programme strategies. Results of our review show that, currently the instruments most directly connected to agroecology are the Coalition for food systems transformation through agroecology, the UK All-Party Parliamentary Group on Agroecology, and the Intergovernmental Panel on Climate Change (IPCC), as well as the Sustainable Development Goals (SDGs), in particular SDG1 Poverty, and SDG2 Zero Hunger which emphasises the need for sustainable agriculture to promote food security, SDG3 Health & Wellbeing, SDG4 Farming Education and SDG5 Gender Equality. Also playing a fundamental role in promoting agroecology at global level are the FAO (Food and Agriculture Organisation of the United Nations) and IPES-Food, International Panel of Experts on Sustainable Food Systems.

Zooming in - At country level, a broad overview of the policies for agroecology and agri-environmental schemes are reviewed for 18 European countries. The overview shows that France has been a pioneer in promoting agroecology, integrating it into its national policies, with related schemes presented (e.g. the Ecophyto Plan and the Agricultural Ecological Transition Law). Germany has a range of agri-environment schemes that support sustainable agriculture such as the Biodiversity Strategy and the Organic Farming Action Plan. Similarly, the UK and Sweden have implemented agroecology principles in their policies and programmes. Spain has strong regional policies that directly promote agroecology and several

regions tailor the schemes to their specific practices and ecosystems. The Netherlands has implemented various schemes such as the Agri-Environmental Management Scheme and the Circular Agriculture Action Plan. In the case of Switzerland, the strong focus is reflected in the Swiss Agri-Environmental Scheme providing financial incentives to farmers, and the Biodiversity Action Plan. Italy has policies both nationally and regionally with initiatives such as Agroecology Project in Emilia Romagna. In Denmark, the Green Growth Plan for Agriculture focuses amongst other factors, on reducing negative environmental impact. Austria has an agri-environmental programme; Belgium also has regional policies (Wallonia Agroecology Plan; Flanders Agro-Environmental Measures); Finland emphasises the preservation of traditional rural landscapes and biodiversity; Portugal and Greece have programmes for rural development; Poland, an Ecological Farming Support programme; Ireland provides incentives to farmers for habitat creation and water quality through its Agri-Environmental Options Scheme; the Czech Republic has a Countryside Development Programme and focuses also on soil erosion prevention; and Hungary has schemes to support organic farming and landscape management.

Determining the order of importance of agroecological practices across European countries is a subjective assessment influenced by various factors, however some approximation has been brought, based on available information. Considering the prominence of agroecology in the countries' agricultural policies, dedicated initiatives and integration of agroecological principles in their agri-environmental schemes, the top four countries that appear with relatively more agroecological practices are: France, Germany, Sweden and Italy. Countries with relatively few agroecology denominated policies are: Greece, Poland, Hungary and Romania. While these countries have implemented agri-environmental programmes and initiatives that promote sustainable agriculture and include elements of agroecology, the level of emphasis on agroecological practices could be seen as comparatively lower. It is important to note that this ranking is a general indication based on the available information and may not capture the entirety of agroecological practices or their extent in each country. Agroecology is a dynamic field, and policies and practices can vary within regions and evolve over time.

The missing link - Some countries have been analysed using the insights from results of another EU-funded Horizon 2020 project, BOND, bringing collective grassroots voices on agroecological practices. Interestingly, there is a large contrast between what appears as policy incorporating elements of agroecology and actual agroecology practice on the ground. This shows a clear disconnect between two levels operating with different logics, the policy making and the policy implementation. When the latter is not involved as an active participant

in the former, a vacuum is created in the middle that impairs empowerment. This gap requires special attention for policies to be more meaningful. The Netherlands, addressing this critical gap have created a front-door/back-door mechanism to tackle this mismatch. France, for example has suffered from this disconnect as although policy statements were firm, the actual translation on the ground has been poorer than expected. Contrarily, the case of Portugal is an excellent illustration of a country where agroecology is seldom brought forward in its policies, but which has developed a Family Farm legislation which has been a tremendous boost for agroecology development in the country. This law is enacted at national level and represents a true poster-child for the rest of Europe, the same farmer organisation, CNA has been instrumental in bringing its policy contributions to the Farm-to-Fork scheme. Spain also, while not presenting at national level a strong commitment to agroecology, has, for example in the *Comunidad Valenciana*, one of its autonomous regions, a highly sophisticated agroecology plan with targeted funding for most dimensions of agroecology, including food sovereignty. In Romania, the CAP is widely used in certain local provinces by the local communities to support agroecological principles, and international instruments such as UNDROP (United Nations Declaration on the Rights of Peasants and other People Working in Rural Area), UNFFF (United Nations Decade of Family Farming), the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forestry and The Platform Access to Land (VGGT), all of which strengthen the debate on human rights issues, have been used at national level to influence national policies. Similarly, UNDROP was used in Poland by local networks to influence a shift in national policy to protect peasant seed systems and seed diversity. In Croatia, Hungary, and Czech Republic local networks influence national policy to address regenerative agricultural practices, green public procurement and social economy as means to promote widespread use of sustainable practices.

Executive recommendations – based on our insights a list of recommendations for agroecology policies that authors expect will make a real difference addressing the missing links are in the following synopsis of policies addressing (i) CAP reform as crucial prerequisite, (ii) collective action in relation of future smallholder farming, agroecology and regenerative food systems, (iii) and wider recommendations for institutional reform within contemporary multi-level governance settings.

Recommendations related to CAP reform

- Recognise farmers' cooperation as a CAP priority.
- Redefine farming activity in ways that overcome current constraints with respect to speculative land use, that include small-scale and peasant farming, and that respect UNDROP implementation in member states.

- Make CAP and other relevant policies subject to transparent and open decision-making processes.
- Safeguard human-scale farming in ongoing CAP negotiations.
- Base CAP reform on the food sovereignty principle, to protect and promote healthy, sustainable, democratic and family farming-based agri-food models.
- Make sure that CAP's National Strategic Plans reflect the objectives of more local and resilient farming and subsidise small and medium-sized farms and the peasant farming model as the only way to maintain dynamic rural areas.
- Guarantee that CAP provides specific support to recover, create and promote local and traditional markets for the commercialisation of local/traditional produce, particularly from family farming.
- Extend CAP's cross-compliance regulations with rules for labour rights of farmers and rural workers in line with international labour conventions and UNDROP.
- End those free trade agreements, which have a devastating impact on family farming. As Europe works toward a Green Deal and talks about reducing polluting emissions with a view to achieve carbon neutrality, it is not coherent to continue to allow the unbridled negotiation of FTAs at a global level.
- Link CAP aid to food production features and not to area (ha) to better support those who are actively producing goods to feed the population.
- Progress with a fairer distribution of CAP aid through capping (e.g. a maximum of EUR 60,000 of annual direct payments), mandatory modulation and redistributive schemes that value first hectares more.
- Guarantee that small-scale farmers receive payments as defined under the Small Agriculture Scheme by replacing anticipated direct payments at levels sufficient to ensure long-term viability of the farms.
- Give farmer-led collective action a more prominent role in Europe's regional rural development plans, similar to well-known Leader and Interreg approaches.

Recommendations for collective action that address agroecology and regenerative food systems

- Put agroecology at the heart of food system policies, practices and related research to transform the European agri-food sector.
- Cherish diversity (age, gender, nationality, knowledge, ways of production, etc.) with policies and food production facilitation that recognise the critical role of small-scale farming in relation to sustainable natural resource management.
- Support and protect peasant seed systems, including low-cost seed production, community seed banks and the strengthening of networks of seed producers at various scales, to improve the availability of organic seed.
- Educate public sector institutions about peasant seeds and embrace various forms of knowledge exchange on seed production.
- Link to the EU F2F strategy by helping farmers to collect information on how to connect effectively to contemporary climate change and other sustainability challenges.
- Focus farmer cooperation on societally relevant issues such as loss of biodiversity, sustainable land use, generational renewal, population growth, farm-based added value production and income stability in the farming sector.
- Give targeted support for young farmers and new entrants engaging in small-scale agroecology, including allowances to allow progress toward a ‘living wage’ income.
- Embed research and innovation within agroecological and food sovereignty movements and existing low-tech grassroots innovations.
- Sensitise farm advisory services to small-scale agroecological transitions, including farmer-to-farmer exchange programmes.
- Promote short food chains as promising models for territorial development and the preservation of family farming.
- Protect the position of farmers in agri-food distribution by prohibiting sales below production costs (dumping practices and by control of profit margins).
- Reverse the closure of public services in rural areas.
- Set limits to factory farms and their negative environmental and social impacts.
- Improve European regulatory frameworks to the benefit of family farming and farmer-led collective action.
- Include farmers, farm workers, pastoralists and other food producers that support agroecology in the development of national strategic plans.
- Prioritise family farming in the supply of public institution canteens and the social economy of the region where farms are located, establishing significant minimum limits for food from this source.

Recommendations for wider institutional actors

- Facilitate farmer-led collective action for its ability to: - transform and improve relations between farmers, authorities and market actors; - mobilise resources (knowledge, enthusiasm, problem definitions, directions for solutions, social cohesion, partnerships, support) that are often inaccessible to public administrations but crucial for the socio-economic vitality of rural areas; combine self-interest with wider societal benefits.
- Provide regional helpdesks with ‘start-up seed money’, to stimulate promising collective action by covering initial expenses, for example for proposal preparation.
- Participate as local and regional authorities (e.g. municipalities or provinces) in regional helpdesks to guarantee close relations with public and civic organisations.
- Allow for a certain regulatory flexibility by providing experimental space that explores the boundaries of self-governance approaches and perspectives.
- Realise that collective action requires long-standing relationships. The provision of subsidies, therefore, should avoid ‘forced shopping’ formulas that undermine the opportunity to establish such long-standing and trustful relations.
- Be aware that collective action often requires financial support in vulnerable early-lifecycle phases, which can clash with conditions set for financial support. More suitable development fund criteria might overcome such early lifecycle financial problems.
- Outsource public employees temporarily to novel collectives to improve their relationships with authorities, to stimulate collaborative learning and to facilitate policy support.
- Create budgets for visits to interesting collective action initiatives elsewhere. Such visits can strengthen internal relationships and deepen insights into the crucial role of external relationships and the mobilisation of wider societal support.
- Facilitate capacity building that enhances the role of regional policy actors in different stages of policymaking and that fosters more direct interaction between the EU and regional administrations.
- Stimulate interregional cooperation to create networks of initiatives with similar objectives in different regions of Europe and to reflect more holistically on the impact of own farming activities elsewhere (within and outside the EU).
- Involve all relevant stakeholders (e.g. farmers, land managers, NGOs, researchers, etc.) to enrich policy debate and to co-create more cross-sectoral and interdisciplinary policy approaches.
- Realise that farmers, land managers and related organisations become particularly powerful change agents with flexible and well-targeted support, including legal, financial and educational support. These should therefore be directly and actively engaged in support design, preparation and implementation as much as possible.
- Train young people to take part in collective action and associated movements.
- Value the crucial role of rural and farming women through concrete measures that allow them to fully enjoy their rights, in line with UNDRDP.

2 Introduction

While very few countries in Europe have policies dedicated to agroecology (AE), numerous AE-related initiatives in the different countries present a source of inspiration for reinforcing the transition towards an agroecological future for Europe. The AE4EU project together with the ALL-Ready project helps to accelerate this transition, by contributing to agroecology research and innovation. In particular the road map and framework for a European network of agroecological living labs (LL) and research infrastructures (RI), with mapping of the local, regional and national initiatives in European countries. Note, research infrastructures are understood as technical/physical or social, or both.

The first volume with 18 countries has been available since March 2023 and includes the identification of different initiatives, cases, examples and programmes relating to five different activity categories: Practice, Science, Movement, Living Labs, Education, and Training (Wezel et al. 2023). Our analysis is partly based on the analysis of further data relevant to policy, collected during the mapping. Details on methodology are already outlined in the book *Agroecology in Europe. Country Reports Series* (Wezel et al., 2023). Further literature study has also informed the analysis (e.g. Schwarz et al. 2020, Gava et al., 2022, Buratti-Donham et al., 2023).

This analysis shows connections between relevant actors from the living labs and research infrastructure, with funding schemes and country policies and in this context, deliverable D1.2 analyses agroecology-related policies and initiatives in selected countries, providing local voices of the country agroecological perspectives. Task 1.2 was conducted in close cooperation with Task 1.1 ‘Local to national initiatives and living labs mapping. Overlap with Task 5.1 ‘EU policy implementation and agroecology in CAP strategic plans’ was avoided. By combining AE4EU’s findings with the outcomes of other European projects, we contribute to AE4EU successful living lab and research infrastructure approach. To do so, we focus in this report on the following central topics:

- 1) international, national and regional policies and initiatives for AE or elements of AE and an analysis of how they contribute to AE or whether they are using “greenwashing”;
- 2) analysis of mapping data, regarding movement and policy initiatives;
- 3) country perspectives & local voices of AE-related policies;
- 4) policy recommendations and support needs and requirements for the Agroecology Partnership.

3 Methodologies

This task has used the mapping questionnaires from the country reports in Task 1.1 and combined it with secondary data from the literature and with expert knowledge within the consortium. As Task 5.1 covers agri-environmental schemes, this report (D1.2) is focussed on a critical discussion of international, national and grassroots policy frameworks and initiatives. Results from other EU Horizon 2020 projects and especially the Coordination and Support Action BOND (*Bringing Organisations & Network Development to higher levels in the Farming sector in Europe BOND, 2020*), were revisited in the light of the present AE4EU project's objectives, and open interviews were held with BOND partners from the selected countries reviewed. Other EU funded projects were consulted, e.g. AGROMIX which delivered an analysis on agroforestry and mixed farming policies published in the Journal *Agroecology and Sustainable Food Systems* as 'Transforming food systems towards agroecology – a critical analysis of agroforestry and mixed farming policy in 19 European countries' (Buratti-Donham et al., 2023), or UNISECO (Understanding & Improving the Sustainability of Agro-Ecological Farming Systems in the EU).

International, national and regional policies and initiatives considered in this analysis are:

1. Sustainable Development Goals (SDGs)
2. Intergovernmental Panel on Climate Change (IPCC)
3. Conference of Parties (COP)
4. Climate Smart Agriculture (CSA)
5. Global Alliance for Climate Smart Agriculture (GACSA)
6. Global Research Alliance on Agricultural Greenhouse Gases (GRA)
7. Pan-European ministerial conferences (Forest Europe, Environment for Europe)
8. Pan-European Biological and Landscape Diversity Strategy (PEBLDS)
9. Coalition for food systems transformation through agroecology
10. UK All-Party Parliamentary Group on Agroecology - Parliamentarians for Agroecology
11. Agroecology advisory group to the federal ministry for economic cooperation and development (BMZ) in Germany,

4 International, national and regional policies and initiatives

4.1 Sustainable Development Goals (SDGs)

The **Sustainable Development Goals (SDGs)**, are an internationally agreed set of 17 interlinked goals. They are on a global level and were set in 2015 by the United Nations General Assembly in New York. Therefore, they are not specific to agriculture or food. Nevertheless, they cover many elements of agroecology especially on farm and food system level. While many policies like ‘Climate Smart Agriculture’ apply to a specific topic, e.g. climate change in this context, the SDGs attempt to cover a holistic set of goals.

For this reason, they have been widely adopted and quoted, and many initiatives and research projects are measured against the SDGs. For this reason ‘Agroecology’, if understood as food and farming system innovation (system innovations include social, governance and technical innovations together), can align to this much better than ‘Climate Smart Agriculture’.

For ‘Agroecology’ specifically the goals (1) No Poverty, (2) Zero Hunger, (3) Good Health and Wellbeing, (4) Farming Education, (5) Gender Equality, (6) Clean Water, (7) Clean Energy, (8) Decent Work and Ecological Economics, (9) Innovation and Infrastructure at appropriate scale, (10) Reduced Inequality, (11) Sustainable Cities (Urban Agroecology) and Communities, (12) Responsible Consumption and Production, (13) Climate Action, (14) Life Below Water (Zero-Pollution), (15) Life On Land, (16) Peace, Justice, and Strong Institutions, (17) Agroecological Partnerships are of immediate relevance.

However, the SDGs are a very broad concept and they are open to a very wide interpretation of sustainability - otherwise called “*greenwashing*”. For example, ‘Clean Energy’ could mean large scale centralised nuclear power. ‘Economic Growth’ is not very different from ‘Degrowth’ concepts. ‘Economic Growth’ unspecified is also a paradigm shift away from economic growth concepts championed by ecological economists. ‘Sustainable Cities’ could mean vertical plant factories, without any ecosystem services coming from food production in cities, and continued car use and emissions, albeit from fully electric cars. ‘Responsible consumption’ could still mean over-consumption and waste generation. ‘Life below Water and on Land’ could still mean acceptance of all ‘necessary’ pesticide and fertiliser pollutions and intensive factory farming of animals as part of ‘smart agriculture’ or cyclical economy concepts where manure from livestock factories is incentivised to produce ‘renewable clean energy’.

4.2 Intergovernmental Panel on Climate Change (IPCC)

The **Intergovernmental Panel on Climate Change (IPCC)** is the United Nations body for assessing the science related to climate change. In its 2022 report “Impacts, Adaptation and Vulnerability”, IPCC addresses the specific impacts of climate change on ecosystems, biodiversity and humans. The human-induced part of climate change, due to pollution of the atmosphere has caused widespread adverse impacts and losses and damages to nature and people. This is specifically felt in the food system. Among the solutions ‘with high confidence’, the IPCC identifies agroecological practices and other agricultural approaches that work with natural processes, support food security, health and well-being, biodiversity and ecosystem services. These ecological ecosystem-based approaches are contributing to pollination, soil health, pest control, buffering of temperature extremes and carbon sequestration. Agroecology is fully recognised to improve the resilience of global food and farming systems, to support long-term productivity including reducing reliance on external (contentious) inputs. Some agroecological practices are also seen to provide mitigation measures. Therefore, it is concluded that a transition to organic farming and agroecological practices is key to reduce and adapt to adverse impacts of climate change. Shifting to sustainable food systems must happen now and cannot be further delayed.

Ecosystem health influences prospects for climate resilient development

(a) Human activities that degrade ecosystems also drive global warming and negatively impact nature and people



(b) Human activities that protect, conserve and restore ecosystems contribute to climate resilient development



Figure 1: Agroecology as part of the solution for activities that protect, conserve and restore ecosystems contributing to climate resilient development. (Source IPCC, 2022)

4.3 Conference of Parties (COP)

The **Conference of Parties (COP)** is the decision-making body of the **United Nations Framework Convention on Climate Change (UNFCCC)** <https://unfccc.int>. It is an annual conference which was initiated in Berlin, Germany, in 1995 (COP-1). The next COP (COP-28) is in Dubai in 2024. At COP-27 in Egypt, there was, for the first time, a dedicated ‘Food Systems Pavilion’ at the venue, run by a coalition of international food organisations. This had agroecology, among ‘other solutions’ represented. It is hoped this will help to put agroecology higher up on the agenda and the momentum carried forward to forthcoming COPs. It does, however, not guarantee that agroecology will be taken seriously, or what these ‘other solutions’ are. It is open to greenwashing further down the line, although many actors are happy with what was achieved as a first step with one voice saying: “*we have never really had such a strong COP on food*”. Among other solutions, **Nature-based Solutions (NbS)** are promoted and a critical part of the discussion of what is included in nature-based is presented by Wynberg et al. (2023). If nature-based includes “*...building on cultural and biological coevolution, promoting systemic changes based on the redesign and diversification of agroecosystems through ecologically and relationally based diverse cropping and agroforestry...*” (Wynberg et al., 2023) - it would come closer to agroecology.

4.4 Climate Smart Agriculture (CSA)

Climate-smart agriculture (CSA), like ‘Agroecology’ and ‘Organic Farming’ is an approach championed by the FAO (Food and Agricultural Organisation of the United Nations based in Rome). It aims to transform agriculture (and food systems) towards greener and climate resilient practices. The concept supports reaching the SDGs and the Paris and Glasgow agreements of the Conference of Parties in its 26th annual meeting (COP26).

However, unlike agroecology and community supported agriculture (also abbreviated CSA), climate-smart focusses on three different main goals: 1) increasing agricultural productivity (sustainable intensification to produce more products which can then be wasted to increase growth and incomes); 2) building resilience to climate change; and 3) removing greenhouse gas emissions. Goal 3) in particular is interpreted narrowly e.g. intensive livestock production is placed above social aspects of sustainability like animal welfare and health. Climate-smart agriculture is also promoting GMOs (Genetically Modified or Manipulated Organisms where genes sequences are manipulated either within a species or between different species), and further concentration of farming inputs. GMOs are therefore viewed critically by proponents of agroecology and is illegal within certified organic and agroecological farming practices, including food processing input within the EU regulation.

This analysis confirms that the SDGs can be interpreted fairly loosely, and although focus on pollution from greenhouse gas emissions is very important, it is not clear that climate-smart agriculture can really deliver on climate change mitigation, even if it had no further negative impacts on the others SDGs.

On the other hand, climate-smart agriculture aims to support the FAO strategic framework 2022-31 with the four ‘betters’: better production, better nutrition, a better environment and a better life for all, leaving no one behind. Especially the last 3 ‘betters’ are holistic in the same way as agroecology - the question remains however, what is ‘better’, how is this measured and assessed, and for whom is it better? From an agroecology perspective, the word ‘smart’ is the least controversial in the climate-smart framework as if ‘smart’ means more knowledge-intensive holistic approaches. This is something most agree is needed for a transition of the agricultural and food system. Controversial would be which knowledge, who creates this knowledge, is it open access, who owns it, is equitable and accessible for all genders, farm sizes, cultural settings?

4.5 Global Alliance for Climate Smart Agriculture (GACSA)

The **Global Alliance for Climate Smart Agriculture (GACSA)** is an inclusive, voluntary and action-oriented multi-stakeholder platform on Climate-Smart Agriculture (www.fao.org/gacsa/en). It is linked to the vision of ‘climate smart’ and the framing used. It uses word like “... *improve food security, nutrition and resilience in the face of climate change*” and “*transformational partnerships to encourage actions that reflect an integrated approach*” and “...*recognising the importance of empowering farmers*” which could be an indication of greenwashing, especially when combined with “*increase productivity in a sustainable way*”, which could mean producing more food to be wasted, and sustainability self-declared.

4.6 Global Research Alliance on Agricultural Greenhouse Gases (GRA)

The **Global Research Alliance on Agricultural Greenhouse Gases (GRA)** brings countries together to find ways to “grow more food without growing greenhouse gas emissions” (<https://globalresearchalliance.org/about>). It was launched in December 2019 and there are currently 67 member countries. Among its principles stated in 2019 are “*Undertaking large-impact projects for the benefit of society*” and “*Developing global knowledge networks for industry and industrial sectors to enhance their competitiveness*”. Its governance is based on a council and 4 research groups (paddy rice, livestock, croplands and ‘integrative’). Financial details and funding are not provided; however it is stated that the charter provides a framework for voluntary action to increase cooperation and investment in research activities. The GRA works to deliver so-called ‘Flagship Projects’. Currently (June 2023) six are mentioned and most focus on improving inputs for intensive industrial livestock systems: ‘*Economics of cattle GHG mitigation (EMiFa)*’, ‘*Ensuring long-term mitigation and adaptation co-benefits*’, ‘*Feed additives to reduce methane*’, ‘*Mining rumen data to reduce methane*’, ‘*Reducing N₂O emissions and improving accounting*’, and ‘*Satellite monitoring to improve livestock management*’.

It is difficult to see any deeper links of these current projects with agroecology. The GRA has basically an approach of further industrialisation of farming (e.g. data mining, remote monitoring to improve competitiveness). The current projects are based on input substitution for mainly industrial livestock systems stressing production competitiveness rather than e.g. animal rights or diet change for human health. It appears GRA still believes in the ‘sustainable intensification narrative’ put forward by its proponents 20 years ago. This may change in the future and remote sensing might be interesting for fenceless grazing within agroforestry systems, but currently this approach is not apparent and the GRA would need to change course for a more transformative approach to solve the plants real problems. Although some of the research activities might reduce methane emission in intensive livestock, which is a positive and hence can extend the continued justification for those systems. However, by focusing on GHG as the only ‘planetary boundary issue’ there is also a risk to other equally important ‘planetary boundary issues’ (agricultural biodiversity loss, pollution of rivers and soils, antibiotic and anthelmintic overuse) might be ignored.

4.7 Pan-European ministerial conferences (Forest Europe, Environment for Europe)

Forest Europe (<https://foresteurope.org>) has not specifically mentioned agroecology, but sustainable forest management (SFM) is a very important topic. SFM is defined as holistic, according to the Helsinki resolution, “*the stewardship and use of forests and forest lands in a way, and at a rate, that maintains their biodiversity, productivity, regeneration capacity, vitality and their potential to fulfil, now and in the future, relevant ecological, economic and social functions, at local, national, and global levels, and that does not cause damage to other ecosystems*”. How much this is implemented in practise is a different matter and whether agroecological/organic standards for forest and woodland management (e.g. Naturland, and international certification body, based in Germany, www.naturland.de/en/naturland/what-we-stand-for/forest.html) go beyond the minimum requirements defined and applied by the Forest Stewardship Council (FSC certification, <https://uk.fsc.org/forest-management-certification>) which can be seen as the entry level for sustainable forest management. Forest Europe has however, embraced agroforestry stating it “*represents a promising climate change adaptation concept of sustainable land use as it can contribute to fire prevention, soil erosion control and microclimate management while providing livelihood and supporting food security*” (Forest Europe, 2020). It also includes family farms and local, short food supply chains, both important parts of agroecology: “*... traditional agroforestry systems should be promoted as the traditions in the farmers’ families are one of the main drivers of the implementation of agroforestry practices. An increasing number of consumers demand local products from family farm*”.

Environment for Europe (<https://unece.org/structure>) was setup up as the United Nations Economic Commission for Europe (UNECE) in 1947, by ECOSOC (www.un.org/ecosoc), the United Nations Economic and Social Council. It predates the ECC and EU and includes all of Europe. It is one of five “*regional*” (i.e. continental) commissions of the United Nations and it also focuses on helping countries of Eastern Europe, Caucasus and Central Asia and of South-Eastern Europe to improve their environmental standards. The current structure of the process follows the provisions of the reform plan of the “Environment for Europe” process, adopted in 2009.

4.8 Pan-European Biological and Landscape Diversity Strategy (PEBLDS)

Pan-European Biological and Landscape Diversity Strategy (PEBLDS) is a framework to promote regional cooperation and build capacity for the implementation of the Convention on Biological Diversity Europe wide, in particular the EECCA region, and provides biodiversity-related input to the Environment for Europe process. It is superseded by the **EU Biodiversity strategy 2030** launched in combination with the Green Deal. It also has a “*3 billion tree planting pledge for 2030*” and will enlarge existing **Natura 2000** areas, with strict protection for areas of very high biodiversity and climate value. None of them mention agroecology directly, but agroforestry can contribute to the tree planting target and to protect areas of high biodiversity, agroecological farming practices without synthetic pesticides, synthetic fertiliser and area-based, low-stocking density, free-range livestock systems with no run-off and leaching into valuable habitats can best protect and surround high biodiversity

areas and landscapes (https://environment.ec.europa.eu/strategy/biodiversity-strategy-2030_en#:~:text=The%20biodiversity%20strategy%20aims%20to,people%2C%20climate%20and%20the%20planet).

4.9 Coalition for food systems transformation through agroecology

Coalition for food systems transformation through agroecology has members from 44 countries and 94 organisations, including farmers' organisations, indigenous peoples' organisations, philanthropic and civil society organisations and research organisations (as of 2022, <https://agroecology-coalition.org>). It is fully aligned to agroecology and make this clear in its Purpose and Functions statement, *“the purpose of the Coalition is to accelerate the transformation of food systems through agroecology, guided by the 13 principles of agroecology defined by the High Level Panel of Experts (HLPE) of the Committee on World Food Security (CFS) that are aligned with the 10 Elements of Agroecology adopted by the 197 FAO member states in 2019”*.

Since March 2023, the Agroecology Coalition has a new secretariat, hosted by the **Alliance of Bioersity International and the International Centre for Tropical Agriculture (CIAT)** in Rome, Italy. The secretariat team is headed by *Oliver Oliveros* as the Coordinator of the Coalition, together with *Valentina Pavarotti* as Communications Officer. *Emile Frison* who served as interim Coordinator now serves as Senior Advisor. In May, an Associate Coordinator will complete the team. The secretariat is responsible for the daily management and coordination of the work of the Coalition.

4.10 All-Party Parliamentary Group on Agroecology - Parliamentarians for Agroecology (in the United Kingdom of GB and NI)

The United Kingdom of Great Britain and Northern Ireland (UK) All-Party Parliamentary **Group on Agroecology**, in existence for more than 12 years, was followed on by the All-Party Parliamentary **Group on Agroecology for Sustainable Food and Farming** in 2022 and in March 2023 by Parliamentarians for Agroecology <https://realfarming.org/programmes/parliamentarians-for-agroecology>. **Parliamentarians for Agroecology** replaces the previously registered All-Party Parliamentary Group (APPG) on Agroecology for Sustainable Food and Farming and is the only group in Parliament to actively promote sustainable food and farming. Whilst a fresh approach, the group welcomes supporters of the former APPG and new faces. The **Real Farming Trust** provides the secretariat for Parliamentarians for Agroecology (<https://realfarming.org>). The Real Farming Trust is a UK charity (Charity number: 1061607) with an annual turnover of £0.7 million in 2022 (£0.2m in 2018, for comparison). Its main income in 2022 were £0.6 million as donations and legacies, sources not disclosed. The Real Farming Trust is an example of being fully aligned with agroecology also on the food system level. Its accounts are not disclosed on the charity website, but are available from the UK charity commission (<https://register-of-charities.charitycommission.gov.uk>). Despite this exemplary UK approach to promoting agroecology on cross party parliamentary levels, the real term policy impact was meagre, when e.g. compared to the European Union's Green Deal and its 25% target for agroecological and organic land use by 2030 (UK current share of certified agroecological

land use is below 4%). The current UK government being outright hostile to agroecology is a mitigating circumstance.

4.11 Agroecology advisory group to the federal ministry for economic cooperation and development (BMZ) in Germany

In Germany like everywhere with the biological, ecological and organic farming regulated by EU law, the word ‘agroecology’ has been protected since 1991. This covers agroecology as a practice, as part of the organic regulation. In Germany the word organic was only used at the beginning of the agroecology movement in the 1970s (Schmutz, 2022), mainly by the certification body Bioland as *organisch-biologischer Landbau* (organic-biological). Later the word ‘organic’ was used less in this context, as it is also used in the terms ‘organic chemistry’ or other contexts, like in economics as ‘organic growth’ which make it open to greenwashing (today ‘organic’ is often replaced by ‘certified organic’ to make the case that the term is legally protected, too). By the late 1970s it has already been replaced by biological (hence the word *Bioland*, biological agriculture) and in the 1980s, by ecological agriculture or agroecology. All words and derivatives were protected in the EU regulation of 1991, meaning only the adherence to all agroecological practices and external third-party certification of these claims can be used to label food or fibre as agroecological, organic, or biological. This covers however, only agroecology defined as a practice not as a movement or used in scientific debate. However, some proponents of agroecology, reinventing the wheel, are sometimes blissfully unaware of legal foundations or the historic development of the movements.

In the area of economic cooperation and development (non-EU agroecology policy) the concept of agroecology was adopted relatively late (GIZ, 2020). In its factsheet in 2020, GIZ calls agroecology a “*new and holistic concept*”, referring mainly to the discussion on the international level at the FAO and stating that “*in recent years, agroecology has gained significant importance in the international discourse ... (e.g. see HLPE Report, 2019)*”. It notes that the German parliament (Bundestag) acknowledged this development in its resolution of June 2019. This resolution calls upon the Government to continue its commitment to agroecology and expand it with respect to development cooperation and the promotion of rural areas. The BMZ regularly organises expert discussions on agroecology with the participation of civil society, the private sector and other federal ministries, and is involved in conceptual and policy debates on the topic. The recent commitment to 30% agroecological land use on the German national and federal state level (e.g. Bavaria) by 2030 (above the 25% target in the EU’s Green Deal) is one tangible result of this new emphasis by the Labour-Green-Liberals triple coalition but equally other political parties like the Social-Conservatives (CSU) in Bavaria. Agroecology has gained cross-party support. BMZ specific examples are the “Green Markets and Sustainable Consumption” projects e.g. where GIZ supports smallholder farming cooperatives as well as indigenous and traditional population groups in gaining better market access for their agroecologically-farmed produce in Brazil. In addition, individual federal states, such as the State of Amazonas, receive support in developing their own agroecology strategies, which reflect the German understanding in the political efficiency of devolution. The global programme “Knowledge Centres for Organic Agriculture in Africa”, as part of the “One World – No Hunger” initiative, is another example to close knowledge gaps and empower smaller scale farmers, but equally taking a food system

networking and approach including, advisors, trainers, producers, processing enterprises, retailers, fair value chains and consumers.

4.12 Overview and conclusions

In this section we provide a short qualitative overview of the policies (Figure 2) and a qualitative assessment regarding (i) if the policy fully relies on the concepts of agroecology, (ii) if it has elements of agroecology and (iii) if the wording and concept is open to “greenwash”?

This overview assessment shows that about half (46%) of the policies studied in this analysis fully rely on the concept of agroecology. An even higher percentage (85%) have elements of agroecology in the policy or initiative documents, even if this is only limited. We also find a certain amount of cases (38%) where the wording has elements of “greenwashing”. The term is defined at the beginning of this deliverable in the abbreviation and definition section. It is used if one or more of the three criteria (i-iii) are met (one criteria is already sufficient):

i) “Greenwashing” is defined as using words, like “agroecological”, “organic”, “biological”, “regenerative”, “100% natural” without meeting legal minimum criteria of the EU regulations from 1991 for agroecological and organic farming, and food processing.

ii) In addition, it is used if falling short of the FAO’s definition of the principles of agroecology. These principles add to the farming and food processing practices defined by EU regulation an element of food system thinking including food sovereignty (these principles are not yet added to the EU regulation as they are politically controversial and an EU-wide consensus is needed to get this enshrined in law.

iii) Greenwashing also includes using the word “sustainable” without external third-party verification of “sustainable” and clear and transparent criteria around how sustainable is measured, rather than ‘self-declared’ sustainable.

Nr	Policies and initiatives	relies fully on agroecology	has elements of agroecology	is open to "greenwash"	how to advance
1	Sustainable Development Goals (SDGs)	no	yes	yes	complete and holistic, focus on equity and the benefit of small-scale solutions help, not critical of advancing beyond market failures
2	Intergovernmental Panel on Climate Change (IPCC)	yes	yes	no	replace food security with food sovereignty concept, add gender aspects, food justice
3	Conference of Parties (COP)	no	yes	yes	add further agroecology in COP-28 and use Nature-based solutions with agroecology
4	Climate Smart Agriculture (CSA)	no	yes, limited	yes	limited use, agroecology is more holistic and ultimately better framework to deal with all planetary boundaries
5	Global Alliance for Climate Smart Agriculture (GACSA)	no	yes, limited	yes	as for SCA, follows model of further industrialisation of agriculture
6	Global Research Alliance on Agricultural Greenhouse Gases (GRA)	no	no	yes	difficult to see benefits, it is an outdated approach
7	Pan-European ministerial conferences (Forest Europe, Environment for Europe)	no	yes	no	has clear definitions and certification FSC, but is below agroecology standards like Naturland
8	Pan-European Biological and Landscape Diversity Strategy (PEBLDS)	no	yes	no	is clear agroecology can help to achieve the strategy by giving surrounding protection
9	Coalition for food systems transformation through agroecology	yes	yes	no	has principles and secretary, unclear is funding and financial resilience
10	UK All-Party Parliamentary Group on Agroecology - Parliamentarians for Agroecology	yes	yes	no	fully aligned but so far zero or very limited effect on policy
11	Agroecology advisory group to the federal ministry for economic cooperation and development (BMZ) in Germany,	yes	yes	no	deepen has potential of leadership also at larger scale as connected to organic farming and organic food processing knowledge
12	Groupements d'intérêt économique et environnemental (GIEE) and agroecology strategy in France	yes	yes	no	seen as leading in Europe by many
13	Spanish agroforestry association (AGFE) as part of the Spanish National Rural Network	yes	yes	no	further integration and connection to growing organic markets
Totals 'yes' percentage		46%	85%	38%	

Figure 2: Overview of policies and initiatives discussed in this chapter. A qualitative assessment is made, regarding (i) if the policy fully relies on the concepts of agroecology, (ii) if it has elements of agroecology and (iii) if the wording and concept is open to “greenwash”. For definition of greenwash, see abbreviations at the beginning of the report. Example text of how to advance is also given.

In the following part of the deliverable we continue the analysis with a bottom-up approach, using insights from actors mapped and selected case-study countries in Europe, especially to widen the understanding of agroecology policy and family farming, collective action and a strengthening of peasant, small-scale farming initiatives and supply chains (peasant agroecology).

5 Analysis of existing policy movements and initiatives for AE mapped

This includes analysis of and additional data on policy and movement not presented in the mapping deliverables (Wezel, Grard and Gkisakis, 2023). Responses from 18 countries and 143 interviewees from Agroecology for Europe’s mapping network are used. The average rating for each country based on a range of 15-3 interviews per country was calculated. Please note, large countries with diverse climate regions had the highest number of interviewees (e.g.

Italy 15) and smaller countries had fewer (e.g. North Macedonia 3). The average number of interviewees was 8 (7.9) per country.

Country	Number of interviews per country
Albania	6
Austria	8
Bosnia and Herzegovina	4
Bulgaria	4
Croatia	4
France	14
Germany	13
Greece	12
Italy	15
Ireland	7
Kosovo	11
Malta	8
Moldova	3
Montenegro	6
North Macedonia	3
Portugal	10
Romania	7
Slovenia	8
Sum	143
Average	7.9

Figure 3a: Responses from 18 countries and 143 interviews from Agroecology for Europe's mapping network. 3 to 15 interviews were done per country. Large diverse countries had the highest number of interviews (Italy 15) and smaller countries fewer (North Macedonia 3), the average number of interviews per country is 7.9). In the subsequent analysis the average per country is used from either 3 to 15 interviews per country.

Results show that there was a high interest (Figure 3b) in the movement pillar of agroecology. This was used as proxy for political engagement from the bottom up. The countries with highest rankings are mainly in south-east Europe with Kosovo, Romania, Bulgaria, Albania, Montenegro, Bosnia Herzegovina and Greece on the top of the list. Equal interest is found only in France and Italy. In other countries, movement interest was low or not mentioned at all; examples are Germany, Austria, Portugal, Ireland and Croatia.

The analysis of policy levels (National, Regional, Local, 3c) is not surprising, large countries with federal structures and high diversity are at the top (Germany, Italy with 4 levels), followed by other more centralised countries (France, 3 levels). Interestingly for smaller countries (Greece, Portugal, Slovenia) also 3 levels were reported. The rest had only 1 or 2 level which shows that if agroecological policies are present there is only one level or none as in case of Bosnia Herzegovina, despite many interviewees having an interest in movement – or the other way round the lack of any policy may explain the importance of grass-root movements.

Country	Interviewee main pillar of interest/competence
Kosovo	64%
Romania	57%
Italy	53%
Bulgaria	50%
Malta	50%
Albania	33%
Montenegro	33%
France	29%
Bosnia and Herzegovina	25%
Greece	25%
Slovenia	25%
Ireland	14%
Austria	13%
Portugal	10%
Germany	8%
Croatia	0%
Moldova	0%
North Macedonia	0%

Country	Number of levels
Germany	4
Italy	4
France	3
Greece	3
Portugal	3
Slovenia	3
Austria	2
Croatia	2
Kosovo	2
North Macedonia	2
Romania	2
Albania	1
Bulgaria	1
Ireland	1
Malta	1
Moldova	1
Montenegro	1
Bosnia and Herzegovina	0

Figure 3b (left): Based on 3a average from interviewees rating for each country countries are ranked regarding activity in movement (a proxy for policy from the bottom up) Percentage indicates interviewees first or second preference for movement as a pillar of interest or competence.

Figure 3c (right): ranking of countries regarding numbers of levels of agroecology that policies cover. Levels considered are National, Regional, Local, Other or none, hence scores from 0 to 4 (4 is all levels present).

Country	5. Are there any policies in your country that help the implementation of agroecology?
Austria	1.00
Bulgaria	1.00
France	1.00
Greece	0.83
Romania	0.79
Ireland	0.50
Montenegro	0.50
Germany	0.48
Croatia	0.44
Italy	0.38
Portugal	0.38
Malta	0.29
Moldova	0.25
North Macedonia	0.25
Slovenia	0.19
Kosovo	0.16
Albania	0.15
Bosnia and Herzegovina	0.00

Country	5. ... Are they specifically focus on agroecology?
Moldova	1.00
France	0.96
Austria	0.56
Bulgaria	0.50
Greece	0.46
Portugal	0.45
Montenegro	0.42
North Macedonia	0.33
Albania	0.30
Italy	0.27
Croatia	0.25
Romania	0.21
Germany	0.15
Malta	0.08
Slovenia	0.06
Bosnia and Herzegovina	0.00
Ireland	0.00
Kosovo	0.00

Figure 4a (left): Based on 3a average from interviewees ranking of countries regarding the question: “5. Are there any policies in your country that help the implementation of agroecology?”. Rated as: ‘Not at all’ = 0, ‘Not really - only at discussion level’ = 0.25, ‘Yes - in discussion by policy makers’ = 0.5, ‘Yes - already in force’ =1.

Figure 4b (right): ranking of countries regarding question “5. ... Are they specifically focusing on agroecology?” Rated as: Not at all’ = 0, ‘Yes - slightly’ = 0.5, ‘Yes’ = 1.

Regarding the analysis of supporting or contributing policies for agroecological implementation and specific focus (Figure 4a and 4b), different countries are at the top: Austria, Bulgaria, Greece and France. Therefore, a composite ranking of countries (4a and 4b

multiplied) was calculated to analyse interviewees’ perception if policies that help the implementation of agroecology and are also specifically focusing on agroecology? If they do both, the highest score is achieved. If only one element is missing (multiplication) the score is 0 (zero). Using this method we arrive at our ultimate top 10 list. This shows (Figure 4c) that France is leading by some margin, followed by Austria and Bulgaria. In the middle field are Greece, Moldova, Montenegro, Portugal and Romania. However, possibly the main result is that most countries on the list have a very low rating. They have very few policies that help with the implementation of agroecology and then if there is one, there is no specific focus. This is worrying and it is hoped that the EU Partnership for Agroecology and Living Labs can contribute to remedy this omission of policies.

Please note, this analysis of external interviewees’ perception was done after we developed our own list which is shown in the next chapter, based on qualitative expert knowledge. Like this, the analysis result did not affect our own judgement, as we did not know the result. If compared to the next chapter the results are not dissimilar (France on top), but also not identical (our own analysis has Austria lower and Germany and Italy higher). Also note the sample is different, as only the first 18 countries from the mapping are included.

Country	Multiplication index (AE policies x AE specific focus)
France	0.96
Austria	0.56
Bulgaria	0.50
Greece	0.38
Moldova	0.25
Montenegro	0.21
Portugal	0.17
Romania	0.17
Croatia	0.11
Italy	0.10
North Macedonia	0.08
Germany	0.07
Albania	0.05
Malta	0.02
Slovenia	0.01
Bosnia and Herzegovina	0.00
Ireland	0.00
Kosovo	0.00

Figure 4c: Composite ranking of countries (4a and 4b multiplied) to analyse interviewees’ perception if policies that help the implementation of agroecology and are also specifically focusing on agroecology? If they do both, the highest score is achieved. If only one element is missing (multiplication) the score is 0 (zero).

In summary our results show promising examples of agroecology policy and great interest in agroecology as a movement. However, when a composite ranking is used (Figure 4c), data show very limited policies in most countries, with only a few exceptions. This is also reported

by other research (Buratti-Donham et al., 2023) and reflected by the quotes we have collected. Only limited examples were given as no policies are in existence.

The quotations of some should not distract from the fact that there are limited ‘*examples of policies which help implementation*’ (Figure 4a).

“The local/regional debate is quite absent in regards to these topics. At national level no financial help or strategy is provided to agroecology development.”

“ÖPUL (Österreichische Programm für umweltgerechte Landwirtschaft = CAP environmental scheme in Austria), EU policies on organic agriculture, private regulation from BioAustria, or Demeter or Bioland for example”

“Politically, organic farming is promoted, AE is closely linked to organic farming”

“EU CAP agri-environmental measures in Greece (e.g. Organic Farming)”

“The Law for organic production, Analysis of current state of agrobiodiversity” “Proposal for a law Provisions for the protection and enhancement of peasant agriculture” under discussion (“Disposizioni per la tutela e la valorizzazione della agricoltura contadina”)

“Young farmer scheme, eco-scheme, organic scheme, result based payment scheme”

“New funds are planned through the IPARD like project, which aims to finance agroecology initiatives in Montenegro”

There are also limited, but interesting responses given regarding ‘*which key points should policies for agroecology have?*’ (Figure 4b).

“A lot can become better, nothing on agroforestry!”

“Most of these come from the EU-level, rather than “motivated” and developed locally.”

“We should work on educating political actors when listening to associations and citizens, maybe something would be achieved - the response to environmental crises should be realistic but very far-reaching, - in addition to politics should be educated and science scientists conservative as well as political actors.”

“Need all levels of policies. Local gives motivation for farmers to change. National finance and gives directions. Regional is a bridge between the two.”

“A lot of strategies including components of agroecology exist but there is no Agroecology strategy yet.”

“Three brand new goals concerning climate change adaptation, promotion of sustainable development and biodiversity protection.”

“The result of a campaign by a series of associations and NGOs that began a decade ago to propose a law that values peasant agriculture.”

“Besides subsidies, the state adopts new regulations which contribute to development of agroecology in Moldova. For example, the Ministry of Agriculture is preparing the law on public acquisitions, so that at least 5% of publicly purchased food is from the local organic farmers. Also law is developed to simplify bureaucratic procedures for small farmers. For instance the garden adjacent to the household can now be registered as a peasant farm which provides certain privileges to small food producers including them in the legal framework.”

“The policies are not ensured to be taking place in practice. Analysis have been done, but they focus on various aspects (agrobiodiversity, wild plants, organic production, water management etc.) and often include further recommendations.”

“Collaboration and local governance is the key to foster such initiatives”

“Eco-schemes and ecological certification; no other laws outside CAP to support and finance agroecology”

6 Additional country perspectives & local voices of AE-related policies

6.1 Overview and own expert ranking

The ranking was done before the analysis showed above and is based on the authors’ expert knowledge and longstanding insights including the delivery of several EU framework projects from 5th -8th framework (8th framework is Horizon 2020).

Mapping international, national and regional policies for agroecology and agri-environment schemes in different European countries is a complex task. Here we provide a summarised broad overview of agroecology policies and agri-environment schemes in 18 European countries, also included are selected international policies and a ‘hitlist’ of four top countries most active in agroecology. This is of course subjective and intended to start a discussion and draw interest to best-cases, it is not the definitive list. A list of potential lagging countries is also given.

6.2 Agroecological policies and agri-environment schemes at country level

France:

- France has been a pioneer in promoting agroecology and has integrated it into its national policies.
- The "Ecophyto Plan" focuses on reducing pesticide use in agriculture and promoting sustainable farming practices.
- The "Agricultural Ecological Transition Law" aims to develop agroecological practices and reduce the use of chemical inputs.
- Agri-environment schemes like "Ecological Focus Areas" promote biodiversity conservation and the adoption of agroecological practices.

Germany:

- Germany has a range of agri-environment schemes designed to support sustainable agriculture.
- The "Biodiversity Strategy" promotes ecological farming practices, habitat preservation, and landscape management.

- The "Organic Farming Action Plan" encourages the conversion to organic farming methods, which align with agroecological principles.
- Agri-environmental programmes provide financial incentives for farmers adopting practices such as crop rotation, cover cropping, and agroforestry.

United Kingdom (England, Northern Ireland, Scotland and Wales):

- The UK has various agri-environment schemes that incorporate elements of agroecology.
- The "Environmental Stewardship Scheme" encourages farmers to adopt environmentally friendly practices such as wildlife conservation, soil management and water protection.
- The "Countryside Stewardship Scheme" supports sustainable land management, including agroforestry, integrated pest management and soil conservation.
- The "Agriculture Bill" introduced in 2020 aims to transition UK agriculture towards more sustainable and environmentally friendly practices.
- ELMs (Environmental Land Management) is the equivalent to the European Union's new CAP (Common Agricultural Policy). ELMs aims to include payments for ecosystem services and environmental land management, in contrast to the flat payments only for larger land owners (>5 ha) as the current CAP was implemented by the current UK government.
- Wales, Scotland and Northern Ireland have their own agricultural policies different from England. The EU agricultural policy is devolved to these four nations (double-Brexit)

Sweden:

- Sweden has implemented agroecology principles in its policies and agricultural programmes.
- The "National Food Strategy" emphasises sustainable food production and supports agroecological practices.
- Agri-environment schemes like the "Agri-Environmental Payments" aim to enhance biodiversity, promote organic farming, and reduce nutrient runoff.

Spain:

- Spain has regional policies that promote agroecology and sustainable agriculture.
- Several autonomous regions have developed agri-environment schemes tailored to their specific agricultural practices and ecosystems.
- For example, in Andalusia, the "Ecological Farming and Livestock Plan" supports organic farming practices, while Catalonia has programmes to enhance agroecological practices and agroforestry.

Netherlands:

- The Netherlands has implemented various agri-environment schemes, including the "Agri-Environmental Management Scheme" that supports environmentally friendly farming practices such as biodiversity conservation, soil management and water quality improvement.

- The Dutch government has also initiated the "Circular Agriculture Action Plan" to transition towards circular farming systems that align with agroecological principles.

Switzerland:

- Switzerland has a strong focus on agroecology and sustainable agriculture.
- The "Swiss Agri-Environmental Scheme" provides financial incentives to farmers for adopting agroecological practices, including organic farming, crop rotation, agroforestry and the preservation of cultural landscapes.
- The "Biodiversity Action Plan" emphasises the conservation and restoration of biodiversity in agricultural landscapes.

Italy:

- Italy has implemented agroecology policies at both national and regional levels.
- The "National Rural Development Program" includes measures to promote sustainable agriculture and agroecological practices.
- Regional initiatives such as the "Agroecology Project" in Emilia-Romagna aim to support the transition towards agroecological farming systems.

Denmark:

- Denmark has a range of agri-environment schemes that promote sustainable agriculture.
- The "Green Growth Plan for Agriculture" focuses on reducing the environmental impact of farming and supporting agroecological practices.
- Agri-environmental programmes provide incentives for practices like organic farming, precision agriculture and water management.

Austria:

- Austria has a strong commitment to agroecology and sustainable agriculture.
- The "Agri-Environmental Program" provides financial support for farmers implementing agroecological practices such as organic farming, agroforestry and landscape conservation.
- The "Biodiversity Strategy" promotes the integration of biodiversity conservation into agricultural practices.

Belgium:

- Belgium has regional policies and agri-environment schemes promoting sustainable agriculture and agroecology.
- The "Wallonia Agroecology Plan" in the French-speaking region of Wallonia supports the adoption of agroecological practices and organic farming.
- The "Flanders Agro-Environmental Measures" in the Dutch-speaking region of Flanders encourages biodiversity conservation, landscape management and sustainable soil practices.

Finland:

- Finland promotes sustainable agriculture through programmes like the "Agri-Environment and Climate Scheme," which supports farmers in adopting

environmentally friendly practices such as organic farming, agroforestry and wetland conservation.

- The Finnish government also emphasises the preservation of traditional rural landscapes and biodiversity.

Portugal:

- Portugal has various agri-environment schemes that promote sustainable agriculture and agroecological practices.
- The "Program for Rural Development" provides support for farmers to adopt environmentally friendly practices, including organic farming, soil conservation and water management.
- Portugal also encourages the preservation of traditional farming systems and agrobiodiversity.

Greece:

- Greece has implemented agroecology policies and agri-environment schemes to support sustainable agriculture.
- The "Rural Development Program" includes measures to promote agroecological practices, organic farming and the conservation of natural resources.
- Greece also focuses on the preservation of traditional agricultural landscapes and sustainable land use.

Poland:

- Poland has introduced agri-environment schemes to encourage sustainable agriculture.
- The "Ecological Farming Support Program" provides financial incentives for farmers adopting organic farming methods and sustainable practices.
- Poland also emphasises the protection of natural resources, biodiversity conservation, and landscape management.

Ireland:

- Ireland has implemented agri-environment schemes to support sustainable farming practices.
- The "Agri-Environment Options Scheme" provides incentives for farmers to undertake environmentally beneficial actions, such as habitat creation, water quality improvement and conservation farming practices.
- Ireland also promotes the preservation of traditional farming systems and landscapes.

Czech Republic:

- The Czech Republic has agri-environment schemes to support sustainable agriculture and agroecological practices.
- The "Countryside Development Program" offers financial support for farmers implementing practices such as organic farming, agroforestry, and biodiversity conservation.

- The Czech Republic also focuses on landscape protection, soil erosion prevention, and water quality improvement.

Hungary:

- Hungary has implemented agri-environmental programmes with a focus on sustainable agriculture and biodiversity conservation.
- The country has schemes that support agroecological practices like organic farming, landscape management and the preservation of traditional rural landscapes.
- Hungary aims to enhance soil quality, water resource protection and sustainable land use.

6.3 International policies

There are also many international policies relevant for agroecology. Here we provide a summarised broad overview of key international agreements and institutions promoting agroecology, as well as examples of European countries that have prioritised agroecology in their policies.

International Agreements and Institutions:

1. **United Nations (UN) Sustainable Development Goals (SDGs):** The SDGs, particularly Goal 2: Zero Hunger, emphasise the need for sustainable agriculture and promote agroecological approaches to ensure food security and environmental sustainability.
2. **Food and Agriculture Organisation of the United Nations (FAO):** The FAO has recognised the importance of agroecology in achieving sustainable food systems and has been advocating for its integration into agricultural policies and practices.
3. **International Panel of Experts on Sustainable Food Systems (IPES-Food):** IPES-Food is an independent panel that provides scientific expertise and policy recommendations to promote sustainable and equitable food systems, including agroecology.

Examples of European Countries, that could be seen as ‘leaders’ or better ‘first movers’ in implementing international and regional policies on agroecology are:

1. **France:** France has been a leader in promoting agroecology through national policies, such as the "Ecophyto Plan" to reduce pesticide use and the "Agricultural Ecological Transition Law" that encourages agroecological practices and reduced chemical inputs.
2. **Germany:** Germany has implemented various agri-environment schemes, including the "Biodiversity Strategy" and the "Organic Farming Action Plan," which support agroecological practices and the transition to organic farming. It has an ambitious 30% land use target for certified organic by 2030, both on a federal level and even earlier in some states, e.g. **Bavaria**.

3. **Sweden:** Sweden has integrated agroecology into its policies through initiatives like the "National Food Strategy" and agri-environment schemes like "Agri-Environmental Payments," which support biodiversity conservation and organic farming.
4. **Italy:** Italy has national and regional policies promoting agroecology, including the "National Rural Development Program" and regional initiatives such as the "Agroecology Project" in Emilia-Romagna.
5. **United Kingdom:** The UK has policies and agri-environment schemes like the "Environmental Stewardship Scheme" and the "Countryside Stewardship Scheme," which promote sustainable agriculture and include limited elements of agroecology, mainly confined to the area protected (spared) while other areas are subject to further intensification (squeezed). The radical agroecology movement promotes land sharing, combining agri-biodiversity and agroecology and agroforestry on large areas (over 50% of the usable agricultural area). Some of this is adopted more readily in the parliament of **Scotland** and Senedd of **Wales**.

Many other European countries have specific regional or local programmes supporting agroecology, and the extent to which these policies rely on and refer to agroecological principles varies.

6.4 Order of importance of agroecological practices across European countries

Determining the order of importance of agroecological practices across European countries is a subjective assessment influenced by various factors such as policy frameworks, implementation and cultural contexts. It is impossible to provide a definitive ranking as the weighting of factors is always subjective. However, the authors, based on their expert knowledge, the information provided earlier and considering the prominence of agroecology in their agricultural policies, have proposed a hit list. These countries have demonstrated a commitment to agroecology through national policies, dedicated initiatives and the integration of agroecological principles in their agri-environment schemes.

Top Four countries in Europe with relatively more or most agroecological practices:

1. France
2. Germany
3. Sweden
4. Italy

Countries with relatively few agroecology-denominated practices are (but not ranked):

- Greece
- Poland

- Hungary
- Romania

While these countries have implemented agri-environmental programmes and initiatives that promote sustainable agriculture, and include elements of agroecology, the level of emphasis on agroecological practices could be seen as comparatively low. It is important to note that this ranking is a general indication based on the available information and may not capture the entirety of agroecological practices or their extent in each country. Agroecology is a dynamic field, and policies and practices can vary within regions and evolve over time.

More generally, the following presents additional European countries listed in order of priority based on the *perceived* level of agroecological practices:

1. France
2. Germany
3. Sweden
4. Italy
5. United Kingdom
6. Switzerland
7. Austria
8. Denmark
9. Belgium
10. Netherlands
11. Finland
12. Portugal
13. Ireland
14. Greece
15. Poland
16. Hungary
17. Romania
18. Czech Republic
19. Spain
20. Slovenia
21. Croatia
22. Slovakia
23. Bulgaria
24. Estonia
25. Latvia
26. Lithuania
27. Cyprus
28. Malta
29. Luxembourg

As seen when analysing some selected countries more in-depth, based on information from the local farmer organisations, the perspectives (perceived level) differ as approaches on, for example, family farming (Portugal) and food sovereignty (Spain) demonstrate a high level of implementation of agroecological policies. These are not *seen* as contributing to agroecology in their full dimension, when analysing the agri-environmental policies at national level. It is important to note that nearly all European countries have some level of agroecological practices or initiatives in place, although the extent and focus may vary. While it is challenging to identify countries with absolutely no agroecological practices, there may be variations in the level of emphasis or the stage of implementation across countries. However, here are a few countries that may be perceived to have relatively few agroecological practices when compared to others:

- Russia
- Belarus
- Kazakhstan

These countries, while having agricultural practices and policies in place, may have relatively few specific initiatives or programmes that explicitly prioritise or promote agroecological principles. However, it is important to acknowledge that the information provided is a general assessment, and there may still be agroecological practices and efforts taking place in these countries that are not widely known or documented. Russia and Belarus have certified organic farming and plans to legislate this also to export. An organic conference in Minsk in 2019, before the recent undemocratic elections and the subsequent crackdown on democracy, showed a burgeoning agroecological interest in Belarus, which is also likely to be the case in Russia. The invasion of Ukraine has put all this on hold. Ukraine in contrast, has a large certified organic land area and also agroecological and urban solidarity food initiatives, partly as a reaction to the violent invasion of the country.

6.5 Potential in next CAP

The European Commission provides financial support and guidance through various programmes, such as the current Common Agricultural Policy (CAP), which includes agri-environmental schemes aimed at promoting sustainable agriculture, biodiversity conservation and the use of agroecological practices. The CAP encourages member states to adopt and implement measures that contribute to sustainable agriculture and environmental protection. There is ample space for increased support for agroecological development and the next CAP

could look very different; interesting test-cases for the next CAP are actually Switzerland and the United Kingdom's four nations which are experimenting with alternatives, which have to be 'sold' to voters as better than the next CAP (otherwise why leave the CAP). To deliver this there is an interest to be more innovative and use more bottom-up co-development. Outcomes are too early to judge. There could also be fake bottom-up approaches and 'participatory' greenwashing.

6.6 Detailed analysis of AE initiatives and policies

In the following sections different perspectives on AE-related policies and their positive or negative effects from selected countries (Portugal, Spain, Romania, Hungary and Czech Republic) are presented. This five countries were selected as they present a unique insight into the aspects of agroecology policy and family farming both in western (Portugal, Spain) and central Europe (Romania, Hungary and Czech Republic).

6.6.1 Portugal

In Portugal, there is no AE policy as such but there is a unique policy model that translates into agroecology which is the legal recognition of Family farming. *Confederação Nacional da Agricultura* (CNA) is a Portuguese organisation which defines itself as the "organised expression, predominantly, of family farmers". CNA is part of the Community of Portuguese Language Countries (CPLP) Platform for Peasants, which had a say in the development of important instruments for the valorisation of Family Farming in the region, such as the Lisbon Charter for Strengthening Family Farming or the Guidelines for the support and promotion of Family Farming in CPLP Member States. CNA has played a crucial role and describes this process. The role of Family Farming is recognised as a determining factor to ensure people's food security and sovereignty, and as a model capable of responding to the various crises that society faces: financial, climate, energy, food, migration, and deprivation of rights. Key issues are: 1) State commitments to instruments recognising and valuing Family Farming, 2) The introduction of agriculture and food policies which sustain food sovereignty by protecting and promoting healthy, sustainable and democratic agri-food models, as well as a fair income and decent living for farmers and their families, 3) Policies to encourage young and new farmers and reverse the abandonment of rural areas, 4) A valorisation of the role of rural and women farmers.

6.6.2 Spain

In the last 10 years, the situation in the agrarian sector in Spain has been characterised by a deepening crises of sustainability and profitability. A reduction of small and medium sized

farms is ongoing. On the other hand, important innovations related to sustainable agri-food systems have been developed and reinforced by local public policies fostered under the Milan Urban Food Policy Pact. And new forms of multi-stakeholder organisations and articulations have taken place, in the spirit of the Rural Platform. Food Sovereignty platforms at local and regional level were developed and a proliferation of short food supply chain articulations around agroecological agri-food systems took place (*Alimentando Córdoba*, promoted by the Institute of Sociology and Peasants studies - ISEC, at University of Córdoba, for instance). The classical cooperatives and agrarian trade unions based on hierarchical structures and oriented to industrial agri-food systems started being contested by new forms of unions and articulations based on other principles such as radical democracy, ecofeminist perspective and solidarity economy, that despite their reduced impact in the agrarian sector, started to point out important challenges and innovations (*Sindicato Labrego Galego or Coordinadora Campesina del País Valenciá – COAG*). Family Farming, due to its multidisciplinary and multifunctional nature, is more than a way of producing food - its relationship to agroecology is discussed in the next chapter.

6.6.3 Agroecology and family farming

The United Nations World Decade Plan for Family Farming (UNDFP) 2019-28 declares: “*To feed the world in a sustainable way, an urgent and radical change in our food systems is needed... there is nothing closer to the sustainable food production paradigm than Family Farming*”.

Despite noble objectives, 63 years after the signing of the Treaty of Rome, which created the EEC and CAP, the impacts of agricultural, commercial and food policies in rural areas and peasants’ contexts are not realised. Despite guaranteeing a significant part of Europeans’ food, Family Farms have disappeared at an alarming rate in Europe and those that remain face many difficulties, including access to markets and outlets for their production at fair prices. This compromises these farmers’ right to live and work with dignity. Although CAP aid is intended to offset farmers’ incomes, in 2017 farmers obtained on average less than half of what could be earned in other jobs. The intensification of production, orientation towards productivity and incentives intended to concentrate land use have generated a continuous expulsion of peasants from the countryside and, therefore, an important crisis in rural areas. It is no coincidence that in the EU, non-Family Farms control more than a third (37.7%) of the total utilised agricultural area, despite representing less than 5% of the total number of farms. Between 2005 and 2016, 4.2 million farms in EU Member States were lost. The vast majority of these (around 85%) were small peasant farms with less than 5 hectares, marking a decrease of about a quarter in just 10 years.

The fact that almost a third of farm holders in the EU-27 were 65 years of age or older in 2016 is another important issue. **The lack of generational renewal** in the agricultural sector has long been identified as a concrete consequence of the CAP. This phenomenon poses a serious risk to the sustainable development of Family Farming and rural areas. Support for Family Farming, was not a priority for CAP. The European Commission itself assumes that 80% of aid is paid to 20% of farmers with large holdings. In Andalusia (Spain), for example, four of the seven largest holdings in the city receive between 3 and 8 million euros in public aid from the CAP, while the average value that a farmer receives from the CAP in Spain is 5,328 euros/year. In 1986, the same year Portugal and Spain joined the EEC, negotiations began for the 8th Round of the General Agreement on Tariffs and Trade (GATT), which includes the agricultural sector. This agreement shapes the current World Trade Organisation (WTO), liberalises international trade and increases competitive pressure on agriculture. The EU currently has about 100 trade agreements in place, and which are in the process of being updated or negotiated. In this context of globalised, liberalised trade, farmers continue to be mere suppliers of raw materials at low prices. This situation is aggravated by the fact that these agreements provide foundations for arbitration courts, which can judge and condemn states while protecting the investments of large multinationals.

6.6.4 CAP in Portugal and Spain: Impact on Family Farming

6.6.4.1 *Portugal*

At the time of Portugal's accession to the EEC, national agriculture was based on family organisation, with a productive structure dominated by smallholdings. A large component of these included self-consumption, and consisted of Mediterranean cultures such as fruits, vegetables, wine or olive oil. Portugal has entered a phase dominated by the liberalisation of agricultural product markets worldwide and, therefore, in the progressive reduction of prices. The already fragile national agricultural sector faces difficulties of the EEC itself in the flow of production. There is an urgent need to adjust prices to balance supply with demand. In a context of surplus production where the priority was to not produce, Portuguese agriculture began to decline. The situation was compounded by problems in CAP that did not take into account the specificities of each country and its productive capacity. Since joining the EU, the national agri-food balance has worsened, both because of the need to restructure agricultural holdings and because of the common market (the policy for reducing production surpluses has been applied linearly). Payments to farmers have been progressively decoupled from production and replaced by direct income aid. Discouragement in the fields has been striking and even today the consequences are enormous.

6.6.4.2 Spain

The situation in the Spanish state is heterogeneous regarding the application of the CAP, with respect to direct payments and the application of rural development funds. For example, data about people affiliated to the Special System of Agriculture, Livestock and Fishing shows that, between the years 2009 and 2019, there was a decrease of 12% in the state as a whole, and in Galicia, this was 36%. Further data indicative of heterogeneity from this period shows that almost 700,000 requests for CAP aid were submitted in the Spanish state, while there are fewer than 300,000 registered people in the SETA (the special Social Security system for farmers and ranchers). In Galicia, 26,805 applications were filed, and 29,013 people were affiliated to SETA. The size of farms is very variable and, therefore, the average amount of basic payment charged per beneficiary also varies (State: 4,011 €, Galicia: 2,699 €). However, in common with the entire EU, the application of the CAP in Spain eliminates farmers. The CAP has been a failure in terms of maintaining Family Farming and establishing decent incomes for food producers. Common problems include: access to land, seeds, credit, fair markets and loss of ability to decide what and how to produce (integration of livestock and agriculture). It is more and more difficult to cover production costs and farmers have to produce more to earn less. Discussions of CAP almost always refer to the subsidies received by farmers and other rural inhabitants. Yet it is more important to examine how the application of Regulation 1308/2013, which creates and organises agricultural markets, has influenced each State. This regulation is the basis for important decisions which affect more than just the budget: public intervention, private storage, operational programmes for the fruit and vegetables sector, planting authorisations, import and export marketing regulations, Designations of Origin (DO) and Protected Geographical Indication (IGP), producer organisations, inter-branch organisations, contractual systems, competition rules and contracts.

These and so many other issues are what really matter, and not the subsidies and these issues are part of CAP regulations under negotiation today. The regulation suggests that, through creating producers' organisations to manage relationships with distribution chains and negotiate stable contracts with the industry, farmers have better control over prices, production and markets. But the reality of the Galician dairy sector shows the opposite to be true: decision-making and power in the markets is imbalanced in the industry's favour and away from producers' organisations. In each contract the industry determines the quantities farmers are allowed to produce and the price they can sell at. In addition, there is almost unanimity regarding the bad distribution of funds. The European Commission, the European Parliament and the European Court of Auditors admit to problems. In the Spanish as well as other states, distribution of first pillar funds through historical rights has created problems in

production and for new farms. A whole series of payments depend on the existence of these rights, so some farms receive nothing (young people, for example, although redistributive aid was not implemented in Spain). The payment per hectare to comply with mandate from the WTO also hurts very small farms, since the average payment in Galicia is 187 €/ha.

The second pillar, Rural Development funds have also seen variable application. Galicia has had measures implemented for years, such as aid to young people, or for improvement plans, agri-environment, or organic farming. These measures would all need to be improved in many ways, in order to serve the purpose of the Rural Development Plans. In the case of agri-environment, organic farming and disadvantaged areas, the payment is per hectare, so the problem is always the same for people with very small areas. A determined commitment and additional funds are needed to genuinely solve problems in rural areas. The results of CAP have created a situation in the Spanish state almost identical to that of Portugal. 43% of small and medium sized farms in Malaga have gone out of business over the last 10 years. This process can be attributed, in many cases, to the absorption and concentration of food supply chains by multinational companies, and to the strategic role of these companies as intermediaries between producers and consumers. In 2015, for example, 74% of food purchases by Spanish households were made in supermarkets. Policy has imposed supply requirements, prices and payment terms which small and medium sized farms struggle to meet. National and regional workshops were held where the agroecology initiatives and policies were discussed. Below is a list of the main policy recommendations that emerged to strengthen Family Farming. They are based on the Iberian examples but applicable to all European countries.

6.6.5 Proposals to strengthen rural Family Farming

- The CAP reform proposals should be revised, taking into account that it is already two years old and does not reflect new social realities, such as the COVID-19 pandemic or the growing concern about environmental problems that led to the creation of the Green Deal and the F2F strategy.
- CAP reform must be based on principles of Food Sovereignty, in order to protect and promote healthy, sustainable and democratic agri-food models and the thousands of family farmers who support them, thus also safeguarding food security.
- Small and medium scale farms, and peasant farming models, mainly based on agroecological practices, are the only way to maintain dynamic rural areas, and to fight climate change and loss of biodiversity by supporting traditions, knowledge, culture, farmers' seeds and indigenous breeds.

- Reversing the closure of public services in rural areas and promoting the maintenance and creation of quality public services (health, education, public transport, communication routes, public administration, culture) will improve the quality of life for populations and reverse the trend of human desertification in rural areas.
- National strategic plans for the CAP should reflect the objectives of more local and resilient farming and subsidise small and medium scale farms, and the peasant farming model, as the only way to maintain dynamic rural areas.
- Limits must be set on the so-called mega-farms and their negative impacts at environmental and social levels.

6.6.6 Bringing farmers and consumers together and relocating food consumption

- CAP and other policies should provide specific support to recover, create and promote local and traditional markets for the commercialisation of local/traditional produce, particularly from Family Farming.
- Policy must establish appropriate rules and standards for hygiene, and for processing products on farms, as well as financing local and collective equipment initiatives such as mobile slaughterhouses for small farms, options for vegetable processing, infrastructure for local markets and further related initiatives.
- Priority should be given to Family Farming in the supply of public institution canteens and the social economy of the region where farms are located, establishing significant minimum limits for food from this source.

6.6.7 Protecting the position of farmers in the market

- Market and production management instruments are fundamental for stabilising markets and improving farmers' incomes.
- Reinforcing the management and regulation of the common internal market and production model under CAP will put an end to the relocation of food production to countries that do it more cheaply and without concern for how food is produced or the serious health, environmental and social consequences that may arise, for these countries and for the EU.
- The position of farmers in the agri-food distribution chain must be protected by prohibiting sales that are below the production cost (dumping practices), or by establishing systems for controlling prices and profit margins. This includes, for example, legislative regulation of the commercial activities of large distribution and agribusiness companies.
- EU competition rules must be changed to take account of social and environmental aspects, favouring short market channels.
- The economic organisation of production needs better support, namely with multi-product producer organisations and rules appropriate to small and medium scale Family Farms.
- Encouragement and support should be given to farmers' associative organisations as a way of guaranteeing space for participation in the formulation of public policies.

6.6.8 Young and new farmers

- In rural development interventions, giving priority to supporting the installation of young people and new farmers will revitalise rural areas and combat the aging of the agricultural population and desertification of the rural world.
- Ensuring effective policies for the setting-up and maintenance of young and new farmers, will allow them to sustain their activity after five years of obligatory project maintenance.

6.6.9 Rules for access are needed to support the entrance of small and medium scale farmers.

- A land directive needs preparing to facilitate access for young people, protect the soil, prevent artificialisation of the land and to ensure access to and sustainable use of natural resources.
- Policy must ensure the transmission of knowledge between farmers and generations, to preserve traditional Family Farming practices.
- Technical support, adapted to small and medium scale Family Farms and specialised training, needs to be promoted.
- Young people must be trained for collective action, integration into and participation with associative movements.

6.6.10 Valuing the role of rural and farmer women

- The important role played by rural and farmer women must be valued through concrete measures which allow them to fully enjoy their rights, with respect to the Declaration of the Rights of Peasants
- CAP aid should be linked to production and not to area (ha) and should support all those who are actively producing goods to feed the population.
- A fairer distribution of aid requires capping (or limits, for example, so beneficiaries receive a maximum of 60k Euro/year in direct payments), mandatory modulation and a redistributive payment that values the first hectares.
- Small-scale farmers should receive payments as defined by Member States under the Small Agriculture Scheme, in the form of a predetermined amount, which replaces the anticipated direct payments, at a level sufficient to ensure long-term viability of the farms.
- Investment of financial funds in the agroforestry sector (that grab land, displace rural communities and impose industrial models of agriculture) should be limited and not eligible for public aid.
- Cross-compliance must include in its rules the labour rights of farmers and rural workers, with a view to valuing work and fulfilling their rights (under international labour conventions and the Declaration of Peasant Rights).

6.7 Romania

While in Romania there is no national agroecology policy per se, the different policies that impact positively or negatively on the development of agroecology in the country are analysed.

6.7.1 CAP pre 2023-2027

The CAP has been designed as a common policy to be followed by the members of the community. Specific political priorities targeted for public funding have been defined at European level, such as securing jobs and growth, sustainability, modernisation, innovation and quality, but it is up to the members states to implement these, choosing the most appropriate ratio of direct payments and rural development programmes for the policy period frames. Along with the official institutional message of progress, adaptation and successes comes the realisation that the CAP has not achieved all its crucial and foundational objectives, and that it needed to be reformed as its design does not fit contemporary issues at stake. If on the one hand, it succeeded in increasing productivity standards, on the other hand, living standards among small farmers in the agricultural field did not improve; the CAP fixed a minimum price for food products, but it distorts food prices and supports quantity over quality. Additionally, the reality of NMSs from the eastern European region shows that the specific needs of these countries were not efficiently and inclusively addressed. New international tools, namely UNDROP (United Nations Declaration on the Rights of Peasants and other People Working in Rural Area) and UNDFE (United Nations Decade for Family Farming), were generated and now reinforce the current debate on HR (Human Rights) issues. In the framework of AE, these tools, complemented by already existing ones, have the power to cover both European and non-European countries, namely the entire pan-European area. These tools can be used to underline the social-environmental necessities to which the CAP should respond. They can fill in the gap between the impact of the CAP on non-EU countries and the social and economic security of farmers from these regions who do not benefit from the Common Agricultural Policy but are impacted by its effects on the market.

6.7.2 UNDROP

The United Nations Declaration on the Rights of Peasants and other People Working in Rural Areas <https://digitallibrary.un.org/record/1650694> is a universal declaration. Since 2010, La Via Campesina has been working toward this goal, allowing all the states of the world to contribute to the long negotiation process that led to the adoption of the declaration in Geneva, then ratified in New York in December 2018. The document is composed of 27 articles: UNDROP addresses common worldwide problems with contemporary solutions. The final

objective is to improve the lives of all stakeholders and people involved in rural areas in the future. It refers to different aspects: social, cultural, economic, political, civil and natural resources, the last one representing the novelty of the document. To be legally effective, the document must be implemented at national level, a process highly facilitated by collective action. It is up to farmers and peasants to push for these changes, but political support in favour of grassroots groups remains crucial. In particular, for eastern countries, applying the UNDROP at the regional level can also influence a more inclusive definition of peasant and small farming at the national level that enables better CAP implementation and can sustain national decision makers to reinforce inclusive national policies.

6.7.3 UNDFE

The second tool, The United Nations Decade for Family Farming) (www.fao.org/family-farming-decade/home/en), is a Global action plan based on seven pillars whose main goal is to develop an enabling policy environment to strengthen family farming. The worldwide movement of peasant farmers, *La Via Campesina* is part of the governance mechanism, together with IFAD and FAO. The specific objectives to be achieved starting in 2019 are the following: supporting youth, generational sustainability and gender equality; strengthening family farmers' organisations and capacities to generate knowledge; improving socio-economic inclusion; enhancing the multidimensionality of family farming. Peasant innovation does not mean replacing people with machines, but neither does it mean avoiding progress: the key is to innovate in a more inclusive context and framework. ECVC has its own main goals for the decade: the promotion of all-inclusive small-scale family farming; the promotion of HR implementation and application; the promotion of knowledge sharing about the diversity of food producers.

6.7.4 VGGT

In addition, among the tools that were already present during the previous CAP reform in 2013, a few need to be mentioned: The Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forestry and The Platform Access to Land (VGGT). They are based on the following general principles: recognition, safeguarding, promotion, facilitation, control of legitimate tenure right holders and rights, prevention of tenure disputes, violent conflicts and corruption. The guidelines are an instrument of soft law, non-binding and global in scope. During several years of negotiations, CFS opened up to civil and social movements. The VGGT emerged in a context where there was major media attention in terms of HR on land grabbing issues and they represent the first international instrument to adopt an International Covenant on Economic, Social and Cultural Rights (ICESCR) -based

approach to the question of the tenure of natural resources. The main objectives are the following: emphasis on the most vulnerable and marginalised groups, respect for and protection of legitimate tenure rights, introduction of measures to curb land concentration and speculation, support for adequate land reform and redistribution, definition of responsible investment and safeguards in the case of Large-Scale Land Acquisition (LSLA). After the adoption, the VGGT have been used by FAO, governments and civil society, through international and transnational programmes, as technical guides, learning frameworks, people manual, training workshops, reference points at various levels. The Platform Access to Land is introduced as a tool developed and constantly developing to increase transparency and data availability and comparison. Established in 2012, it functions as an informal network that brings together about fifteen grassroots organisations from across Europe to share experiences and promote the significance of access to land for agroecological transition and generational renewal. Building alliances is the main goal while inclusive access to land is the crucial issue to be solved and farmland succession the main challenge to be accomplished.

6.8 Hungary & Croatia

Neither Hungary, nor Croatia have AE-dedicated policies. A local analysis of the policies that impact agroecology in both countries was made and presented during national and regional workshops.

In 4 regional policy roundtables, major policy clusters were differentiated with policy recommendations targeting the primary sector and food production, the regulatory system, and education, communication and dissemination. Hungary and Croatia share a similar history and attitude towards agroecology, cooperatives and other forms of collective action in the farming sector. In the past decade, promising grassroots initiatives have been growing and scaled up and out in both countries, showing new forms of AE collective action and renewed faith in them. Nevertheless, these initiatives need the support of different kinds for their further development: legal, financial, administrative and educational. The learnings from local initiatives bring the following reflections in terms of AE policies:

- Networking and territorial solidarity are key aspects to a transformative change to the food system. It is essential to strengthen territorial solidarity and cooperate beyond borders. This means not only creating networks of initiatives with similar objectives in different regions of Europe, and to link these, but also to think holistically about the impact of European farming activities outside the European Union and continent.

- Discovering in-person model initiatives and farms, meeting and sharing experience with other individual actors has a genuinely strong impact and triggers more action. The importance of study tours and other forms of personal exchanges, strengthen farmer-to-farmer knowledge sharing, need for independent model farms and their network.
- Training and tools adapted to the needs of farmers, land managers and other related actors empower farming communities and their environment. Relevance of capacity building trainings, participatory methodologies (active involvement of stakeholders), organisational development tools, easy-to-understand regulatory framework guides and their availability in various languages.
- These new spaces of multi-stakeholder interactions generate impact on many levels. The importance of involving a variety of relevant stakeholders (farmers, land managers, NGOs, researchers, policy makers, etc.) to enrich debates, exchanges and co-thinking, regular dialogue is crucial to co-create well-adapted policies and other actions to the farming, food and any other related sectors in an intersectoral and interdisciplinary way.
- Farmers, land-managers and related organisations are powerful change-makers in our society, but they need support. Flexible, well-targeted (previously assessed on their specific needs) legal, financial and educational support is needed, while engaging actively with farmers, land managers and related organisations in the different processes: from the design, to the preparation work and to the actual implementation.
- Agroecology should be at the heart of food system policies, practices and related research. It is auspicious to see that the European agricultural research community has begun to acknowledge agroecology, as it is explicitly mentioned in the new Horizon Europe framework programme as a promising alternative to lead agricultural research efforts to transform the European agri-food sector. However, agroecology needs to be put at the heart of agricultural and food policies at international, European and member-state level.
- Success through diversity: Europe still has a diversity of farming practices, but they are very much endangered, as are biodiversity and traditional food cultures. In order to create resilient ecosystems, we need to cherish diversity (age, gender, nationality, knowledge, ways of production and so on) with adapted policies and production facilities. Small-scale farms are pools of diversity of natural resources and farming related activities – this should be acknowledged and valued.

6.9 Poland & Czech Republic

In Poland and Czech Republic, as in the previous countries presented, there is no official AE policies that are formally recognised. Nevertheless there are AE-related activities and initiatives that have been discussed e.g. the Declaration of Peasants' Rights (UNDROP). The major areas of action envisaged in the roadmap concern:

Poland

- Raising awareness about the Declaration within the peasant society in Poland

- Engaging in joint dissemination activities with non-governmental organisations and movements dealing with human rights, ecology, agriculture, food sovereignty and sustainable development as well as scientific and research units
- Gaining broad public support through the realisation that, indirectly, the Declaration applies to all people (e.g. with respect to the issue raised during the workshop about the availability of good local and seasonal food at a reasonable price)
- Efficient initiation, coordination and evaluation of targeted communication activities.
- On the national level in Poland, emphasis was put on the need to provide:
 1. Support for creating and protecting a peasant seed system, including farmers' models of low cost seed production, as well as community seed banks to allow farmers to exchange seeds and strengthen networks of seed producers at a national and regional level (in order to make more organic seeds available through national markets).
 2. Support to farmers' associations to register as operators for plant passports.
 3. Education opportunities about seeds by public sector institutions and supporting various forms of knowledge exchange on seed production.
 4. Creation of a network at a national level to produce and consume good quality organic food; provision of training for consumers about organic farming; financial support for farmers' organic seed production.
 5. Support for the creation of new forms of collective action promoting advisory services.
 6. Link to the EU Farm to Fork Strategy, helping people to collect more information about and connect effectively with this important strategy.

Czech Republic

- Distribution of subsidies - up to 70% of payments are not prevented from heading towards environmental measures; this connects to discussion of a redistributive payment per hectare. The problem includes a warning about the disappearance of small farms caused by concentrating payments to large enterprises under the CAP.
- Competition between large and small farms (small farmers/farms under ten hectares, which is over 80% farms within the EU).
- Environmental vs. economic needs - the importance of public money for public goods, which should be perceived sensitively by the CAP.
- Common food policy does not replace CAP but can develop. Farmers will then be able to choose their eco-schemes.
- Fairer acknowledgment of the importance of farmers and farming in society.

7 Concluding reflections

Agroecology-related policies and initiatives may involve the organisation of labour, the production, processing and marketing of food products, and the provisioning of other rural ecosystem services as part of wider rural resource management and working collectively in AE also involves political motivations. Therefore, the following includes reflections on AE collective action under the BOND project, a Horizon 2020 CSA (EC-funded GA 774208). The synthesis report from this research states that without well-organised collective farmers' initiatives that are based on new ideas, new forms of self-organisation and new practices, there is a serious risk that the weak positions of peasants and small-scale farmers will not change very much. Food industries, retailers and other vested interests are likely to remain largely 'in control', and therefore reinforce the relatively weak positions of farmers. New practices of farmers may incentivise new policies. Certainly, in agroecological and peasant farming, many examples can be found that deviate from mainstream global models, rules and relations. As such, examples represent crucial building blocks for the construction of local solutions to global problems, which contrasts sharply with agricultural modernisation forces that counter local problems with global solutions. Such local solutions assume a certain degree of freedom. AE practices are starting points for increasing the influence of farmers on future food systems and for improving their socio-economic position. Different potential societal benefits of farmer-led AE collective action have been addressed in a broad range of initiatives. Their acknowledgement and recognition are crucial in bringing farmer-led network dynamics to higher levels. Critical success factors for this are:

- **Bottom-up collective** initiatives often emerge as farmer-led bottom-up processes. This does not mean that alliances with others are not important. Over time, other – preferably local – parties may be included in the initiative, for example through local citizens becoming members of the initiative or through local NGOs contributing to their further development.
- **Local resources** in the development of initiatives, practices, autonomy and self-control are important. Initiatives are stronger when these are firstly built on local resources (own labour, own capital, own knowledge, local networks, own machinery, etc.).
- **Family farm resilience** is important, as the strength of initiatives is often positively affected when their logics are rooted in family farm resilience.
- **Distinctiveness and collective** action is successful when it results in better 'defendable' markets for agricultural produce and services. That is that distinctiveness, not 'more production' or 'higher productivity', becomes the guiding principle, as it is especially through distinctive produce and services (quality, sustainability, recycling, food waste reduction) that

new coalitions and networks can be built, that vested structures and interests can be deconstructed and that new, more beneficial market relations, rooted in changing societal and consumer behaviour demands, can unfold and persist.

There is great potential to make a difference by reconnecting agriculture with citizens, consumers, the city and other economic sectors in ways that generate societal benefits; re-establishing close relations between agricultural activity and natural processes; re-integrating agricultural activity with new societal demands such as low carbon economies and climate change resilient water management models; re-discovering rural added value through new forms of sustainable and regenerative resource use and reduced market-dependency.

7.1 Multiplicity of policy recommendations

A summary of the multiplicity of policy recommendations has been moved to the executive summary at the beginning of this text. Recommendations not repeated here are made for: (i) CAP reform as a crucial prerequisite, (ii) collective action in relation to future smallholder farming, agroecology and regenerative food systems, and (iii) wider recommendations for institutional reform within contemporary multi-level governance settings.

7.2 Insights for the ‘AGROECOLOGY for EUROPE Roadmap’

The ‘AGROECOLOGY for EUROPE roadmap’ is a deliverable of workpackages 5 & 6 (Task 5.3 and T6.1). This includes integrating key insights from all workpackages as a synthesis of relevant perspectives on what needs to be addressed or made use of in order to enhance opportunities for agroecological transitions in farming and food systems in Europe.

From this task the insights are two-fold:

1. What can we **learn** from the policy analysis regarding constraints/undermines/lock-ins/opportunities for the agroecological transformation of farming and food systems? Are there international or national experiences applicable to Europe?
2. From the policy analysis, what are the **enablers** or **potential enablers** or enhance or unlock opportunities for agroecological transformations of farming and food systems in Europe?

For this we include factors such as economic, financial, social, agronomic, climate, materials, knowledge, communication and ethics. We also examine the roles to be played by particular actors, and successful and appropriate approaches and strategies, the relationships and collaboration, networks and initiatives (e.g. living labs, knowledge hubs, research infrastructures). It is also about capacities and motivations, as well as policies and legislation at different temporal or special scales (short term/long-term issues, or

Concluding reflections

local/regional/national/international). All this is set into different societal conditions (market conditions, consumer preferences, landownership, poverty levels) and other differences between countries in Europe.

Regarding learning for partnership the reflections already given in the executive summary are valuable (they are not repeated here). Equally valuable are conclusions from other recent analysis e.g. “...to foster agroecological transitions in Europe, policy tailoring should be based on a deep understanding of the key socio-economic barriers faced by the diversity of farming systems and social contexts.” (Gava et al. 2022), or “...policies are currently not designed in a cohesive manner, and at times work against one another. We therefore recommend that all future policies centre themselves on the High-Level Panel of Expert’s 13 Principles of Agroecology...” (Buratti-Donham et al., 2023).

References

- BOND (2020). New Solutions for Collective Action. Synthesis Report
www.bondproject.eu/wp-content/uploads/2020/10/BOND_Publication_WU_Synthesis-Report-HQ-Single_compressed.pdf
- Buratti-Donham, Jessica, Rosemary Venn, Ulrich Schmutz and Paola Migliorini (2023). Transforming food systems towards agroecology – a critical analysis of agroforestry and mixed farming policy in 19 European countries, *Agroecology and Sustainable Food Systems*, 47:7, 1023-1051, <https://doi.org/10.1080/21683565.2023.2215175>
- EIP-AGRI Focus Group (2017) Mixed farming systems. Livestock and Cash crops. Final Report. Available at: http://ec.europa.eu/agriculture/eip/focus-groups/charter_en.pdf
- FOREST EUROPE (2020). Adaptation to Climate Change in Sustainable Forest Management in Europe, Liaison Unit Bratislava, Zvolen, ISBN: 978-80-8093-314-2, https://foresteurope.org/wp-content/uploads/2016/08/Adaptation_to_Climate_Change_in_SFM_in_Europe_compressed.pdf
- Gallardo-López F, Hernández-Chontal MA, Cisneros-Saguilán P, Linares-Gabriel A. (2018). Development of the Concept of Agroecology in Europe: A Review. *Sustainability*. 2018; 10(4):1210. <https://doi.org/10.3390/su10041210>
- Gava, O., Povellato, A., Galioto, F., Pražan, J., Schwarz, G., Quero, A.L., Iragui, U.Y., Massa, C.A., Zilāns, A. and Carolus, J. (2022), Policy Instruments to Support Agroecological Transitions in Europe. *EuroChoices*, 21: 13-20.
<https://doi.org/10.1111/1746-692X.12367>
- GIZ Sector Project Sustainable Agriculture - Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH (2020) Factsheet Agroecology. Bonn and Eschborn, Germany,
www.giz.de/en/downloads/giz2020_en_Agroecology_SV%20Nachhaltige%20Landwirtschaft_05-2020.pdf
- IPCC (2022). *Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge University Press. Cambridge University Press, Cambridge, UK and New York, NY, USA, 3056 pp., <https://doi.org/10.1017/9781009325844> .

References

- Schmutz, U. (2022). How can organic agriculture & agroecology contribute solving the climate crisis in a healthy world? In G. Rahmann (Ed.), Research for Organic Agriculture to tackle future challenges proceedings: ISOFAR International Scientific Workshops (1 ed., Vol. 1, pp. 181-185). International Federation of Organic Agriculture Movements. www.isofar.org/Events/2022-ISOFAR-workshops-for-2nd-Organic-Expo-in-Korea-in-Sep-2022/
- Schwarz, G., Vanni, F., Miller, D., Helin, J., Pražan, J., Albanito, F., Fratila, M., Galioto, F., Gava, O., Irvine, K., Landert, J., Quero, A.L., Mayer, A., Monteleone, D., Muller, A., Rööös, E., Smyrniotopoulou, A., Vincent, A., Vlahos, G. and Zilāns, A. (2022), Exploring Sustainability Implications of Transitions to Agroecology: a Transdisciplinary Perspective. EuroChoices, 21: 37-47. <https://doi.org/10.1111/1746-692X.12377>
- Wezel, A., Grard, B. and Gkissakis. V. Editors (2023). Agroecology in Europe. Country Reports Series, Vol. 1, ISARA, Lyon, France; Agroecology Europe, Corbais, Belgium. Available at: <https://www.fao.org/family-farming/detail/en/c/1636719/>
- Wynberg, Rachel, Michel Pimbert, Nina Moeller, Georgina McAllister, Rachel Bezner Kerr, Jasber Singh, Million Belay and Mvuselelo Ngcoya (2023). Nature-Based Solutions and Agroecology: Business as Usual or an Opportunity for Transformative Change? Environment: Science and Policy for Sustainable Development, 65:1, 15-22, <https://doi.org/10.1080/00139157.2023.2146944>