BFC

D1.4.1 SURVEY

How to incentive innovative green and circular economy from biodiversity management by farmers and SMEs

This project is supported by the Interreg IPA ADRION programme under the Interreg Funds (European Regional Development Fund and IPA III)

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Contents

1. Introduction

This report presents the results of a transnational research initiative conducted within the framework of the Biofarms (BFC) project. The research was carried out through the collaboration of nine partner organisations from seven countries—Italy, Croatia, Slovenia, Serbia, Bosnia and Herzegovina, Greece, and Albania—with the aim of mapping the current state of biodiversity preservation and/or enhancement through innovative methods of plant cultivation, collection, and processing. These methods were examined in relation to their applicability in the nutraceutical, cosmetic, and pharmaceutical sectors. The overarching goal of the research was to support the development of circular economy practices and sustainable agricultural models across the Adriatic and Western Balkan regions.

The research explored a wide range of factors impacting biodiversity and sustainable agricultural development, including relevant European, national, and local policies, legal and strategic frameworks, funding mechanisms, stakeholder involvement (particularly of farmers and SMEs), and certification schemes for processes and products. Particular attention was paid to circular economy principles—specifically, the utilization of by-products from plant production and processing, the management of waste and raw materials, and the reduction of environmental impact. The research acknowledged that biodiversity is an interconnected system, where changes in one component (such as insect populations) may have cascading effects on others (such as plant and soil diversity).

The methodology followed was based on secondary research. Instead of collecting new data through direct methods such as interviews or basic surveys, researchers gathered and analysed already existing information from reliable sources, including public databases, scientific publications, governmental and institutional websites, internal archives of the partner organisations, and reports from national and international bodies. Where necessary, researchers contacted relevant stakeholders for further clarification, and these communications were recorded in a dedicated internal file (BFC_CommunicationTrackStakeholders) to support transparency and future engagement.

Each national partner compiled their findings into a standardized template, ensuring consistency in structure and comparability of data across countries. These national reports are presented in the following chapters of this document, each following the same template — which is also included as Annex 2 at the end of the report for reference.

It is also worth noting that Annex 1 presents, for each country, funding programs related to the conservation and enhancement of biodiversity through agricultural production and the circular economy. These programs aim to support interested parties in identifying suitable financial tools.

This approach offers a comprehensive overview of each national context while maintaining alignment with the overarching goals and thematic priorities of the BFC project.Following the individual country chapters, readers will find a consolidated synthesis section, which offers a comparative analysis of the key findings. This section highlights common trends, contrasts in policy or practice, and cross-national challenges and opportunities. It serves as a crucial reference point for understanding the broader regional picture and for informing the design of the project's next phases—particularly the development of the Biofarms Toolkit (D.1.5.1), which aims to promote the adoption of innovative, ethical, and ecologically sustainable business practices in the agricultural sector.

Through this structured, collaborative, and context-sensitive approach, the research provided not only a detailed mapping of the current landscape, but also a strong foundation for future policy development, stakeholder engagement, and practical implementation of solutions that contribute to biodiversity preservation and sustainable rural development in the target regions.

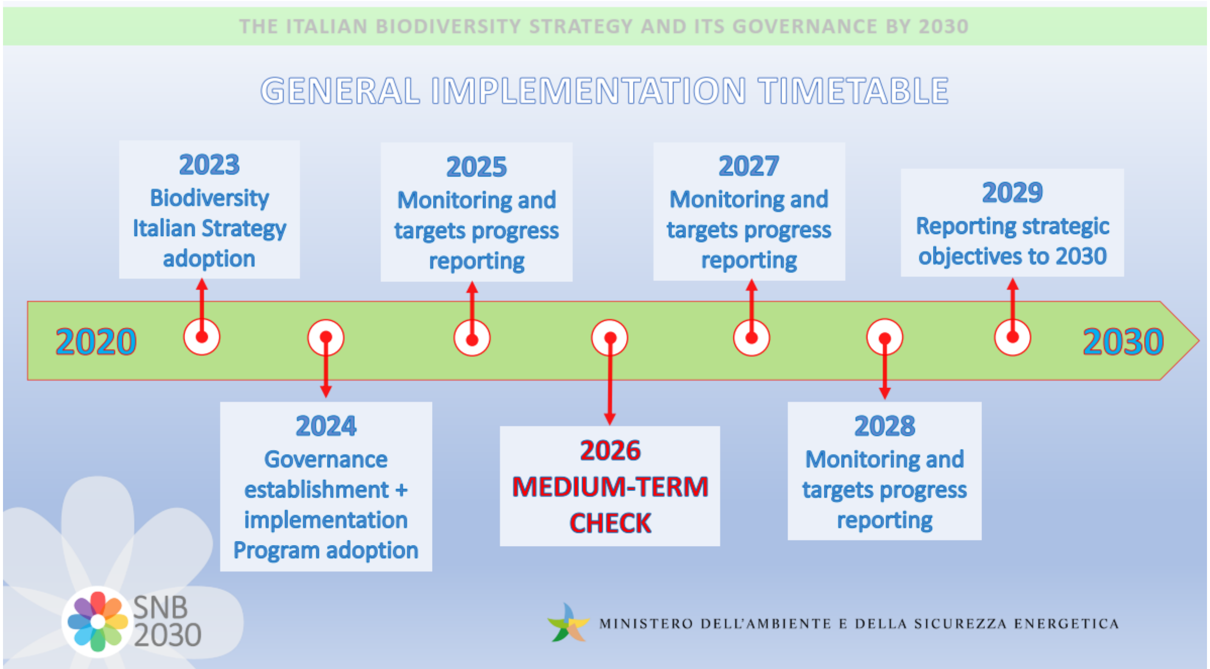
2. ITALY

Italy, with its diverse climatic zones, rich ecosystems, and centuries-old agricultural traditions, is one of the most biodiverse countries in Europe. This biodiversity plays a pivotal role in providing plant-based resources for both nutraceutical and pharmaceutical applications. Among Italy's main cultivated crops with high nutraceutical value are olive trees (*Olea europaea*), which are rich in polyphenols and oleic acid and have both nutritional and medicinal properties; grapes (*Vitis vinifera*), a source of resveratrol and anthocyanins used in anti-aging and cardiovascular health products; and citrus fruits (*Citrus spp.*), abundant in flavonoids and vitamin C, which are crucial for immune support and antioxidant functions. Additionally, Italy cultivates numerous medicinal and aromatic plant species such as lavender (*Lavandula angustifolia*), mint (*Mentha spp.*), rosemary (*Rosmarinus officinalis*), helichrysum (*Helichrysum italicum*), oregano (*Origanum vulgare*), sage (*Salvia officinalis*), and thyme (*Thymus vulgaris*).

Furthermore, Italy's wild flora is rich in untapped resources for pharmaceutical and nutraceutical applications, including elderberry (*Sambucus nigra*), St. John's Wort (*Hypericum perforatum*), mastic tree (*Pistacia lentiscus*), myrtle (*Myrtus communis*), nettle (*Urtica dioica*), and various high-altitude and coastal plant species that include *Artemisia absinthium* (wormwood) from alpine zones and *Crithmum maritimum* (samphire) and *Artemisia arborescens* (tree wormwood) from coastal regions, all of which offer unique bioactive compounds.

2.1. National Legal and Strategic Framework for the Conservation/Enhancement of Biodiversity through Agricultural Production

The Italian legal and strategic framework demonstrates a strong commitment to biodiversity conservation through sustainable agricultural practices and circular economy principles and is actively improving in the next future due to the adoption of the new National Strategy for Biodiversity by 2030. On August 3, 2023, Ministerial Decree No. 252 was signed, adopting the new National Biodiversity Strategy to 2030 and establishing its governance bodies. The National Biodiversity Strategy 2030 outlines two strategic objectives divided into eight areas of intervention (Protected Areas; Species, Habitats, and Ecosystems; Food and Agricultural Systems, Livestock; Forests; Urban Green Spaces; Inland Waters; Marine Areas; Soil). Additionally, it includes "Vectors," cross-cutting areas of action designed to facilitate, strengthen, and contribute to achieving the objectives. And on December 11, 2024, the Management Committee was established, and it adopted the internal operating regulations for the Governance Bodies.



Based on the actual legal framework it includes:

1. The National Laws on Biodiversity and Agriculture
    - Law 157/1992: Regulates the protection of Italy's wildlife and natural ecosystems, with provisions to conserve native species and habitats.
    - Legislative Decree 150/2012: Promotes integrated pest management (IPM) and sustainable farming practices, minimizing the environmental impact of agriculture.
    - National Law on Organic Agriculture (Legge 23/2022): Establishes a framework to promote organic and sustainable farming methods, encouraging the use of biodiversity-friendly practices.
2. The Alignment with EU Directives

- Habitat Directive (92/43/EEC) and Birds Directive (2009/147/EC): Protect natural habitats and wild flora and fauna.
- EU Biodiversity Strategy for 2030: Aims to restore biodiversity in agricultural landscapes by promoting agroecological practices and organic farming.
- Common Agricultural Policy (CAP): Provides subsidies and incentives for biodiversity-focused farming, including eco-schemes that reward circular economy practices.

The Strategic Framework includes:

1. National Biodiversity Strategy (NBS): Established under Law 394/1991 (Framework Law on Protected Areas), which sets the foundation for biodiversity protection in Italy, and further supported by the National Strategy for Biodiversity 2010-2020, developed in compliance with the Convention on Biological Diversity (CBD). The NBS promotes sustainable land use and biodiversity-friendly agricultural practices.
2. National Action Plan on Organic Agriculture (Piano Strategico Nazionale Biologico): Adopted in line with Law 23/2022 on Organic Agriculture, which outlines specific objectives to expand organic farming, recover traditional varieties, and enhance biodiversity through agricultural production. This strategy is aligned with the EU Green Deal and Farm to Fork Strategy, as well as the Regulation (EU) 2018/848 on organic production and labeling.
3. The "Farm to Fork" Strategy: Rooted in the European Green Deal (2019) and integrated into Italy's Strategic Plan for the Common Agricultural Policy (CAP) 2023-2027. The strategy enforces biodiversity-friendly farming practices, eco-schemes, and sustainable food systems. It promotes pesticide reduction, which aligns with Directive 2009/128/EC on the sustainable use of pesticides, transposed into Italian law under Legislative Decree 150/2012.

Focusing on Circular Economy Initiatives in Agriculture the present framework includes:

1) Circular Economy Strategy: Aligned with

a) Legislative Decree 116/2020, implementing the EU Circular Economy Package, which focuses on waste reduction and the reuse of resources, including agricultural by-products. This strategy also complies with Law 221/2015 (Green Economy Law), which encourages resource efficiency and circular approaches in agriculture.

2) Sustainable Use of Agro-Waste:

a) Legislative Decree 152/2006 (*Environmental Code*): Establishes principles for waste management, including the valorization of agricultural residues as secondary raw materials;

b) Legislative Decree 75/2010: Regulates the production and marketing of fertilizers, including compost and organic fertilizers derived from agricultural by-products;

c) Legislative Decree 116/2020: Implements the EU Circular Economy Package, promoting the reduction of agricultural waste and encouraging its reuse in bioenergy and bioproducts.

3) Biodiversity in Agricultural Systems:

a) Law 157/1992: Protects natural habitats and promotes biodiversity within agricultural landscapes, including integration of agroecological practices;

b) Legislative Decree 150/2012 that promotes Integrated Pest Management (IPM) to minimize the environmental impact of farming and supports biodiversity-friendly practices;

c) Law 221/2015 (*Green Economy Law*) that encourages agroecological systems such as polycultures and agroforestry, which enhance soil biodiversity and promote sustainable farming methods.

4) Conservation of Traditional Varieties:

a) Law 46/2007: supports the conservation and use of traditional and local plant varieties in agriculture, contributing to genetic diversity and resilience;

b) Ministerial Decree of 10 October 2019: establishes guidelines for safeguarding local plant varieties and traditional knowledge, fostering their inclusion in biodiversity-friendly farming;

c) EU Regulation 1305/2013 (*Rural Development Program*): that provides funding for the conservation of genetic resources in agriculture, implemented in Italy through regional development plans.

2.2. How is the contribution of farmers and SMEs to the conservation/enhancement of biodiversity through agricultural production and circular procedures foreseen?

The active participation of farmers and SMEs in biodiversity conservation and circular economy strategies is foreseen as a vital approach in achieving sustainable agricultural production in Italy. Different legislative and strategic tools are put into action to integrate biodiversity-enhancing practices and circular procedures into all stages of the agricultural production chain.

2.2.1. Participation in Planning

Farmers and SMEs are encouraged to contribute to the planning phase of biodiversity-enhancing strategies through:

1. Rural Development Programs (RDPs): Italy's regional governments organize consultations and workshops to incorporate stakeholder input into RDPs. Main agricultural and SMEs organizations in Italy participate in the design of biodiversity-friendly measures under the EU Common Agricultural Policy (CAP) under the EU Regulation 1305/2013 on Rural Development.
2. Agro-environmental Schemes: The main agricultural organizations are directly involved in co-developing biodiversity-friendly farming practices, such as organic agriculture, agroforestry, and crop rotation plans through the Legislative Decree 150/2012 (Integrated Pest Management) and Law 23/2022 (Organic Agriculture).
3. Stakeholder Engagement: Several farmers and SMEs associations and cooperatives actively organize forums and advisory boards to develop strategies for biodiversity conservation, such as the protection of traditional plant varieties and the promotion of sustainable practices.

2.2.2. Participation in Implementation

Farmers and SMEs actively encouraged to implement biodiversity and circular economy measures through:

1. Sustainable Farming Practices that includes agro-ecological techniques, polycultures, integrated pest management, and the use of organic fertilizers derived from agricultural waste normed by the Legislative Decree 75/2010 (Regulation on Fertilizers) and Legislative Decree 116/2020 (Circular Economy Package).
2. Promoting the cultivation of traditional plant varieties and wild species with high ecological value (Biodiversity-Friendly Crop Choices), ensuring genetic diversity and resilience to climate change (Law 46/2007 - Conservation of Local Varieties).
3. Implementing circular procedures (Circular Economy Practices), such as composting agricultural residues, using pruning waste for bioenergy production, and reducing synthetic input reliance (Legislative Decree 152/2006 and Law 221/2015.
4. Direct Incentives and Funding for farmers that implement biodiversity and circular economy practices, such as those provided by CAP eco-schemes and national green initiatives.

2.2.3. Participation in Evaluation-Monitoring

Farmers and SMEs contribute to the assessment of biodiversity and circular practices through:

1. Monitoring Biodiversity Outcomes: through collaboration with regional agencies and universities to monitor the impact of their practices on biodiversity. This includes tracking changes in soil health, species richness, and habitat preservation. (Law 394/1991- National Biodiversity Strategy).
2. Feedback for Adaptive Strategies: by participating in periodic evaluations of rural development programs and agro-environmental measures, farmers and SMES provide practical insights for the adjustment of policies and practices (EU Regulation 1306/2013 on the financing and monitoring of CAP).

2.3. Public-Private Sector Collaboration in Italy

In Italy, public-private partnerships (PPP) play a crucial role in economic development and innovation, particularly in sectors like agriculture, production and commerce.

This collaboration is essential for addressing the growing need for sustainable technologies, digitalization, and scientific research. The specific Italian programme called (PNRR) allocates significant resources to ecological transition and innovation, laying the foundation for increased private sector involvement in developing more efficient production processes and infrastructures (Governo Italiano, 2021a).

Currently, Italy's regulatory framework has evolved to support PPPs, with the new Codice dei Contratti Pubblici (D.Lgs. 36/2023) and D.Lgs. 209/2024 aimed at simplifying procedures and reducing implementation times. However, significant barriers remain. Bureaucracy continues to be a major obstacle, with long wait times for accessing public funds and complex administrative processes discouraging private investors. Additionally, fragmented regulations and frequent legislative changes create uncertainty, hindering long-term planning (Governo Italiano, 2021b).

Despite these challenges, there are many opportunities for development. Strengthening PPPs can accelerate the adoption of innovative technologies. The PNRR also includes incentives for creating more integrated and resilient supply chains, with a focus on a circular economy and optimized natural resource management to increase Italy's competitiveness in international markets.

To realize these opportunities, it is crucial to streamline procedures, ensure regulatory stability, and strengthen dialogue between the public and private sectors. This way, Italy can transform current challenges into a driving force for sustainable and innovative growth.

2.4. Certification Programs for Products from Biodiversity Conservation/Enhancement Programs through Agricultural Production and Circular Economy

Italy ranks third in Europe with 2.5 million hectares but holds first place in terms of the percentage of organic UAA, reaching nearly 20%, about twice the European average in 2024. Italy remains one of the most organic in Europe, also maintaining the lead in the number of organic producers, with over 84,191 operators (17% of the total active in Europe) and nearly 25,000 processors, accounting for 26.4% of the European total. In Italy, certification programs for products derived from biodiversity conservation and circular economy practices, especially for aromatic and medicinal plants, have significantly influenced production and farmer participation. Certifications such as EU Organic (Reg. 2018/848), Biodiversity Friend, and PDO/PGI labels promote sustainable farming, enhancing market value and consumer trust. These programs have led to a rise in organic cultivation, reducing synthetic inputs and preserving native plant varieties. Biodiversity Friend Certification, promoted by the World Biodiversity Association, encourages agroecological practices, supporting small farms in sustainable transitions. PDO/PGI labels ensure traceability and territorial identity, increasing competitiveness in niche markets. Farmer and SME participation has grown due to financial incentives, eco-scheme subsidies (CAP), and demand for certified botanicals in cosmetics, pharmaceuticals, and herbal industries. However, certification costs and bureaucratic complexity remain barriers for small producers.

3. CROATIA

According to some estimations on the territory of Republic of Croatia some 170 plant species are planted or collected for medicinal and aromatic purposes. Natural conditions, i.e. geographical, climatological and pedological conditions are suitable for the cultivation as well as for collection from the free nature in spontaneous phytocenosis.

Some 1549 producers, whether they are farmers or cooperatives as well as agricultural companies, are registered on the Official list of medicinal and aromatic plants producers. The cultivated area of certain aromatic and medicinal plant species vary from minimally 0.03 ha (small farmers) to maximally 104 ha (agricultural cooperatives and companies).

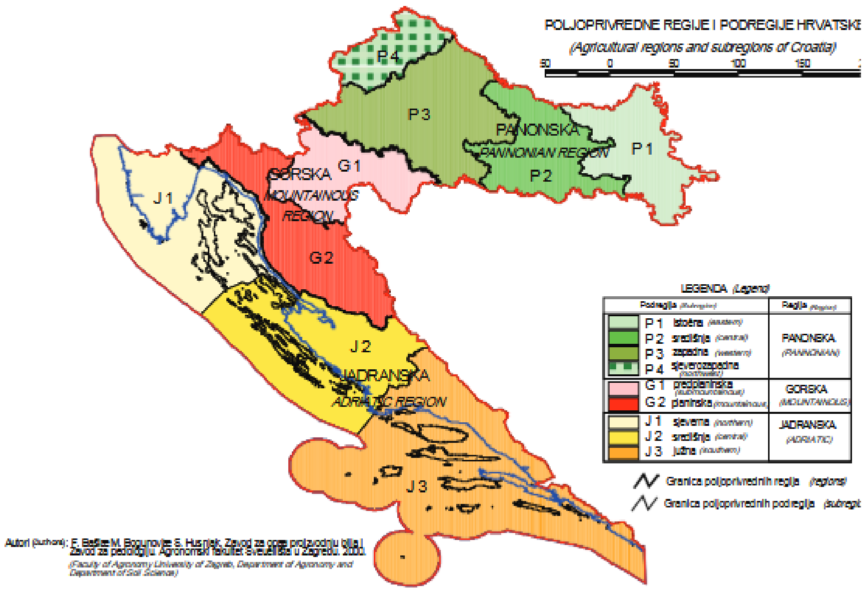


Figure 1. Map of Croatian agricultural regions

It is important to point out that the territory of Croatia is divided into three main agricultural regions [1, 2] (Figure 1):

1. Pannonian region with four subregions; P1 – Eastern Pannonian region, P2 – Central Pannonian region, P3 – Western Pannonian region, P4 – North-West Pannonian region.
2. Mountainous region with two subregions; G1 – Sub mountainous region and G2 - Mountainous region.

3. Adriatic region with three subregions; J1 – Northern Adriatic region, J2 – Central Adriatic region, J3 - Southern Adriatic region.

Such agricultural regionalization of the Croatian territory completely corresponds with geographical, climatical and pedological conditions of different terrains (Figure 2).

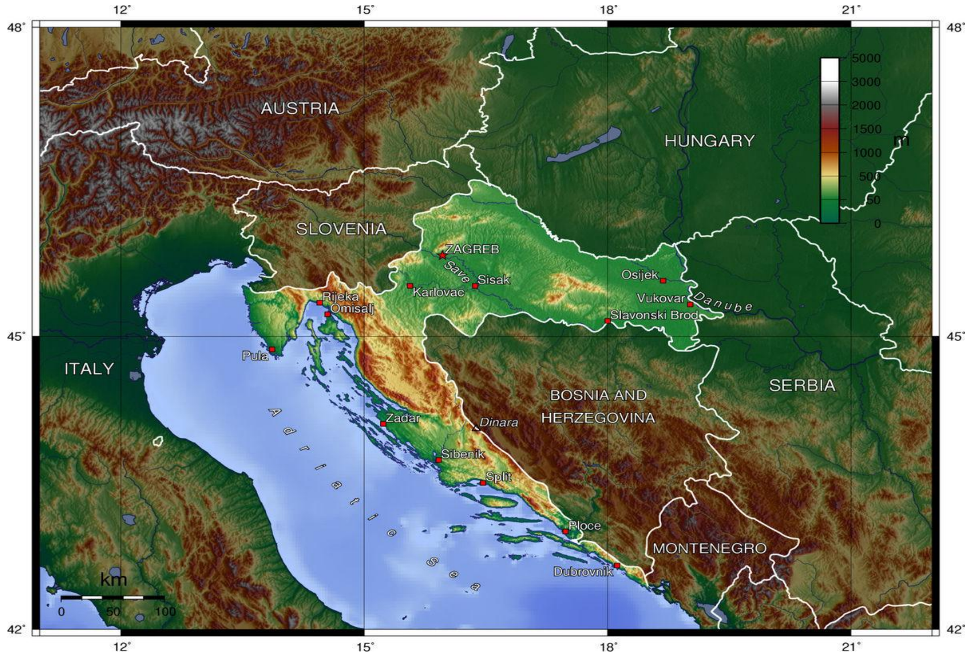


Figure 2. Physical Map of Croatia

The List of allowed plant species for collection in every part of the Mountainous region is prepared every year according to recommendations and requests of the Commission for biodiversity protection of Croatian Forests, the State-owned company responsible for management of forests. It is important to point out that collecting of any plant species is strictly forbidden on the territory of National Parks.

The Croatian National Parks are:

1. Plitivička jezera, placed in the Mountainous region (sub region – G2)
2. Risnjak, placed in the Mountainous region (sub region – G2)
3. Northern Velebit, also placed in the Mountainous region (sub region – G2)
4. Brijuni, placed in the Northern Adriatic region (sub region – J1)
5. Kornati, placed in the Central Adriatic region (sub region – J2)
6. Krka, placed in the Central Adriatic region (sub region – J2)
7. Paklenica, also placed in the Central Adriatic region (sub region – J2)
8. Mljet, placed in the Southern Adriatic region (sub region – J3).

The National Parks represents the highest category of total environmental and natural protection. That means, the any human activity which implies plant collecting, hunting, and even walking outside the marked roads is strictly forbidden. Only the scientists, precisely naturalists, are excepted from this ban, but they must have a particular licence for any kind of research activities they will realize which includes the period of their being in National Park. On the other hand, there are territories of lower category of natural protection. It's called Nature Parks. Some human activities, including restricted agricultural production, i.e. pasturing, and other are allowed in these areas according to regulations and limitations of Natura 2000 ecological network in the Republic of Croatia.[1] On the area outside the Nature Parks there is no limitation on production and/or collecting the aromatic and medicinal plants except those plant species which are registered on the Red List of endangered species in Croatia[2] including the endemic, rare and protected plant species in Croatia[3] [3, 4].

3.1 National Legal and Strategic Framework for the Conservation/Enhancement of Biodiversity through Agricultural Production

It is well known that Natura 2000 is the European Union's ecological network consisting of natural habitat types and habitats of wild species of interest to the European Union. The Regulation on the Ecological Network and the Competences of Public Institutions for the Management of Ecological Network Areas (Official Gazette of the Republic of Croatia, further text – OG, 80/2019[4], 119/2023[5]) establishes the Natura 2000 as ecological network of the Republic of Croatia, as well as the competences of public institutions managing protected areas and ecological network areas for the management and adoption of ecological network management plans. The ecological network of the Republic of Croatia covers 25,956 km^2 and covers 36.8 % of the land territory and 9.3 % of the sea under national jurisdiction (territorial sea and exclusive economic zone of the Republic of Croatia).

The ecological network consists of:

a) Conservation areas important for birds
b) Conservation areas important for species and habitat types

[1] Link: https://mzozt.gov.hr/o-ministarstvu-1065/djelokrug/uprava-za-zastitu-prirode-1180/ekoloska-mreza-natura-2000/ekoloska-mreza-natura-2000-u-republici-hrvatskoj/1211
[2] Link: https://crvenipopis.haop.hr/ [in Croatian]
[3] Link: https://www.expatincroatia.com/protected-plant-species/
[4] Link: https://narodne-novine.nn.hr/clanci/sluzbeni/2019_08_80_1669.html
[5] Link: https://narodne-novine.nn.hr/clanci/sluzbeni/2023_10_119_1665.html

c) Potential conservation areas important for species and habitat types
d) Special areas of conservation important for species and habitat types.

However, it is important to point out that the Nature Protection Act[6] is the main law regulating nature protection (OG 80/2013) and all the strategies and strategic frameworks must follow the regulations defined by the Nature Protection Act. Therefore, pursuant to Article 81 of the Constitution of the Republic of Croatia and Article 11, paragraph 2 of the Nature Protection Act, the Croatian Parliament, at its session on July 7, 2017, has adopted The Nature Protection Strategy and Action Plan of the Republic of Croatia for the Period 2017-2025[7].

Five strategic goals are defined in this document:

1. Increase the effectiveness of key nature protection mechanisms
2. Reduce the direct pressures on nature and promote sustainable use of natural resources
3. Strengthen the capacities of nature protection system
4. Increase the knowledge and availability of data on nature
5. Raise the level of knowledge, understanding, and support for nature protection among the general public.

One of the most efficient projects raised as a result of the strategic goals is BIOPORTAL[8] which is in fact abbreviation for web portal of information system for nature protection.

However, organic agriculture is the most sustainable agricultural production in protected areas, due to the high level of circularity in it. Namely, in organic agriculture the waste production is minimized. The most of wastes are composted and reused for improving the soil fertility and turnover of organic matter in soil through the humification process. Nevertheless, organic agriculture has its own very strict EU and national legislation. According to the Regulations on organic agricultural production (OG 19/16), the collection of wild plants can be part of organic production. Collecting wild medicinal and aromatic plants, other wild plants and forest fruits is defined as procedure in which wild plants and their parts are collected for processing, trade and other traffic. Wild plants are those that grow in nature without direct human influence, which is defined by the Nature Protection Act. The collection of wild medicinal and aromatic herbs,

[6] Link: https://narodne-novine.nn.hr/clanci/sluzbeni/2013_06_80_1658.html
[7] Link: https://www.cbd.int/doc/world/hr/hr-nbsap-v3-en.pdf
[8] Link: https://bioportal.hr/en/

other wild herbs and forest fruits is regulated by the Regulations on the collection of native wild species (OG 114/17), the Forest Act (OG 68/18) and the Regulations on Forest Management (OG 97/2018). Moreover, wild medicinal and aromatic herbs, other wild herbs and forest fruits, can also be collected by agricultural producers or local residents for their own needs if they fulfil the legal conditions prescribed in regulation acts mentioned above.

According to the Nature Protection Act (OG 80/13, 15/18, 14/19, 127/19), wild plants can be collected, subject to the following protection measures:

1. A maximum of two-thirds of the plant population can be collected at one site.
2. In case of collecting only certain "above-ground" parts of plants, only the cutting technique will be used, without damaging other parts of the plants.
3. The immediate habitat must not be damaged during collecting of plants.
4. Pits created by extracting underground parts of wild plants must be backfilled with excavated soil.

The producer of medicinal and aromatic plants must first be registered in the Register of Farmers. Registration in the Register of Farmers is carried out by the offices of the Agency for Payments in Agriculture, Fisheries and Rural Development. Registration in the Register of Farmers is a prerequisite for registration in ARKOD (a system of records of agricultural land use in digital graphic form) and AGRONET (an internet system intended to assist agricultural holdings and other users in exercising their rights to support in agriculture) managed by the Agency for Payments in Agriculture, Fisheries and Rural Development. After registration in the Register of Farmers, the producer of medicinal and aromatic plants must submit an application, with a report from the organic production control body on the first expert control, for registration in the Register of Entities in Organic Production.

Organic production on an agricultural holding is subject to expert control in all parts of production according to the Ordinance on Organic Agricultural Production (Official Gazette, No. 19/16). The production of processed organic products is carried out separately in time or space from products that are not from organic production. An organic product must be properly labelled so that it cannot be mixed or replaced with another product from conventional production. Packaging, handling and storage of organic products are carried out separately in time and space from other products. The producer of medicinal and aromatic herbs is obliged to keep production records and bookkeeping based on entries and/or certificates on the basis of which the control body can verify the origin, type and quantity of all purchased and used materials and their use in each production unit [5, 6].

3.2. How is the contribution of farmers and SMEs to the conservation/enhancement of biodiversity through agricultural production and circular procedures foreseen?

Generally, the contribution of farmers and SMEs strictly correspond to their particular and common interests. So, that is socio-economical rather than ecological issue. Naturally, if the farmers or SMEs have particular interest in bio- or eco- or organic production, whatever, their interest to the conservation and enhancement of biodiversity is, in most of the cases, pretty high [7, 8, 9].

However, the role of different interest groups and societies is very important for conservation and enhancement biodiversity. Namely, believe it or not, but, a lot of warnings about decreasing of fauna biodiversity comes from the hunting clubs. On the other hand, lot of warnings about decreasing of flora biodiversity comes from the hiking clubs, and the same is with fishing clubs in case of lakes, rivers and brooks pollution. The truth is that hunters and mountaineers always report every accident or illegal activity within the habitat(s) which might cause the negative impact on biodiversity, because of their interest.

3.2.1. Participation in Planning

Farmers and SMEs contribute to the conservation/enhancement of biodiversity through agricultural production and circular processes envisaged in the phase Participation in planning and as part of the working groups that participated in the process of creating of the strategic national document that serves as the basis for the creation and announcement of calls for grants in the field of agriculture that contribute/will contribute to the objective in question.

That strategic document is the "Strategic Plan of the Common Agricultural Policy of the Republic of Croatia 2023 - 2027".

In addition, before the announcement, opening and implementation of the tender for farmers and SMEs, the competent authority (Ministry of Agriculture) conducts a process of “e-Consultation” with the interested public for a certain period. Through this process, everyone, meaning both farmers and SMEs, can provide their comments and suggestions on the draft for calls for grants.

The same "e-Consultation" process was carried out for the document "Strategic Plan of the Common Agricultural Policy of the Republic of Croatia 2023 - 2027" in which farmers and SMEs could actively participate.

3.2.2 Participation in Implementation

Farmers and SMEs also contribute to the conservation/enhancement of biodiversity through agricultural production and circular processes envisaged in the phase Participation in implementation, as applicants in open calls for grants who implement project activities that contribute to the conservation/enhancement of biodiversity through agricultural production and circular procedures. In addition to the above-mentioned Calls at the national level, at the regional (Counties) and local level (municipalities), Calls for SMEs and farmers are announced that encourage conservation/enhancement of biodiversity through agricultural production and circular procedures. The funds are provided from the county and municipal budgets. It is also important for Croatia to mention Local Action Groups (LAGs). There are 56 LAGs in Croatia and 23 FLAGs which are stated at the Croatian islands. LAGs and FLAGs are organized as NGO consisting of representatives of the public, economic and civil sectors of a certain rural area whose task is to create local development strategies, guide and monitor their implementation, and giving grants through Public Calls. LAGs adopted their own strategic documents, Local Development Strategies for the period 2023-2027 which were adopted according to the "bottom-up" principle in accordance with the LEADER principles. The LEADER approach enabled the most realistic and accurate determination of the real problems and needs of the area, and in accordance with these inputs and needs, tenders for farmers and SMEs will be announced which are financed from "Strategic Plan of the Common Agricultural Policy of the Republic of Croatia 2023 - 2027".

3.2.3 Participation in Evaluation-Monitoring

Finally, farmers and SMEs contribute to the preservation/improvement of biodiversity through agricultural production and circular processes envisaged in the phase Participation, in evaluation-monitoring phase through Working group for Strategic Plan of the Common Agricultural Policy (CAP) of the Republic of Croatia 2023-2027. Working Group includes stakeholders from various spheres of the public, (like Chamber of Agriculture, Chamber of Commerce), scientific and educational institutions, associations and civil society organizations, other state and public administration bodies, agencies etc. from the field of agriculture and rural

development, all with the aim of collecting high-quality and implementable proposals for amendments and providing opinions on the proposed amendments to the "Strategic Plan of the Common Agricultural Policy of the Republic of Croatia 2023-2027" with the aim of improving implementation. Preparation of the 3rd amendment is underway in Croatia. These changes are being prepared by the Ministry of Agriculture, Forestry and Fisheries. Participation in these thematic working groups is voluntary.
Also, on a national level works National Network of the Common Agricultural Policy, which acts as a platform for networking and sharing information on the Strategic Plan of the Common Agricultural Policy 2023-2027. Membership in the network is free and non-binding, and allows members to cooperate, support and network. Main goals of the network are: increasing the participation of all relevant stakeholders in the implementation and monitoring of the CAP Strategic Plans, contributing to improving the quality of the implementation of the CAP Strategic Plans, contributing to informing the public and potential beneficiaries about the CAP and funding opportunities, encouraging innovation in agriculture and rural development and supporting direct mutual learning and the involvement of all stakeholders in the process of knowledge exchange etc.

3.3. Public-Private Sector Collaboration in Croatia

Public-private sector collaboration is good in some aspects of agricultural production, for instance in organic agricultural production, beekeeping and production of medicinal and aromatic plants. The cooperation in these areas is really good. On the other hand, there are some examples of not so good cooperation between the stakeholders in public and private sector.
One of the negative examples is cooperation between biotech SMEs and public sector. For instance, there are numerous endangered plant species in Croatia and some of them are on the Red List of rare and endangered species. On the other hand, there are some SMEs in biotech which are using the plant tissue culture as a micro propagation method [10, 11]. It is important to point out that using of tissue culture as a micro propagation method is usual in cloning and keeping the wild gene resources of cultural plants. It also used for producing the virus-free propagation material [12], but very rarely for micro propagation or In vitro propagation of rare and endangered plant species [13]. However, In vitro propagation is one of the possible conservation methods for conservation of biodiversity [14, 15].
There are administrative barriers for such obstacle. Namely, there is a ban for collecting the endemic, rare and particularly endangered plant species. Nevertheless, the collecting of these species is allowed for scientific research, but the number of allowed samples is strictly restricted. Besides, it is not easy to get the licence of the authority for collecting of endangered plant species even for research purposes.

This situation must be improved only by improving the communication between all the stakeholders in public and private sector and by further development of protocols for In vitro propagation for each of rare, endemic and endangered plant species for their conservation in their habitats.

3.4 Certification Programs for Products from Biodiversity Conservation/Enhancement Programs through Agricultural Production and Circular Economy

In Croatia every producer of aromatic and medicinal plants must be certified according to following procedure [5, 6]:

Step 1: Application for certification of producer whether is farm or SME

Step 2: First inspection of control body

Step 3: Registering of producer in Register of aromatic-medicinal plants producers.

Step 4: Control of production methods by the certified control body and products by the authorized laboratories

Step 5: Final certificate, valid for production and product(s) lot(s) produced within one vegetation year.

Without certificate it is not possible to achieve the traceability of products of aromatic-medical plants.

Besides, every activity of producing and collecting the aromatic-medicinal without valid certificate is treated as violation of the law that automatically subjects the offender to legal liability.

On the other hand, certified production of aromatic-medical plants and products is basic condition for realizing the subsidies from Fund for agriculture, fishery and rural development. Therefore, certification is even the financial interest of any producer of aromatic-medicinal plants and products.

4. SLOVENIA

Slovenia boasts exceptional biodiversity, encompassing both cultivated and wild plants with nutraceutical and pharmaceutical properties. Due to its diverse climate and geography, the country supports a rich variety of plant species traditionally used for food and medicine. Research has identified 219 plant taxa from 62 families in the Slovenian diet, with Asteraceae (28 taxa), Rosaceae (22), and Lamiaceae (18) being the most common. Well-known examples include dandelion (*Taraxacum spp.*), nettle (*Urtica dioica*), and elderberry (*Sambucus nigra*), often prepared in salads, soups, herbal teas, and fermented beverages. These plants are valued for their nutritional and medicinal benefits. [1]

Many wild plants in Slovenia also have a long history of medicinal use. In regions such as Kras and Gorjanci, local communities rely on traditional knowledge for herbal remedies. Studies have recorded the use of 47 wild plants, 12 species that grow wild but are also cultivated, and 35 cultivated plants for treating ailments like digestive and respiratory issues. [2]

Despite this rich heritage, Slovenia faces challenges threatening its plant biodiversity. Invasive species, climate change, habitat loss, and declining traditional farming practices put native flora at risk. Conservation efforts and sustainable cultivation are essential to preserving biodiversity and ensuring the future of nutraceutical and pharmaceutical applications in the country. [3]

4.1. National Legal and Strategic Framework for the Conservation/Enhancement of Biodiversity through Agricultural Production

Slovenia has established a comprehensive legal and strategic framework to conserve and enhance biodiversity through agricultural production, with a particular focus on integrating circular economy principles. This approach aims to harmonize economic development with environmental sustainability, ensuring the preservation of natural resources for future generations.

- Slovenian Development Strategy 2030

At the core of Slovenia's policy framework is the Slovenian Development Strategy 2030, which sets the primary objective of providing a high-quality life for all citizens. This strategy emphasizes sustainable development by balancing economic, social, and environmental dimensions. It underscores the importance of transitioning to a low-carbon circular economy to enhance economic competitiveness while preserving natural resources and biodiversity. [4]

- National Environmental Action Programme 2020–2030

The National Environmental Action Programme (NEAP) 2020–2030 serves as Slovenia's strategic document for implementing global biodiversity conservation goals. Developed in accordance with the Convention on Biological Diversity, the NEAP integrates biodiversity conservation into sectoral and cross-sectoral plans, including agriculture. It outlines measures to protect ecosystems, species, and genetic diversity, promoting sustainable use of natural resources. [5]

- Roadmap Towards the Circular Economy in Slovenia

Recognizing the necessity of shifting from a linear to a circular economic model, Slovenia developed the "Roadmap Towards the Circular Economy" in 2018. This document identifies priority areas, including the food system and forest-based value chains, where circular practices can be implemented. In agriculture, the roadmap advocates sustainable practices such as reducing waste, promoting organic farming, and enhancing resource efficiency to conserve biodiversity. [6]

- Common Agricultural Policy (CAP) Strategic Plan 2023–2027

Aligned with the European Union's Common Agricultural Policy, Slovenia's CAP Strategic Plan for 2023–2027 focuses on protecting and sustainably managing natural resources, mitigating and adapting to climate change, and preserving biodiversity. The plan encourages farmers to adopt environmentally friendly practices, supports organic farming, and promotes the maintenance of landscape features that enhance biodiversity. [7]

- Nature Conservation Act

The Nature Conservation Act establishes measures for the conservation of biodiversity, including the protection of valuable natural features and the sustainable use of natural resources. It provides the legal basis for designating protected areas and implementing conservation measures within agricultural landscapes, ensuring that farming practices contribute to biodiversity enhancement. [4]

- Integration of Circular Economy Principles

Slovenia's commitment to the circular economy is evident in its strategic documents and policies. The Circular Economy Country Profile 2024 highlights reforms aimed at accelerating the transition to a circular economy for resource efficiency. These include establishing a strategic and legal framework to improve extended producer responsibility and promote the integration of recycled materials into new products. In agriculture, this translates to practices such as nutrient recycling, composting, and the use of renewable energy sources, all of which contribute to biodiversity conservation. [8]

- Challenges and Future Directions

Despite the robust framework, Slovenia faces challenges in fully integrating circular economy principles into agricultural practices. These include the need for increased awareness among stakeholders, investment in sustainable technologies, and the development of markets for circular products. Future efforts will focus on strengthening the implementation of existing policies, fostering innovation, and enhancing collaboration among governmental agencies, farmers, and other stakeholders to achieve the dual goals of biodiversity conservation and sustainable agricultural development.

In conclusion, Slovenia's legal and strategic framework demonstrates a strong commitment to conserving and enhancing biodiversity through agricultural production, with a clear emphasis on circular economy principles. By continuing to implement and build upon these strategies, Slovenia aims to achieve sustainable development that harmonizes economic growth with environmental stewardship.

4.2. How is the contribution of farmers and SMEs to the conservation/enhancement of biodiversity through agricultural production and circular procedures foreseen?

In Slovenia, the active involvement of farmers and small and medium-sized enterprises (SMEs) is pivotal in conserving and enhancing biodiversity through sustainable agricultural practices and the adoption of circular economy principles. Their contributions are structured across three key areas: participation in planning, implementation, and evaluation-monitoring.

4.2.1. Participation in Planning

Farmers and SMEs in Slovenia are integral to the planning processes that aim to integrate biodiversity conservation with agricultural production. Their participation is facilitated through several mechanisms:

- Policy Development Involvement: Agricultural stakeholders, including farmer associations and SME representatives, are engaged in the formulation of national strategies and action plans. For instance, the development of the "Roadmap Towards the Circular

Economy in Slovenia" involved consultations with various agricultural entities to ensure that the proposed measures align with the practical realities of farming and agri-business operations. [8]

- Collaborative Platforms: Initiatives such as the LIFE IP CARE4CLIMATE project provide platforms for stakeholders to contribute to the planning of sustainable agricultural practices. This project supports the implementation of Slovenia's operational plan for greenhouse gases and involves farmers and SMEs in planning processes to promote sustainable land use and agricultural practices that enhance biodiversity. [9]

4.2.2. Participation in Implementation

The implementation of biodiversity-enhancing and circular agricultural practices by farmers and SMEs in Slovenia is supported through various programs and initiatives:

- Agri-Environmental Measures (AEMs): Under the Common Agricultural Policy (CAP), Slovenia offers AEMs that incentivize farmers to adopt practices beneficial to biodiversity, such as maintaining small woody landscape features and practicing organic farming. These measures encourage the implementation of sustainable farming techniques that contribute to biodiversity conservation. [10]
- Circular Economy Initiatives: The Slovenian government promotes the adoption of circular economy practices among SMEs in the agricultural sector. This includes support for the development of sustainable products and processes, waste reduction, and resource efficiency, all of which contribute to the enhancement of biodiversity. [8]

4.2.3. Participation in Evaluation-Monitoring

Farmers and SMEs are also involved in the evaluation and monitoring of biodiversity conservation efforts within agricultural production:

- Monitoring Programs: Through participation in national and EU-funded projects, agricultural stakeholders contribute to the monitoring of biodiversity indicators on farmland. For example, the LIFE IP CARE4CLIMATE project includes components for monitoring the effectiveness of implemented measures, with input from farmers and SMEs to assess the impact of sustainable practices on biodiversity. [9]
- Feedback Mechanisms: Regular feedback is collected from farmers and SMEs regarding the effectiveness of biodiversity conservation

measures. This information is used to adjust and improve policies and practices, ensuring that they are practical and effective in achieving biodiversity goals.

In conclusion, Slovenia actively involves farmers and SMEs in the planning, implementation, and evaluation of strategies aimed at conserving and enhancing biodiversity through agricultural production and circular economy procedures. This collaborative approach ensures that policies are grounded in practical experience and that sustainable practices are effectively integrated into the agricultural sector.

4.3. Public-Private Sector Collaboration in Slovenia

In Slovenia, collaboration between the public and private sectors is crucial for economic development and improving public services. The current situation shows positive steps but also challenges that hinder more effective partnerships.

- Current Situation

In recent years, Slovenia has established several successful examples of public-private collaboration, particularly in infrastructure, healthcare, and digitalization. Projects such as public-private partnerships (PPPs) in construction (e.g., highways, hospitals) have demonstrated that such an approach can be successful. The government has also encouraged collaboration in research and development, where private companies work with public research institutions.

At the local level, municipalities are increasingly open to collaborating with private companies, especially in projects related to energy efficiency, sustainable development, and tourism. Examples of successful collaboration include the renovation of public spaces, the development of smart cities, and the promotion of local tourist destinations. [4]

- Barriers

Despite progress, there are several barriers that limit the effectiveness of collaboration. One of the main issues is bureaucratic complexity and lengthy permitting processes, which deter private companies from engaging in PPPs. The lack of clear legislation and an unstable political framework also contribute to uncertainty.

Another significant barrier is the lack of trust between the two sectors. The private sector often points to inefficient project management by the public sector, while the public sector sometimes views private companies as exploiters of public resources. Additionally, weak coordination between different ministries and agencies complicates the implementation of complex projects.

- Opportunities for Further Development

Slovenia has numerous opportunities to strengthen public-private collaboration. One key area is digital transformation, where private companies could contribute their expertise and innovations to improve digital services in public administration. There is also significant potential in green energy and sustainable development, where PPPs could enable a faster transition to renewable energy sources.

Establishing a more transparent and stable legal framework could encourage greater private investment in public projects. Furthermore, the exchange of expertise and training between the two sectors could improve the quality and efficiency of collaboration. [4, 6]

- Conclusion

Public-private collaboration in Slovenia has great potential, but realizing it fully requires systemic changes. Reducing bureaucracy, building trust, and developing a clearer strategy for collaboration could open the door to new opportunities for economic and social development.

4.4. Certification Programs for Products from Biodiversity Conservation/Enhancement Programs through Agricultural Production and Circular Economy

In Slovenia, certification programs aimed at biodiversity conservation and sustainable agricultural practices have significantly influenced the cultivation of medicinal and aromatic plants (MAPs), benefiting both farmers and small and medium-sized enterprises (SMEs). The Institute of Hop Research and Brewing in Žalec, established in 1976, has been pivotal in promoting the production, processing, and application of MAPs. Their Medicinal and Aromatic Plants program includes a garden featuring approximately 250 different species, adhering to organic guidelines and producing organic seeds. [11]

To ensure the quality and sustainability of agricultural products, including MAPs, Slovenia has appointed three organizations for the control and certification of organic agricultural products: the Institute of Inspection and Certification in Agriculture and Silviculture (KON-CERT), the Institute for the Control and Certification of the University of Maribor, and Bureau Veritas d.o.o. These bodies oversee compliance with organic standards, providing farmers and SMEs with access to markets that demand certified organic products. [12]

The Slovenian Plant Gene Bank, established in 1996 by the Ministry of Agriculture, Forestry, and Food, focuses on maintaining, evaluating, regenerating, and preserving autochthonous species, ecotypes, populations, and landraces of agricultural, medicinal, and aromatic plants. This initiative supports biodiversity conservation and offers farmers access to a diverse range of plant materials for cultivation. [13]

These certification and conservation efforts have encouraged farmers and SMEs to engage in the cultivation of MAPs, leading to diversified agricultural production and the development of value-added products. By adhering to certified organic and sustainable practices, producers can meet market demands, enhance product quality, and contribute to the preservation of Slovenia's rich biodiversity.

5. SERBIA

Serbia is home to rich biodiversity, with diverse ecosystems and a high concentration of medicinal and aromatic plants (MAPs), both cultivated and wild-harvested. Key species include Gentiana lutea, Arnica montana, Sideritis scardica, Helichrysum italicum, and Thymus serpyllum, valued for their bioactive properties (ResearchGate). These plants are traditionally used in herbal medicine and are increasingly in demand in nutraceutical and pharmaceutical industries for their antioxidant and anti-inflammatory effects (PMC).

Central Serbia has a strong fruit-growing sector, with plums dominating both cultivation and processing (Sciendo). Serbia is a leading plum producer in Europe, with a significant portion processed into juices, jams, dried fruits, and semi-products (ResearchGate). The by-products of fruit processing, such as pits, peels, and pulp, hold great potential for nutraceuticals, cosmetics, and bio-based industries, supporting circular economy initiatives and sustainable biorefinery models.

Sustainable harvesting and controlled cultivation of MAPs are key to Serbia's bioeconomy, particularly in central, southern, and southeastern regions. The agri-food and herbal industries prioritize innovation, standardization, and value-added processing, ensuring compliance with Good Agricultural and Collection Practices (GACP) and organic certification schemes (Lekovite Sirovine). However, challenges such as overharvesting, habitat degradation, and climate change impact sustainability (PMC).

Serbia participates in EU-funded programs, including Interreg (Adrion, Danube), Horizon Europe, and Erasmus+, to strengthen conservation efforts, genetic resource management, and circular economy models. Integrating biodiversity preservation with circular economy principles will enhance the sustainability and competitiveness of Serbia's MAP-based and fruit-processing industries, maximizing the potential of by-products in high-value applications.

5.1. National Legal and Strategic Framework for the Conservation/Enhancement of Biodiversity through Agricultural Production

Serbia's biodiversity conservation and enhancement efforts are framed within national legislation and strategic policies aligned with EU directives. The primary legal framework includes the Law on Nature Protection (Official

Gazette RS, No. 36/2009, 88/2010, 91/2010, 14/2016, 95/2018, 71/2021), which regulates the sustainable use of natural resources, including plant biodiversity. Additionally, the Law on Environmental Protection (Official Gazette RS, No. 135/2004, 36/2009, 72/2009, 43/2011, 14/2016, 76/2018, 95/2018, 92/2019, 98/2020, 95/2021) provides the overarching legislative basis for biodiversity-related measures.

The National Biodiversity Strategy and Action Plan (NBSAP) 2011–2020, developed in accordance with the Convention on Biological Diversity (CBD), set critical objectives for conservation, including the promotion of sustainable agriculture and the protection of genetic resources (CBD Official Site). A revised strategy extending targets to 2030 is under development, with a stronger emphasis on climate adaptation and ecosystem services. Serbia is also advancing its commitment to circular economy principles through its Circular Economy Development Strategy (2022–2030), integrating biodiversity conservation into agricultural and industrial processes (EU Circular Economy Action Plan). This strategy promotes waste reduction, resource efficiency, and sustainable production models in the agri-food and nutraceutical sectors.

Within this framework, the Program for Rural Development of the Republic of Serbia (2018–2024) supports bio-based innovations and eco-certification schemes to ensure compliance with EU Green Deal objectives (Serbian Ministry of Agriculture). Sustainable cultivation and processing of wild and cultivated medicinal plants are also governed by the Regulation on Conditions for the Collection and Use of Wild Flora and Fauna (Official Gazette RS, No. 31/2019), which defines permit requirements, traceability protocols, and impact assessments. Furthermore, Serbia's alignment with the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits (ABS) enhances legal certainty for biodiversity-based innovations in the nutraceutical and pharmaceutical industries (Nagoya Protocol - CBD).

Serbia has launched several biodiversity-friendly agricultural initiatives, such as the Biodiversity Conservation Program (co-funded by IPA and national sources) and the Green Fund of the Republic of Serbia, which provide financial and technical support (Green Fund Serbia). The development of Public-Private Partnerships (PPPs) in the bioeconomy sector fosters technology transfer, enabling Serbian SMEs to leverage biodiversity for high-value applications while ensuring compliance with sustainability standards.

In addition to national policies, Serbia is aligning its biodiversity conservation efforts with the EU Biodiversity Strategy for 2030, which aims to restore degraded ecosystems, increase protected areas, and improve the sustainable use of natural resources (EU Biodiversity Strategy). Measures such as agro-environmental payments under the Instrument for Pre-Accession Assistance for Rural Development (IPARD) encourage Serbian farmers to adopt biodiversity-friendly agricultural practices, reduce synthetic input use, and implement sustainable soil and water management techniques (IPARD Serbia). The Forest Development Strategy of the Republic of Serbia (2022–2030) introduces new guidelines for sustainable forest management, addressing habitat preservation, afforestation programs, and the integration of non-timber forest products into bioeconomic value chains (Forest Development Strategy).

Furthermore, the Climate Change Strategy of Serbia, aligned with the EU Climate Law, includes provisions for enhancing biodiversity through carbon sequestration, wetland restoration, and climate-resilient agricultural practices (EU Climate Law). The expansion of organic farming is also a key priority, with Serbia increasing financial incentives and regulatory support for organic certification to promote more sustainable land-use patterns (Organic Farming Serbia).

Serbia actively participates in cross-border cooperation programs under Interreg Adrion and other EU-funded initiatives, facilitating the integration of best practices, the development of innovative cultivation techniques, and the establishment of value chains that promote sustainable biodiversity utilization in the nutraceutical, pharmaceutical, and cosmetic markets (Interreg Adrion). Serbia is also contributing to EU-wide biodiversity monitoring efforts by enhancing its national biodiversity database and expanding research capacity within scientific institutions and universities.

Additionally, Serbia is working to improve waste valorization in the agricultural sector by integrating circular economy models that convert plant residues into bioactive extracts, compost, or bioplastics. The Green Innovation Fund, established by the Serbian government, supports research and development projects that enhance biodiversity while reducing environmental impact (Green Innovation Fund Serbia).

To ensure effective implementation of biodiversity conservation policies, Serbia has established Regional Biodiversity Monitoring Centers that track ecosystem changes, provide early warning signals for biodiversity loss, and support decision-making processes. These centers collaborate with local agricultural cooperatives, ensuring that biodiversity conservation measures align with the needs of rural communities.

Serbia's legal and strategic framework provides a comprehensive foundation for biodiversity conservation within agricultural production systems. By embedding circular economy principles, fostering capacity-building efforts, and enhancing regulatory compliance, Serbia is positioning itself as a key player in the sustainable bioeconomy, ensuring long-term economic and environmental benefits. Through a combination of national policies, EU alignment, financial incentives, and research advancements, Serbia is strengthening its commitment to biodiversity protection, promoting sustainable land use, and fostering economic resilience in agriculture and bio-based industries.

5.2. How is the contribution of farmers and SMEs to the conservation/enhancement of biodiversity through agricultural production and circular procedures foreseen?

Serbia is in the early stages of integrating biodiversity conservation into its agricultural sector, with farmers and small and medium-sized enterprises (SMEs) playing a pivotal role in this process. Their active participation is essential to ensure that biodiversity strategies are practical and effective within the country's unique agricultural context.

Farmers and SMEs contribute significantly to the formulation of biodiversity policies by engaging in advisory councils, agricultural cooperatives, and stakeholder consultations. Their on-the-ground experience provides valuable insights into sustainable management practices for soil, water, and crop diversity. At both national and European Union (EU) levels, their involvement is facilitated through structured dialogues and participation in programs such as Interreg and the LIFE Programme, which promote transnational collaboration and provide access to funding for biodiversity-friendly initiatives.

To support the transition towards sustainable agriculture, capacity-building initiatives are essential. Training programs, often organized in collaboration with organizations like IFOAM - Organics International, focus on imparting knowledge about organic farming, regenerative agriculture, and agroecological principles. These programs aim to enhance biodiversity while ensuring economic viability for farmers and SMEs. Additionally, public-private partnerships (PPPs) facilitated by entities such as the Food and Agriculture Organization (FAO) connect SMEs with research institutions and policymakers. These collaborations foster the development of innovative approaches, including precision agriculture and crop diversification, tailored to Serbia's specific needs.

In practical terms, integrating biodiversity conservation into agriculture involves adopting environmentally responsible farming techniques and embracing circular economy models. Agroecology, which applies ecological principles to farming, is gaining recognition in Serbia. Practices such as crop rotation, intercropping, and the use of cover crops are promoted to improve soil fertility, enhance biodiversity, and increase climate resilience, aligning with guidance from the European Commission on Agroecology.

The cultivation and sustainable harvesting of medicinal and aromatic plants (MAPs) are also integral to biodiversity efforts. Farmers adhering to the World Health Organization's Good Agricultural and Collection Practices (GACP) ensure responsible use of plant resources, thereby preventing habitat destruction. Furthermore, the introduction of agroforestry systems, as advocated by the FAO Agroforestry Guide, involves integrating trees and shrubs into agricultural landscapes. This approach supports habitat preservation and bolsters ecosystem resilience.

SMEs are instrumental in implementing circular economy principles within the agricultural sector. By focusing on waste reduction and the repurposing of agricultural by-products, they develop bio-based products such as organic fertilizers, biodegradable packaging, and natural cosmetics. Organizations like the Ellen MacArthur Foundation support these sustainable business models, which align with biodiversity conservation and waste reduction goals. Additionally, technological advancements play an increasing role in conservation efforts. The adoption of precision agriculture and remote sensing tools, supported by data from the European Space Agency (ESA), enables farmers to optimize land use, monitor biodiversity indicators, and minimize environmental impacts while maintaining productivity.

Effective biodiversity conservation requires robust monitoring and evaluation mechanisms. Serbian farmers and SMEs engage in ecological monitoring programs and citizen science initiatives, contributing valuable data on biodiversity health. The European Citizen Science Association promotes participatory monitoring efforts, while tools such as Geographic Information Systems (GIS) and remote sensing, facilitated by the Copernicus Programme, enhance land-use tracking and conservation planning. Moreover, participation in certification schemes like the EU Organic Certification reinforces commitments to sustainability and ensures compliance with established biodiversity conservation standards.

As part of its broader biodiversity conservation strategy, Serbia is focusing on waste valorization. This involves converting agricultural residues into valuable products such as compost, bioactive extracts, and bioplastics. The Serbian Green Innovation Fund supports industry-led research and innovation in these areas, promoting practices that align with both economic and environmental objectives.

5.3. Public-Private Sector Collaboration in Serbia

Public-private sector collaboration in Serbia, particularly in Šumadija and Pomoravlje, is developing in response to growing demands for sustainable agricultural and biodiversity conservation initiatives. The region has a well-established fruit-growing sector, with plums being a dominant crop, forming the backbone of the local agri-food industry. The Regional Economic Development Agency for Šumadija and Pomoravlje (REDASP) plays a central role in fostering partnerships between governmental institutions and private enterprises to enhance agricultural innovation and biodiversity conservation (REDASP).

Serbia's Law on Public-Private Partnership and Concessions (Official Gazette RS, No. 88/2011, 15/2016, 104/2016, 112/2017) provides the legal framework for collaboration, including agriculture and environmental protection initiatives (Government of Serbia). However, the adoption of PPPs in biodiversity conservation remains limited, with most initiatives focused on infrastructure and traditional agricultural projects.

Public-private sector collaboration faces several challenges, but it also offers opportunities to enhance Serbia's biodiversity conservation efforts. Strengthening cooperation between key stakeholders will facilitate the development of sustainable agricultural value chains, particularly through the effective utilization of plum processing by-products. A structured approach that combines policy support, financial incentives, and industry participation is essential for unlocking the full potential of this collaboration.

Barriers Despite positive developments, several challenges hinder full-scale collaboration:

- Regulatory complexity: Bureaucratic hurdles and unclear procedures slow the establishment of partnerships.
- Limited financial incentives: Insufficient public funding for biodiversity-oriented PPPs discourages private sector investment.
- Lack of awareness: Many SMEs and agricultural cooperatives are unfamiliar with funding opportunities for sustainability projects.

Opportunities for Further Development

- Capacity-building programs: Strengthening local expertise in biodiversity-oriented business models through REDASP and other development agencies.
- Financial incentives: Expanding public funding mechanisms and tax reliefs for businesses engaging in biodiversity conservation.
- Expanding market access: Encouraging SMEs to leverage circular economy principles in fruit and medicinal plant processing, reducing waste and creating value chains based on plum processing by-products, semi-products, and other fruit residues, which can be transformed into bio-based products, pharmaceutical ingredients, and high-value additives for various industries, thus expanding value-added products.
- Stronger research-industry collaboration: Facilitating partnerships between universities, research centers, and the private sector to enhance sustainable production practices.

5.4. Certification Programs for Products from Biodiversity Conservation/Enhancement Programs through Agricultural Production and Circular Economy

Several certification programs in Serbia support biodiversity conservation through agricultural production, particularly in the aromatic and medicinal plant (MAP) sector. These certifications ensure traceability, sustainability, and quality standards, making Serbian MAP products more competitive in EU and global markets.

- EU Organic Certification

Responsible Organizations: Certification bodies accredited by the Accreditation Body of Serbia (ATS) and authorized by the Ministry of Agriculture, Forestry, and Water Management.(Ecocert Balkan Beograd - Provides EU organic certification, Organic Control System (OCS) - Certifies organic agricultural production,Centre for Food Analysis Ltd (CIN) - Conducts product testing and certification.

- FairWild Certification

Responsible Organization: FairWild Foundation, ensuring the sustainability of wild-collected plant ingredients. Certification Bodies in Serbia: Ecocert - Conducts FairWild audits, Control Union - Certifies wild-collected plant-based products.

- Good Agricultural and Collection Practices (GACP)

Responsible Organization: World Health Organization (WHO) provides GACP guidelines, applied by Serbian agricultural authorities. Certification Bodies in Serbia: Ecocert Balkan Beograd - Ensures GACP compliance., Organic Control System (OCS) - Certifies sustainable collection practices

- Geographic Indication (GI) Labels

Responsible Organization: Ministry of Agriculture, Forestry, and Water Management of Serbia. Certification Process: Producers apply through the Ministry to register a product's unique geographical characteristics.

The introduction of certification programs has led to:

- Expansion of organic farming areas and sustainable wild harvesting practices.
- Increased international market access for Serbian MAP products.
- Higher product value due to compliance with EU and global sustainability standards.

- Improved environmental sustainability through controlled cultivation and responsible wild collection.

However, challenges persist, including high certification costs, complex administrative processes, and limited awareness among farmers and SMEs. Strengthening financial incentives and technical support for certification can further enhance participation and sustainability in biodiversity-focused agricultural production.

6. BOSNIA AND HERZEGOVINA

Bosnia and Herzegovina (BiH) is among Europe's biodiversity hotspots due to its location within three distinct regions—Mediterranean, Euro-Siberian-Boreal, and Alpine-Nordic (Grimmett et al., 2017). With over 5,000 confirmed vascular plant taxa (Ginko et al., 2023), its rich flora and fauna stand out.

- Agricultural Land and Production

According to the BiH Agency for Statistics (2021), arable land makes up 49.1%, permanent grasslands 44.3%, and the rest includes kitchen-gardens (1.5%), orchards (4.5%), vineyards (0.5%), and nurseries (0.1%). Cereals dominate sown areas (58%), followed by fodder plants (26%), vegetables (15%), and industrial crops (1%) (Ministry of Foreign Trade and Economic Relations, 2018). Key cereal crops include wheat (primary bread grain) and maize (livestock feed), while fodder crops consist of green maize (55%), legumes (16%), and alfalfa (15%).

Vegetables account for 15% of sown areas, with potatoes and other vegetables splitting 49:51%. Annual potato output averages 385,000 tons, while major vegetables including cabbage/kale (23%), tomatoes (16%), peppers (15%), and onions (13%) produce about 300,000 tons annually. Fruit production spans 101,000 hectares, producing around 264,000 tons/year, dominated by plums (53%), apples (24%), and pears (10%). Significant rainfall variability and late frosts are impacting yields.

Berry production, particularly raspberries and strawberries, has surged, covering 3,000 hectares with annual outputs of about 20,000 tons of raspberries and 10,000 tons of strawberries. Vineyards span approximately 3,660 hectares, yielding an average of 2 kg of grapes per vine.

- Medicinal and Aromatic Plants, Forest Products, and Essential Oils

BiH boasts high biodiversity in medicinal plants, mushrooms, and forest fruits, with strong international market competitiveness (Foreign Trade Chamber of BiH, 2023). Top exports include wild mushrooms (boletus, chanterelle, morel, black trumpet) fresh, dried, or frozen, and herbs like bear's onion, sage, and chamomile, both wild and cultivated. Popular forest fruits include cranberry, blueberry, raspberry, and wild cherry. Essential oil production has grown dramatically, with products like immortelle, sage, juniper, lavender, and rosemary gaining demand. Conifer oils (e.g., black pine, Norway spruce) are prominent as well.

In summary, BiH's diverse plant-based resources and thriving exports, particularly of medicinal herbs, berries, and essential oils, underline its significance in nutraceutical and pharmaceutical industries.

6.1. National Legal and Strategic Framework for the Conservation/Enhancement of Biodiversity through Agricultural Production

The Western Balkan countries are in the early stages of transitioning to a circular economy. While legislative frameworks for sustainable waste management are somewhat developed or still in progress, operational capacities for implementing circular practices remain limited. Key challenges in implementing the circular economy in the region include underdeveloped recycling infrastructure, outdated waste management systems, limited access to financing, low awareness levels, and an inadequate legal framework. Markets for secondary materials are restricted, highlighting the need for modernizing facilities and digitalizing material flow management. Investment in education, awareness-raising, green skills development, and cross-sector partnerships—alongside technical and financial support for innovation - is crucial for achieving sustainable development goals and accelerating the circular transition. By adopting the Green Agenda for the Western Balkans in 2020, the region's countries have aligned with the European Green Deal, committing to implementing measures across five key areas, including the green/circular economy. The Action Plan for Implementing the Sofia Declaration on the Green Agenda for the Western Balkans (2021–2030) (Sofia Declaration on the Green Agenda for the Western Balkans, 2020) dedicates its fourth chapter to sustainable agriculture, outlining seven key activities: (1) Aligning food production and primary agriculture with EU standards on food safety, plant health, animal welfare, and environmental protection, including wastewater, fertilizer, and waste management; (2) Strengthening official sanitary controls throughout the food chain and improving food traceability and labelling systems; (3) Promoting environmentally friendly and organic farming while reducing synthetic chemical use in food production; (4) Fostering collaboration between scientific, educational, business, and agricultural institutions to facilitate the transfer of innovative and eco-friendly technologies; (5) Implementing initiatives to reduce waste in rural and coastal areas; (6) Enhancing sustainable rural development efforts through the LEADER program, and (7) Supporting investments in renewable energy production and technologies, reducing greenhouse gas emissions, and promoting climate adaptation measures in agriculture. Beyond the fourth chapter, agriculture and rural development are also linked to Chapter 3 (Circular Economy) and Chapter 5 (Nature Protection and Biodiversity).

Bosnia and Herzegovina is continuously working to align its legislation and standards with the EU in food safety, plant health, and animal welfare. The country receives expert and technical support from the EU through pre-accession assistance (IPA), Twinning, and TAIEX instruments. In recent years, the NGO sector, in collaboration with international organizations, has been raising awareness about the importance of circularity in production systems. Although a systematic approach to the circular economy is lacking, there has been a noticeable increase in initiatives promoting circular practices. The Foreign Trade Chamber of BiH has organized numerous conferences on the topic. Currently, Bosnia and Herzegovina is developing several strategic documents related to sustainable development, many of which incorporate circular economy elements, such as: The Integrated Energy and Climate Plan (2021–2030) and The Environmental Strategy and Action Plan 2030+, defining environmental goals and policies until 2032 and White paper on the Circular Economy in Bosnia and Herzegovina (Abaspahić et.al., 2022.). Additionally, the Circular Economy Roadmap for Bosnia and Herzegovina (2021–2027), led and funded by UNDP (United Nations Development Programme, 2021), is being developed. This roadmap will play a crucial role in strategic CE planning and serves as a reference for best practices from the EU and the region. Existing agriculture and rural development strategies in BiH already contain elements aligned with the EU Green Deal and the new Common Agricultural Policy (CAP) for 2021–2027 (European Commission (2021). However, to implement the new BiH Rural Development Strategic Plan (due until 2027), it will be necessary to: revise the existing and adopt new sectoral legislation, accelerate and harmonize activities related to EU Acquis adoption, strengthen institutional capacities, continue aligning agricultural policies with EU CAP measures, and enhance cooperation among stakeholders to improve agriculture's role and reputation in society. Despite the presence of goals aligned with the strategy of the "greening" of agriculture, concrete actions are lacking. While BiH's environmental legislation includes provisions for protecting nature and ensuring sustainable resource use, its implementation remains slow and inconsistent. A significant gap exists in financial support measures for agriculture, particularly cross-compliance regulations that would require farmers to adhere to public health, animal welfare, biodiversity, and land management standards.

As a candidate country aspiring to full EU membership, BiH needs to swiftly establish a fully harmonized legislative framework capable of implementing an effective control system to ensure safe food production and consumption. The coming period will be particularly challenging for policymakers and legislators in BiH due to the introduction of the EU's new "green" agricultural policy. Although BiH has experience in legislative transposition, further efforts will be required to align national agricultural legislation with EU standards.

6.2. How is the contribution of farmers and SMEs to the conservation/enhancement of biodiversity through agricultural production and circular procedures foreseen?

Farms and SMEs are a vital part of thriving business environments and essential drivers of a sustainable and inclusive economy. For this purpose, several current, interesting and educational articles related to the green transition of Europe have been published by the Foreign Trade Chamber of Bosnia and Herzegovina (2021; 2022a; 2022b; 2022c). The latest SME Policy Index for BiH report also identified a lack of financial incentives and other non-financial tools for the green transition of SMEs (OECD, 2022). There is an increasing number of companies interested in digitizing their production processes, as evidenced by a growing focus on investing in internal training to enhance employees' digital skills (RCC, 2023). However, the high cost of implementing digital solutions and the difficulty in finding quality service providers pose significant challenges to the successful implementation of these initiatives. Farms and companies, especially small and medium enterprises, face numerous challenges, with financing being one of the most significant. Although financing for green initiatives is increasingly available through international and local institutions as well as commercial banks, funds are often spread across various sources, making the implementation of planned activities more challenging. Technical and financial support to BiH SMEs is primarily provided by international donors and financial institutions such as GIZ, the EU, UNDP, EBRD, KfW, FIM, and EIB through programs aimed at developing green business models. Concurrently, relevant entity development strategies have acknowledged the importance of green development for SMEs and plan to allocate annual funds to support this sector. However, these strategies lack clarity on the approach to providing long-term support necessary for transition processes to yield substantial change. Examples of good practice, such as the support from the Government of Tuzla Canton and the relevant Ministry of Economy of Tuzla Canton, demonstrate how local initiatives can foster the development and competitiveness of SMEs through systemic support and incentive measures (Foreign Trade Chamber of Bosnia and Herzegovina, 2024).

6.2.1. Participation in Planning

Developing a comprehensive plan to integrate green practises into business activities. Market research is a critical aspect of planning. A business plan should detail all the elements of the business that focuses on sustainability, environmental stewardship, and social responsibility. The plan outlines a company's goals, objectives, and target measurements to ensure the company is operating in an environmentally friendly, socially

responsible manner. Farms and companies, especially small and medium enterprises, face numerous challenges, with financing being one of the most significant. Although financing for green initiatives is increasingly available through international and local institutions as well as commercial banks, funds are often spread across various sources, making the implementation of planned activities more challenging. This plan should outline the necessary actions to achieve set the goals, evaluate the resources needed (human, technological and other), establish a detailed timeline and clearly define the phases of implementation. Adhering to the principles of modern business communication, companies that are already green or aspire to become green should follow these guidelines:
- Green Certification Guide, Green Recovery Project, 2023
- Building a sustainable future: Business manual for ESG standards, AIRE Canter and UNDP in Bosnia and Herzegovina, 2023
- Guide for harmonizing policies and instruments that promote and support the green transformation of small and medium-sized enterprises in Bosnia and Herzegovina, Eda - Agency for Enterprise Development, 2023

6.2.2. Participation in Implementation

Implementation should include the following:

- optimizing energy usage to reduce carbon footprint
- minimize waste generation by using resources more efficiently, promoting reuse wherever possible, and implementing robust recycling programs
- designing eco-friendly products
- fostering employee participation
- collaboration with industry peers, NGOs, governments, and other stakeholders to address shared sustainability challenges, leverage collective expertise, and drive innovation.
- leveraging technology for sustainability
- continuously seek out opportunities for improvement, adapt to evolving environmental and social trends, and integrate sustainability into all aspects of their operations and decision-making processes.

6.2.3. Participation in Evaluation-Monitoring

Monitoring progress is essential for evaluating the effectiveness of sustainability initiatives and identifying areas for improvement. Regularly measuring key performance indicators (KPIs) allow businesses to track their environmental performance over time and make informed decisions. Continuous monitoring of the progress against the planned goals will allow the adjustments to the strategy for integrating green business models as needed. Keeping interested stakeholders informed of the results through quarterly and annual sustainability reports.

6.3. Public-Private Sector Collaboration in Bosnia and Herzegovina

The White Paper of the Circular Economy (Abaspahić et al., 2022) contains information about the regional perspective, initial assumptions for the circular economy in Bosnia and Herzegovina, as well as barriers and incentives for the development of the circular economy in Bosnia and Herzegovina. Public institutions in BiH have not been the main drivers of initiatives in this area. Hopefully, strategic documents and legislative framework will be developed and adopted soon, and accompanied with new programs of incentives for companies and local communities that would lead towards greater opportunity to use EU funds. Business community and civil society organizations can, among other things, contribute to the implementation of EU funds. The most important developmental partner in this area most certainly is the EU as it allocates significant funds to support CE initiatives in BiH, ranging from those of strategic importance to company support programmes, by supporting implementation of the Green Agenda for Western Balkans. The funds available for these initiatives will increase over time and will be implemented through the Instrument for Pre-Accession Assistance (IPA), several community programs such as ERASMUS+, Europe for Citizens, HORIZON Europe, LIFE, and programs of European development banks within the Western Balkans Investment Framework. There are more and more local non-governmental organizations and consulting companies that are involved in circular economy in BiH; they work on implementation of several CE projects financed by international organizations by providing technical assistance in the development strategic documents, supporting companies in their transition towards the CE models, supporting local communities, developing capacities, and promoting the CE concept among general public. Such initiatives are supported by international developmental partners, such as the EU Delegation to BiH, UNDP BiH, Swedish and Norwegian development agencies, and other agencies and foundations (USAID, Heinrich Böll Stiftung, etc.) Universities should play a greater role in the future in education, awareness-raising, research, development and innovation, and in efforts to encourage companies to incorporate the CE models in their operations. Considering that BiH is in a very early stage of transition towards CE, significant efforts are required to develop capacities of all parties interested in CE, and to establish networks, promote good practices and international exchange, as well as to raise awareness among both the business community and the consumers. The problem is that there is a general lack of institutional capacity for development in BIH. The lack of institutional support at all levels has continuously undermined the competitiveness of the agricultural and food sectors, resulting in a constantly increasing trade deficit in foreign trade in primary and processed agricultural products. The establishment of functional and responsible institutional capacity for agriculture and rural development would certainly lead to the improvement of this situation (Džafić, 2014). The measures of the priority area will strengthen the general coordination of capacities at the state level and enable gradual harmonization of the policy and support measures needed to meet the conditions for membership in the EU and the WTO.

6.4. Certification Programs for Products from Biodiversity Conservation/Enhancement Programs through Agricultural Production and Circular Economy

SMEs in BiH should align their business activities with international green standards as soon as possible, in order to achieve sustainable development for both their companies and society as a whole. Real changes in processes, and the entire management system, should be implemented before certification, as certification is merely an independent body's confirmation that the system complies with the referent standards. Increasing awareness among company management and among all employees should play a key role in this transformation. Promotion and training are vital in raising interest and understanding the benefits of implementing green standards. To facilitate this, we recommend using the Green Certification Guide prepared by GIZ within the COVID-19 Investment Response: Green Recovery support for the metal and wood industry in Bosnia and Herzegovina (Center for Energy, Environment and Resources, 2024). Promoting the experiences of successful enterprises is an effective way to demonstrate the benefits of green standards. For the certification process to maintain complete credibility, Foreign Trade Chamber of BiH recommends regulating the market of certification bodies, ensuring their accreditation, and harmonizing the accreditation process across BiH through appropriate laws and regulations (Foreign Trade Chamber of Bosnia and Herzegovina, 2024). In the modern business environment, due to the demands of the global market, SMEs from BiH are increasingly striving for improvement of its business using ecological practices. Proactive adoption of green standard practices by SMEs directly contributes to the process of their green transition, contributing to the general strengthening of the culture of environmental awareness and driving the economy, economy and society towards a sustainable future.

7. GREECE

Greece ranks among the most biodiverse countries globally, boasting a remarkable array of ecosystems and species. Its biological richness is one of the most significant in Europe and the Mediterranean.

In Greece, there are 42 plant species per 1,000 square kilometres, a level of floral diversity comparable only to that of the Cape region in South Africa, which is globally renowned for its unique botanical richness.

The Greek flora comprises approximately 6,000 plant species, of which 1,005 are endemic to Greece. Among them, around 894 species are classified as rare or threatened.

Currently, 34.9% of mainland Greece is under protection, significantly higher than the EU average of 26.4% (the EU Biodiversity Strategy goal for 2030 is to have 30% of the entire European Union protected). There are 614 species (flora and fauna) that belong to Greece's biodiversity and are protected by EU law. Of these, 10.1% (62 species) are vascular plants, which include the majority of aromatic and medicinal plants. Of these 62 species, 35.48% are in good conservation status, 40.32% in poor conservation status, 9.68% in bad conservation status, and 14.52% have an unknown status9.

7.1. National Legal and Strategic Framework for the Conservation/Enhancement of Biodiversity through Agricultural Production

Greece’s approach to biodiversity conservation within agricultural production is supported by a combination of national strategies, EU regulations, and emerging circular economy principles. These frameworks aim to integrate environmental protection with economic resilience, particularly within the agri-food sector, which plays a central role in rural development and land use.

- Legal Frameworks Supporting Biodiversity in Agriculture

[9] BISE (Biodiversity Information System for Europe). Countries: Greece. Link accessed on 06.02.2025 https://biodiversity.europa.eu/countries/greece?activeTab=32c6ed31-9535-4689-b789-0f4c6932ee85

The main national legislation underpinning biodiversity protection includes:

- Law 3937/2011 on Biodiversity, which aligns with the EU Habitats and Birds Directives and provides a foundation for protecting species and habitats, especially those located in agricultural landscapes.
- Law 1650/1986 on Environmental Protection, updated by Law 4042/2012 to incorporate waste prevention, reuse, and resource efficiency—key principles of the circular economy.
- Rural Development Programme (RDP) 2014–2020 and the updated CAP Strategic Plan 2023–2027, which integrate biodiversity-related agri-environmental measures and eco-schemes. These include support for organic farming, crop diversification, and the maintenance of landscape features such as hedgerows and dry-stone walls.

▪ Strategic Plans and Circular Economy Integration

Greece adopted its National Circular Economy Strategy in 2018, which was further strengthened through its National Waste Management Plan (2020–2030). These strategies promote sustainable production models, resource reuse, and waste valorisation, especially in the agri-food sector. The circular economy in agriculture is supported through:

- Composting and biogas production from agricultural residues.
- Valorisation of by-products in the food chain (e.g., olive mill wastewater, grape pomace, herb stems).
- Incentives for precision agriculture and closed-loop irrigation systems to reduce input use and preserve soil biodiversity.

The ELGO-DIMITRA report (2019) highlights pilot initiatives where circular models are implemented by SMEs and cooperatives. These include herb and essential oil producers who use distillation by-products for natural cosmetics and biopesticides—practices that conserve native species and reduce chemical inputs.

Key institutions supporting the implementation of these strategies include:

✓ Ministry of Environment and Energy, overseeing biodiversity conservation and circular economy integration.
✓ Ministry of Rural Development and Food, responsible for the agri-environmental dimension of the CAP.

- ✓ ELGO-DIMITRA, conducts research and capacity building on sustainable agricultural practices.
- ✓ IOBE (Foundation for Economic and Industrial Research), provides policy analysis on green transition and competitiveness, highlighting the role of biodiversity as a growth enabler.

- EU Alignment and Strategic Synergies

Greece's national strategies are aligned with the EU Biodiversity Strategy for 2030, the European Green Deal, and the Farm to Fork Strategy, which collectively promote a transition to sustainable food systems. The national CAP Strategic Plan 2023–2027 includes eco-schemes aimed at:

- o Enhancing agro-biodiversity (e.g., through native seed use and diverse crop rotations).
- o Reducing pesticide use and promoting non-chemical pest control.
- o Supporting traditional farming systems in Natura 2000 areas.
- o Circular Economy as a Tool for Biodiversity Enhancement

The circular economy in agriculture is not only about waste reduction but also biodiversity regeneration. Practices such as:

- o Conservation of traditional varieties and wild relatives,
- o Sustainable wild harvesting of medicinal and aromatic plants (MAPs),
- o Use of biodiversity indicators in farming performance metrics,
- o serve both environmental and economic goals.

In particular, MAPs are gaining interest in the nutraceutical and pharmaceutical sectors. The circular use of plant material and valorisation of by-products (e.g., residues from distillation or drying processes) reduces harvesting pressure on wild populations and incentivizes sustainable cultivation of endemic species.

7.2. How is the contribution of farmers and SMEs to the conservation/enhancement of biodiversity through agricultural production and circular procedures foreseen?

In Greece, farmers and SMEs are increasingly recognized as key actors in advancing biodiversity conservation and circular economy goals. Their contributions are being gradually integrated into national strategies and

EU-aligned frameworks, though actual engagement levels vary across planning, implementation, and evaluation stages.

7.2.1. Participation in Planning

Although traditionally limited, the participation of farmers and SMEs in strategic planning is gradually improving. Consultation processes under the Common Agricultural Policy (CAP) Strategic Plan 2023–2027 provide forums where stakeholders, including cooperatives and producer groups, contribute to biodiversity-related priorities (Ministry of Rural Development and Food, 2022). Additionally, participation in Local Action Groups (LAGs) under the LEADER/CLLD framework allows rural stakeholders to shape biodiversity-oriented rural development strategies from the bottom up (European Commission, 2023).

Nationally, organizations such as ELGO-DIMITRA have reported increased interest among farmers and processors in co-designing circular economy pilots in the agri-food sector, especially in herb and essential oil production chains (ELGO-DIMITRA, 2019). However, systematic inclusion—especially of smallholders and informal producer groups—remains a challenge, and their input is not always reflected in final policy instruments.

7.2.2. Participation in Implementation

Farmers and SMEs are more actively involved in implementing biodiversity-friendly and circular practices. These include:

- Participation in agri-environmental schemes under the CAP (e.g., organic farming, conservation tillage, or use of native seed varieties) (Ministry of Rural Development and Food, 2022).
- Engagement in pilot circular economy projects such as composting, biogas production, and the valorisation of by-products from olive, grape, or herb processing (ELGO-DIMITRA, 2019; Ministry of Environment and Energy, 2020).

SMEs, particularly those in nutraceuticals, cosmetics, and herbal products, play a significant role by cultivating or sustainably harvesting medicinal and aromatic plants (MAPs), thus reducing pressure on wild populations and promoting cultivation of endemic species (European Commission, 2020). For example, in regions such as Epirus and Crete, producers apply circular principles by repurposing distillation residues into bio-cosmetic ingredients or natural pesticides (ELGO-DIMITRA, 2019).

Projects supported by ELGO-DIMITRA, local development agencies, and EU-funded rural innovation partnerships (EIP-AGRI) often include farmers and small processors as key partners in adopting biodiversity-friendly and circular models.

7.2.3. Participation in Evaluation-Monitoring

Participation in evaluation and monitoring remains underdeveloped. While farmers contribute indirectly through compliance checks for agri-environmental measures, their involvement in biodiversity monitoring systems is limited. Structured feedback loops, such as post-implementation surveys or participatory biodiversity monitoring, are not widely used (Ministry of Rural Development and Food, 2022).

Nonetheless, emerging tools are beginning to change this dynamic. Citizen science initiatives and GIS-based biodiversity tracking systems are being piloted in protected areas, involving farmers in data collection. Some SMEs in organic and herb production chains are experimenting with blockchain and traceability systems that incorporate biodiversity indicators, especially in export-oriented sectors (IOBE, 2024).

Efforts to increase farmer participation in evaluation are supported by national strategies such as the National Waste Management Plan 2020–2030, which calls for better integration of producers into resource efficiency and biodiversity performance metrics (Ministry of Environment and Energy, 2020).

7.3. Public-Private Sector Collaboration in Greece

Public-private collaboration in Greece related to biodiversity conservation and the circular economy is gradually developing but remains uneven and largely project-based. Nationally, cooperation tends to focus on EU-funded initiatives, such as LEADER/CLLD programs, CAP eco-schemes, and research-industry partnerships under the EIP-AGRI operational groups.

In the agri-food sector, selected regions, such as Thessaly, Crete, and Western Macedonia, have seen promising examples of SMEs, cooperatives, and local authorities working together to develop circular models for herb processing, composting, or renewable energy from agro-residues (ELGO-

DIMITRA, 2019). However, these collaborations are often dependent on temporary funding and rarely continue after project completion.

Barriers include bureaucratic complexity, weak communication between ministries and business actors, and limited awareness among SMEs about biodiversity-related incentives (IOBE, 2024). The fragmentation of responsibilities among public bodies also leads to delays and inconsistent implementation of national strategies (Ministry of Environment and Energy, 2020).

Opportunities for further development include:

- Expanding regional bioeconomy clusters that link universities, producers, and local governments.
- Creating public procurement schemes that favor biodiversity-friendly products.
- Leveraging the CAP Strategic Plan 2023–2027, which offers targeted support for collaborative eco-initiatives and innovation in rural areas.

Enhancing trust, reducing administrative burdens, and embedding biodiversity goals into regional development frameworks can help unlock the full potential of public-private collaboration in achieving sustainable, circular agriculture.

7.4. Certification Programs for Products from Biodiversity Conservation/Enhancement Programs through Agricultural Production and Circular Economy

In Greece, the cultivation and processing of aromatic and medicinal plants (AMPs) such as oregano (*Origanum vulgare*), mountain tea (*Sideritis spp.*), and sage (*Salvia spp.*) are increasingly linked to certification schemes that reward biodiversity conservation and circular economy practices. These certifications include Organic Farming, Protected Designation of Origin (PDO), Protected Geographical Indication (PGI), and biodiversity-friendly/ecological labels.

Organic certification has seen a significant rise in adoption among small farmers and cooperatives cultivating AMPs in Natura 2000 areas, where natural biodiversity is high and synthetic inputs are restricted. This has improved product quality, market access, and export potential, especially in the nutraceutical and phytotherapy sectors. PDO/PGI labels, like those for "Olympus Oregano" or "Cretan Dittany," add territorial identity and credibility, further encouraging farmers to conserve wild relatives and use traditional cultivation methods (Kougioumoutzis, et al., 2021).

In parallel, cooperative models and clusters of SMEs have emerged, particularly in Western Macedonia, Thessaly, and Crete, linking AMP production with eco-certification and circular processing, such as using distillation residues for compost or bioenergy. These innovations improve resource efficiency and reduce waste, making circular practices economically viable (ELGO-DIMITRA, 2019).

Despite these positive impacts, barriers persist, including the cost and complexity of certification, limited training, and low consumer awareness of biodiversity-linked labels. However, ongoing national and EU-funded projects are addressing these gaps through capacity building and technical support (Ministry of Environment & Energy, 2023).

8. ALBANIA

Albania is home to a remarkable array of plant species, both cultivated and wild, many of which are used in nutraceutical and pharmaceutical applications (3). Its diverse climate and topography—from Mediterranean lowlands to rugged mountain ranges—create an ideal environment for a wide variety of plants with medicinal properties. Among the most commonly found species are mountain tea (Sideritis raeseri), wild thyme (Thymus vulgaris), and sage (Salvia officinalis), which have long been utilized for their healing qualities, particularly in rural areas where traditional remedies remain prevalent (10).

In addition to these widely known plants, Albania is also rich in lesser-known species that contribute to the local pharmacopoeia. For example, the wild-growing gentian (Gentiana lutea) and rosehip (Rosa canina) are used in both herbal medicines and as key ingredients in natural cosmetics (9). The country also boasts a variety of aromatic plants such as oregano (Origanum vulgare) and lavender (Lavandula angustifolia), highly valued for their essential oils and therapeutic benefits.

Despite its impressive biodiversity, Albania faces several challenges that threaten its plant resources. Unsustainable harvesting practices, particularly for high-demand medicinal plants, as well as habitat loss due to agricultural expansion, are major concerns. Additionally, climate change exacerbates these issues, threatening the future availability of many species. To mitigate these risks, Albania is encouraging sustainable agricultural practices and the certification of wild-harvested plants, aiming to promote both biodiversity conservation and economic sustainability in rural communities (4).

8.1. National Legal and Strategic Framework for the Conservation/Enhancement of Biodiversity through Agricultural Production

- National Biodiversity Strategy and Action Plan (NBSAP)

(NBSAP) 2016-2025 is a key instrument for biodiversity conservation in Albania (1). This plan, which aligns with the Convention on Biological Diversity (CBD), lays out a clear vision for the sustainable use of biodiversity resources, including plant species that are crucial for the nutraceutical, cosmetic, and pharmaceutical sectors (3). The NBSAP outlines specific actions for biodiversity conservation across various sectors, including agriculture, and emphasizes the importance of integrating biodiversity into agricultural policies and practices.

- Legal Framework for Biodiversity Protection

1. Law No. 10431/2011 on Protected Areas: This law governs the establishment and management of protected areas, which are crucial for preserving Albania's biodiversity. It sets forth regulations for the protection of flora and fauna in these areas and ensures the conservation of vital ecosystems where medicinal and aromatic plants thrive (5).
2. Law No. 5/2016 on the Protection of Biodiversity: This law provides a comprehensive framework for the protection of biodiversity in Albania. It mandates the sustainable use of plant resources and outlines regulations for the protection of endangered species and their habitats(6).
3. Law No. 146/2014 on Forests and Forestry Service: It establishes guidelines for the protection of forest ecosystems, which are home to a variety of medicinal and aromatic plants used in pharmaceutical and nutraceutical products. The law regulates sustainable forest management, logging activities, and the collection of forest products, including wild plants, ensuring that these resources are harvested in a manner that does not threaten biodiversity (7).
4. Law No. 26/2018 on Organic Agriculture: This law encourages the development of organic agriculture in Albania, which is crucial for the conservation of biodiversity. Organic farming practices minimize the use of synthetic chemicals, which can harm plant and animal species, and promote the use of sustainable farming techniques such as crop rotation, agroforestry, and the preservation of natural habitats. The law supports the certification of organic products, ensuring that Albanian farmers meet the standards required for both domestic and international markets (8).

- Circular Economy and Agriculture

In recent years, Albania has increasingly adopted the principles of the circular economy in its agricultural policies. The circular economy focuses on minimizing waste, reusing materials, and creating a closed-loop system where resources are continuously recycled. This approach is particularly relevant to agriculture, where the efficient use of resources can reduce environmental impact and enhance the sustainability of farming practices (12).

Waste Reduction and Valorization: Circular economy principles focus on reducing agricultural waste and using by-products from medicinal and aromatic plants, like leaves, stems, and seeds, to create valuable products such as essential oils, herbal extracts, and cosmetics. This not only reduces waste but also provides farmers with new income streams while promoting environmental sustainability (12).

Agroecology and Sustainable Practices: Agroecology supports biodiversity by using farming techniques such as agroforestry, organic farming, and polyculture that work in harmony with nature. These methods reduce reliance on harmful pesticides and fertilizers, offering both environmental and economic benefits (12).

Utilization of Agricultural By-products: Agricultural by-products from medicinal plant processing are increasingly used to produce natural products like herbal teas, essential oils, and cosmetics. Additionally, waste is being explored for biogas, composting, and biodegradable packaging, helping reduce waste and environmental impact (12).

Resource Efficiency and Recycling: Circular economy practices focus on improving resource efficiency, such as using efficient irrigation systems and renewable energy sources like solar power. Recycling agricultural plastics, packaging, and plant residues further helps reduce environmental impacts in agriculture (12).

- EU Integration and Alignment with EU Policies

As part of its European Union integration process, Albania is aligning its environmental and agricultural policies with EU standards. The Common Agricultural Policy (CAP), which governs agriculture across the EU, provides financial support for sustainable farming practices and the protection of biodiversity. Albania's agricultural policies are increasingly reflecting the principles of the CAP, including the promotion of organic farming, agroecology, and sustainable land management practices that benefit biodiversity.

Albania's legal framework is also being harmonized with EU environmental directives, such as the Habitats Directive and the Birds Directive, which protect plant species and their habitats. These directives are vital for maintaining the biodiversity of Albania's ecosystems, including the protection of medicinal and aromatic plants that are important for both local communities and the international market.

- Strategic Plans and Funding

In addition to national laws, Albania's strategic plans play a crucial role in promoting sustainable agriculture and biodiversity conservation. The National Strategy for Sustainable Development (NSDS) and the National Rural Development Programme are two key documents that guide Albania's efforts in sustainable agriculture. These plans emphasize the importance of integrating environmental sustainability into agricultural policies and support initiatives that promote the circular economy.

8.2. How is the contribution of farmers and SMEs to the conservation/enhancement of biodiversity through agricultural production and circular procedures foreseen?

8.2.1. Participation in Planning

The contribution of farmers and SMEs to the conservation and enhancement of biodiversity through agricultural production and circular economy procedures is pivotal, as their active participation ensures the integration of sustainable practices at the grassroots level. Their involvement in planning, implementation, and evaluation/monitoring is essential to ensuring the success and sustainability of biodiversity-enhancing initiatives.

Farmers and SMEs are often the most knowledgeable about the local ecosystems, plant species, and agricultural practices that can either positively or negatively impact biodiversity. Their inclusion in the planning stage of biodiversity and circular economy initiatives allows for the development of strategies that are both feasible and appropriate for local conditions.

Farmers and SMEs in Albania are crucial stakeholders in the planning of biodiversity conservation strategies, particularly when aligning agricultural production with circular economy principles. Various national and local initiatives, such as the Albanian Rural Development Program and projects supported by international organizations like the UNDP and FAO, ensure that farmers' practical knowledge and SMEs' innovations are integrated into national biodiversity action plans. Participatory planning mechanisms ensure that these policies are grounded in the realities of local farming practices while promoting sustainable land management.

8.2.2. Participation in Implementation

Farmers and SMEs play a direct role in the implementation of biodiversity-enhancing agricultural practices and circular economy procedures. On the farm level, this includes adopting agroecological practices such as organic farming, crop rotation, agroforestry, and polyculture, which enhance biodiversity by promoting a variety of plant species, reducing chemical inputs, and improving soil health.

In the context of the circular economy, farmers are key players in the reduction of waste and the valorization of agricultural by-products. For example, waste products from medicinal plant cultivation, such as leaves, stems, and seeds, can be processed into essential oils, herbal teas, or natural cosmetics, which not only provide additional income but also help reduce environmental impact. SMEs, particularly those in processing sectors, facilitate the integration of circular economy principles by utilizing these by-products to create value-added products, further supporting biodiversity conservation and sustainable agricultural practices.

Farmers and SMEs are supported in Albania through several targeted initiatives aimed at improving biodiversity. The Agri-Environmental Schemes under the EU's IPARD Program incentivize sustainable practices like organic farming and agroforestry. Additionally, Albanian SMEs are being encouraged to adopt circular economy measures through governmental programs and partnerships with international organizations. These practices include the processing of agricultural waste for value-added products such as herbal extracts and essential oils, contributing to both environmental sustainability and economic growth in rural areas (4).

8.2.3. Participation in Evaluation-Monitoring

In Albania, farmers and SMEs are actively involved in the monitoring and evaluation of biodiversity-enhancing practices. Through collaboration with national programs like the Biodiversity Monitoring Program and EU-funded initiatives, farmers track key biodiversity indicators such as soil health and native species diversity. Additionally, feedback from farmers is collected through local agricultural associations and cooperatives, allowing the government to adjust policies and improve the effectiveness of biodiversity conservation efforts (4).

8.3. Public-Private Sector Collaboration in Albania

- Current Situation

In Albania, public-private sector collaboration has increasingly become a key component of the country's development strategy, particularly in areas like infrastructure, agriculture, energy, and environmental protection. The government has actively sought to engage the private sector in large-scale projects, recognizing its role in fostering economic growth and innovation. Key collaborations include joint efforts in the construction of transportation networks, such as roads and bridges, as well as in the renewable energy sector, where private investment is essential for the transition to greener energy sources. In agriculture, partnerships are emerging between local authorities and private enterprises, aiming to modernize farming practices, introduce sustainable techniques, and promote the value-added processing of agricultural products, especially in the context of medicinal and aromatic plants. These collaborations are supported by international development programs, which help provide technical assistance and funding (11,12).

- Barriers

Despite the positive developments, several obstacles still hinder the effective collaboration between the public and private sectors in Albania. A major challenge is the regulatory framework, which often lacks clarity and consistency, making it difficult for private companies to navigate the requirements for investments or partnership agreements. Complex bureaucratic procedures, including slow approval processes and unpredictable permit issuance, deter potential investors and create inefficiencies in project implementation. Furthermore, there is a need for stronger coordination between government agencies and local authorities, which sometimes operate in silos and struggle to align their goals and actions. Additionally, a degree of skepticism remains between the two sectors, with the public sector sometimes viewing the private sector as profit-oriented and potentially neglecting the broader social and environmental impacts, while the private sector often complains about delays and inconsistent policy enforcement (11).

- Opportunities for Further Development

Despite these challenges, Albania has considerable potential to expand and deepen public-private collaboration. One significant opportunity lies in the green energy sector, where public-private partnerships could accelerate the adoption of renewable energy sources like wind, solar, and hydropower. As the country seeks to reduce its carbon footprint and improve energy security, the private sector's expertise and investment capacity will be crucial. Additionally, in agriculture, especially in the context of sustainable farming practices, there is great potential for collaboration between local farmers, SMEs, and the government. This can be achieved by focusing on eco-friendly farming techniques, promoting organic agriculture, and expanding the production of high-value products like essential oils and medicinal plant extracts. PPPs could also be vital in developing the country's tourism sector, specifically eco-tourism and agro-tourism, where private businesses can work with public authorities to enhance rural development and biodiversity conservation (11,12).

8.4. Certification Programs for Products from Biodiversity Conservation/Enhancement Programs through Agricultural Production and Circular Economy

- Organic Certification

Organic certification ensures that aromatic and medicinal plants are cultivated without synthetic chemicals, preserving soil health and biodiversity. Albanian farmers who obtain organic certification can access higher-value markets in the EU and beyond, increasing their income and encouraging more producers to adopt sustainable practices.

- Geographical Indication (GI) and Protected Designation of Origin (PDO)

These certifications highlight the unique characteristics of plants grown in specific Albanian regions, such as mountain herbs from Tropoja or Korça. They add market value to products, ensuring recognition and protection of traditional farming methods linked to biodiversity conservation.

- Fair Trade and Sustainability Labels

Certifications like FairWild promote ethical and sustainable harvesting of wild plants, ensuring resource regeneration and fair wages for harvesters. Such programs enhance farmer participation by providing incentives for sustainable wild collection and cultivation.

- Impact on Farmers and SMEs

Certification programs have increased the adoption of biodiversity-friendly agricultural practices while boosting market opportunities for farmers and SMEs. They provide economic incentives for sustainable production, foster trust among consumers, and enhance Albania's reputation in the international herbal product market.

9. COMPARATIVE ANALYSIS

This comparative analysis examines the approaches of seven countries (Italy, Croatia, Slovenia, Serbia, Bosnia and Herzegovina, Greece, and Albania) in integrating biodiversity conservation with circular economy principles through agricultural production. The assessment is structured around four axes common to each country report: (1) Legal and Strategic Framework, (2) Farmer and SME Participation, (3) Public-Private Sector Collaboration, and (4) Certification Programs.

National Legal and Strategic Frameworks

All countries have adopted legal and strategic frameworks aligned with EU directives, although their maturity and implementation capacity vary.

- **Italy, Slovenia, and Greece** present the most advanced and coherent frameworks, with robust national strategies aligned with the EU Biodiversity Strategy 2030, strong organic agriculture policies, and integrated circular economy roadmaps.
- **Croatia and Serbia** demonstrate significant progress, especially through Natura 2000 and their national biodiversity action plans, but face challenges in administrative complexity and regional disparities.
- **Bosnia and Herzegovina and Albania** are still developing comprehensive frameworks. BiH shows growing interest, with support from UNDP and IPA funds, but faces institutional fragmentation and weak enforcement mechanisms. Albania is making strides through its EU alignment efforts but lacks a finalized national biodiversity strategy.

A common trend is the integration of biodiversity into broader sustainability strategies—such as climate action plans and circular economy roadmaps—though practical application often lags behind policy ambition.

Participation of Farmers and SMEs

In all countries, participation mechanisms are formally in place, but the depth and effectiveness of engagement vary considerably.

- **Italy, Slovenia, and Greece** offer structured and institutionalized participation of farmers and SMEs in planning, implementation, and monitoring. Italy uses CAP eco-schemes and stakeholder forums effectively. Slovenia promotes stakeholder input through LIFE projects and local development strategies. Greece engages farmers through public consultations, national rural networks, and participation in policy development processes.

- **Croatia and Serbia** engage stakeholders mainly through CAP strategic planning and consultation processes. Serbia leverages EU projects for training and knowledge transfer, and Croatia uses e-Consultation and LEADER-based LAGs for bottom-up engagement.
- **Bosnia and Herzegovina and Albania** show weaker engagement. While SMEs and farms are involved in donor-driven projects, systemic inclusion in national planning is limited. BiH relies heavily on external support and lacks centralized coordination, while Albania's participation is fragmented and often ad hoc.

Overall, meaningful participation correlates with the strength of rural institutions, access to funding, and national commitment to inclusive policy design.

Public-Private Sector Collaboration

Public-private collaboration remains a critical but underutilized driver in most countries.

- **Italy, Slovenia, and Greece** demonstrate relatively advanced PPP frameworks. Italy's National Recovery and Resilience Plan (PNRR), Slovenia's digitalization and R&D incentives, and Greece's partnerships under the Green Growth agenda promote cooperation in biodiversity-enhancing innovations.
- **Serbia and Croatia** show mixed results. In Serbia, the legal basis exists, but implementation is uneven due to administrative burdens. Croatia's collaboration is successful in beekeeping and MAP production but weak in biotech and conservation research.
- **Bosnia and Herzegovina and Albania** face significant barriers: weak trust between sectors, limited funding channels, and low awareness. Collaboration tends to be project-based rather than strategic.

Recommendations include simplifying PPP procedures, increasing financial incentives for biodiversity-oriented projects, and strengthening regional innovation ecosystems.

Certification Programs

Certification of biodiversity-friendly and circular economy agricultural products varies in scope and enforcement.

- **Italy, Slovenia, and Greece** lead with well-developed organic certification infrastructures, specialized MAP programs, and support for PDO/PGI schemes. Italy, for example, has the highest share of organic UAA in Europe. Greece has implemented comprehensive certification schemes for organic products and promotes Geographical Indications (GI) in alignment with EU quality schemes.
- **Serbia and Croatia** have made progress with certifications such as EU Organic, FairWild, and GACP, but face challenges in costs and bureaucratic complexity for small producers.
- **Albania and Bosnia and Herzegovina** are still developing national certification systems. Participation is often tied to access to funding (e.g., IPARD), but technical and administrative barriers remain high.

Across all countries, stronger capacity-building and streamlined procedures are needed to ensure wider adoption of certification schemes, especially among smallholders.

Conclusions

This comparative review reveals significant progress in aligning agricultural biodiversity conservation with circular economy principles across the ADRION region, albeit unevenly. Countries with mature strategic frameworks, institutional continuity, and strong stakeholder ecosystems (e.g., Italy, Slovenia, Greece) are more successful in operationalizing these goals. Others (e.g., BiH, Albania) need targeted capacity building and governance reforms.

Policy recommendations:

- Harmonize national legal frameworks with the EU Green Deal and Biodiversity Strategy.
- Strengthen stakeholder platforms to ensure farmer and SME inclusion.
- Expand funding and technical support for certification and PPPs.
- Promote knowledge exchange and regional cooperation through Interreg and Horizon Europe.

This analysis provides a foundational reference for the Biofarms Toolkit and the next phases of the BFC project, contributing to a more resilient, biodiverse, and circular agricultural economy in the ADRION region.

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- LIFE Programme
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- Serbian Green Innovation Fund
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11. ANNEXES

11.1. ANNEX 1: Funding Programs for the Conservation/Enhancement of Biodiversity through Agricultural Production and Circular Economy

11.1.1. ITALY

Program 1	
Program	Horizon Europe Program
Subprogram	Cluster 6 - Food, Bioeconomy, Natural Resources, Agriculture, and Environment
Description	Horizon Europe is the EU's framework program for research and innovation. Cluster 6 focuses on the sustainability of agricultural and food systems, the circular bioeconomy, and biodiversity protection, funding projects that promote innovative and sustainable agricultural practices.
How is innovation and/or results rewarded?	Selected projects can receive funding covering up to 100% of eligible direct costs, incentivizing innovative solutions with a positive impact on biodiversity.
What is the territory of implementation?	European Union member states and associated countries.
Is there provision for process and/or product certification through the program?	Not specifically, but projects may include the development of standards or certifications as part of their activities.

Link or/and reference (if applicable)	https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/cluster-6-food-bioeconomy-natural-resources-agriculture-and-environment_en https://horizoneurope.apre.it/struttura-e-programmi/global-challenges-european-industrial-competitiveness/cluster-6/

Program 2	
Program	*LIFE*
Subprogram	Nature and Biodiversity
Description	The LIFE program is the European Union's funding instrument dedicated to environment and climate action. It supports projects that contribute to the development and implementation of EU environmental policies, including nature and biodiversity conservation.
How is innovation and/or results rewarded?	Innovative projects that demonstrate effective solutions to complex environmental problems can receive funding. The program values approaches that are replicable and transferable to other contexts.
What is the territory of implementation?	Italy
Is there provision for process and/or product certification through the program?	It depends on the funded project.

Link or/and reference (if applicable)	https://www.mase.gov.it/pagina/programma-l-ambiente-e-l-azione-il-clima-life-2021-2027

Program 3	
Program	*Rural Development Program (RDP) Calabria 2014-2020*
Subprogram	Measure 10 - Agri-climatic-environmental payments
Description	Measure 10 of the RDP Calabria supports agricultural practices that promote environmental sustainability and biodiversity conservation. Funded interventions include integrated production, biodiversity preservation through cover crops, and land-use conversion from arable land to pasture or grassland.
How is innovation and/or results rewarded?	Beneficiaries receive payments for adopting sustainable agricultural practices that contribute to biodiversity conservation and climate change mitigation.
What is the territory of implementation?	Calabria Region, Italy.
Is there provision for process and/or product certification through the program?	Not necessary, but adopting sustainable practices can facilitate access to recognized environmental certifications.
Link or/and reference (if applicable)	https://www.calabriapsr.it/misure/20-misure?limit=5&start=5

Program 4	
Program	*Rural Development Program (RDP) Calabria 2014-2020*

Subprogram	Measure 4 - Investments in physical assets
Description	Measure 4 of the RDP Calabria aims to improve the economic performance and environmental sustainability of farms through investments in innovative technologies and infrastructure. Interventions include support for the purchase of modern machinery and equipment, as well as the implementation of processing and marketing techniques for agricultural products.
How is innovation and/or results rewarded?	Selected projects can receive funding covering a significant percentage of eligible costs, encouraging the adoption of innovative and sustainable solutions..
What is the territory of implementation?	Calabria Region, Italy
Is there provision for process and/or product certification through the program?	Not necessary, but adopting sustainable practices can facilitate access to recognized environmental certifications.
Link or/and reference (if applicable)	https://www.calabriapsr.it/misure/33-misura-4

Program 5	
Program	*Rural Development Program (PSR) Calabria 2023-2027*
Subprogram	SRA16 - Support for activities related to the conservation, use, and sustainable development of genetic resources in agriculture.
Description	This measure aims to preserve and enhance local genetic resources at risk of extinction through in situ, on-farm, and ex situ conservation. Activities include characterization, collection, and

	sustainable use of plant, animal, and microbial genetic resources of agricultural interest.
How is innovation and/or results rewarded?	The program provides funding for innovative projects that contribute to the conservation and sustainable use of agricultural biodiversity, encouraging sustainable farming practices and participation in conservation networks.
What is the territory of implementation?	Calabria Region
Is there provision for process and/or product certification through the program?	Yes, the program supports the certification of agricultural products derived from local genetic resources, promoting quality and controlled-origin labels.
Link or/and reference (if applicable)	https://www.calabriapsr.it/misure/20-misure?limit=5&start=5 https://www.calabriapsr.it/pac-2023-2027/schede-interventi

11.1.2. CROATIA

Program 1	
Program	EUROPEAN AGRICULTURAL FUND FOR RURAL DEVELOPMENT
Subprogram	Intervention 70.04 - Ecological (organic) cultivation
Description	The aim of the intervention is to encourage the use of environmentally friendly organic farming practices and methods (non-use of synthetic mineral fertilizers and reduced use of pesticides) from the perspective of reducing greenhouse gas emissions, adaptation, and mitigation of climate change. Reducing the use of pesticides contributes to reducing soil pollution, and banning the use of synthetic mineral fertilizers

	contributes to reducing water pollution through reduced leaching and runoff of nutrients, such as nitrogen and phosphorus. Non-use of synthetic mineral fertilizers and reduced use of pesticides also significantly contributes to the preservation of biodiversity.
How is innovation and/or results rewarded?	EU grants – cofinancing 100%
What is the territory of implementation?	Republic of Croatia
Is there provision for process and/or product certification through the program?	- Yes, the organic or ecological agricultural products must be certified and labelled.
Link or/and reference (if applicable)	https://ruralnirazvoj.hr/intervencije/70-04-aec-ekoloska/ https://www.apprrr.hr/wp-content/uploads/2024/04/Strateski-plan-Zajednicke-poljoprivredne-politike-Republike-Hrvatske-2023.-2027.pdf

Program 2	
Program	EUROPEAN AGRICULTURAL FUND FOR RURAL DEVELOPMENT
Subprogram	Intervention 70.05 - Support for conservation, sustainable use and development of genetic resources in agriculture
Description	Croatia has valuable genetic resources, with the total number of known species and subspecies being 40,000, with the assumption that there are up to three times as many species. The genetic potential in Croatia is very valuable, especially in terms of biodiversity and the need to adapt agriculture to climate change. The priority is not only the preservation of traditional, locally adapted plant and animal species, but also all varieties and breeds that, although not valuable in an economic sense, can be used as a basis for creating new or improving the performance of existing varieties of agricultural plants and breeds

	of domestic animals. Support will be provided to beneficiaries who prevent the erosion of plant and animal genetic resources and contribute to the promotion of their sustainable use, development and conservation for the purpose of achieving global food security, sustainable agriculture and the maintenance of biodiversity.
How is innovation and/or results rewarded?	EU grants – cofinancing 100%
What is the territory of implementation?	Republic of Croatia
Is there provision for process and/or product certification through the program?	- n/a
Link or/and reference (if applicable)	https://ruralnirazvoj.hr/intervencije/70-05-aec-potpora-za-ocuvanje-odrzivo-koristenje-i-razvoj-genetskih-izvora-u-poljoprivredi/ https://www.apprrr.hr/wp-content/uploads/2024/04/Strateski-plan-Zajednicke-poljoprivredne-politike-Republike-Hrvatske-2023.-2027.pdf

11.1.3. SLOVENIA

Program 1	
Program	Slovenian Rural Development Programme (RDP) 2023–2027
Subprogram	Agri-environment-climate measures (AECM), Organic Farming, Natura 2000, and Ecological Focus Areas
Description	Supports sustainable farming practices that enhance biodiversity, soil health, water quality, and landscape features. Incentives are given for organic production, maintenance of permanent grasslands, crop rotation, hedgerows, and buffer strips. Includes targeted support for Natura 2000 zones.

How is innovation and/or results rewarded?	Results-based payments and innovation-friendly calls within LEADER and EIP-AGRI frameworks. Farmers can receive additional support for participating in innovative approaches or pilot schemes related to biodiversity and circular practices.
What is the territory of implementation?	Entire territory of Slovenia, with prioritization in Natura 2000 areas, Less Favoured Areas (LFAs), and areas with high natural value (HNV) farming.
Is there provision for process and/or product certification through the program?	Yes – organic certification is required for beneficiaries under organic farming measures. Participation in schemes like Integrated Production or environmental labeling may also be incentivized.
Link or/and reference (if applicable)	https://www.gov.si/en/policies/agriculture-food-forestry-and-rural-development/rural-development-programme-2023-2027/

Program 2	
Program	Slovenian Strategic Plan under the Common Agricultural Policy (CAP) 2023–2027
Subprogram	Eco-Schemes and Agri-Environmental and Climate Commitment
Description	Provides direct payments and incentives for environmentally friendly practices on farms. Focuses on crop diversification, precision farming, maintenance of permanent grasslands, cover crops, and pollinator-friendly practices.
How is innovation and/or results rewarded?	Eco-schemes include voluntary measures where farmers exceeding basic compliance are rewarded through top-up payments. Innovation is further encouraged under the EIP-AGRI (European Innovation Partnership).
What is the territory of implementation?	Nationwide – with specific geographical targeting depending on the measure (e.g., Natura 2000 areas, water-sensitive zones).
Is there provision for process and/or product certification through the program?	Yes – certification is required for some eco-schemes (e.g., organic farming). Environmental and quality assurance schemes are also recognized.

Link or/and reference (if applicable)	https://agriculture.ec.europa.eu/cap-overview/cap-strategic-plans/cap-strategic-plan-slovenia_en

Program 3	
Program	National Recovery and Resilience Plan (RRP) – Green Transition Pillar
Subprogram	Circular Economy for Food Systems and Agriculture
Description	Invests in circular bioeconomy models, waste-to-resource innovations, soil regeneration, and digital monitoring systems in agriculture.
How is innovation and/or results rewarded?	Competitive grants awarded for demonstration projects, pilot farms, and technology uptake. Funding prioritizes innovative business models and product circularity.
What is the territory of implementation?	National territory, with funding directed to strategic demonstration locations and high-impact value chains.
Is there provision for process and/or product certification through the program?	Indirectly – projects may seek certification (e.g., organic, EPD, ISO 14001) as part of funded actions.
Link or/and reference (if applicable)	https://ec.europa.eu/info/business-economy-euro/recovery-coronavirus/recovery-and-resilience-facility/slovenias-recovery-and-resilience-plan_en

11.1.4. SERBIA

Program 1	
Program	Instrument for Pre-Accession Assistance in Rural Development (IPARD)
Subprogram	Measure 1 – Investments in Physical Assets of Agricultural Holdings
Description	This subprogram provides financial support to agricultural holdings for investments aimed at enhancing competitiveness, aligning with EU

	standards, and promoting sustainable practices. Eligible investments include modernization of equipment, construction of facilities, and adoption of environmentally friendly technologies.
How is innovation and/or results rewarded?	Innovative projects that introduce new technologies or practices receive co-financing of up to 70% of eligible investment costs, with higher support rates for young farmers and those engaged in organic production.
What is the territory of implementation?	Territory of implementation: Nationwide, covering all regions of Serbia.
Is there provision for process and/or product certification through the program?	Yes, the program supports investments that facilitate compliance with EU standards, including obtaining necessary certifications for products and processes.
Link or/and reference (if applicable)	https://uap.gov.rs/ipard-ii-programme-in-serbia/

Program 2	
Program	Agricultural Loans and Grant Program
Subprogram	Financing for Farmers and SMEs in Fruit Processing and Circular Economy
Description	This initiative provides low-interest loans and grants for farmers and agricultural SMEs engaged in fruit processing, waste valorization, and circular economy practices. The program supports the development of bio-based products from fruit by-products, such as plum pits, skins, and pulp, which can be used in pharmaceuticals, cosmetics, and food industries.
How is innovation and/or results rewarded?	Entrepreneurs using innovative processing methods, upcycling fruit waste, or developing high-value-added products can access higher loan amounts and grant incentives.
What is the territory of implementation?	Nationwide, particularly targeting fruit-producing regions like Central Serbia, Šumadija, and Pomoravlje.
Is there provision for process and/or product certification through the program?	Yes, financial support is available for businesses pursuing EU certification for eco-friendly products, bio-based packaging, and food-grade ingredients.
Link or/and reference (if applicable)	Agricultural Development Fund - Serbia

Program 3	
Program	National Program for Rural Development
Subprogram	Support for Sustainable Fruit Production and Orchard Management
Description	This program aims to enhance the competitiveness of fruit growers by supporting investments in modern orchard management, irrigation systems, and disease-resistant plant varieties. Special emphasis is placed on plum production, given its importance in Serbia's agricultural sector. The program encourages sustainable farming techniques and biodiversity conservation to maintain high-yield, environmentally friendly orchards.
How is innovation and/or results rewarded?	Farmers implementing integrated pest management, organic farming practices, or advanced irrigation technologies receive higher subsidy percentages. Additional grants are provided for the certification of organic plums and climate-resilient crops.
What is the territory of implementation?	Nationwide, with a focus on key fruit-growing regions such as Šumadija and Pomoravlje.
Is there provision for process and/or product certification through the program?	Yes, the program supports organic certification and compliance with EU phytosanitary and sustainability standards.
Link or/and reference (if applicable)	Ministry of Agriculture - Rural Development

11.1.5. BOSNIA AND HERZEGOVINA

Bosnia and Herzegovina has access to several funding programs and initiatives aimed to integrate biodiversity conservation with sustainable agricultural practices and the principles of the circular economy, contributing to the preservation and enhancement of Bosnia and Herzegovina's rich natural heritage.

Program 1	
Program	European Union Support to Agriculture Competitiveness and Rural Development in Bosnia and Herzegovina (EU4AGRI)

Subprogram	EU4AGRI-Recovery project
Description	EU4AGRI project is a four-year initiative (2020-2024) that aims to modernize agri-food sector, create new jobs, as well as retain existing ones, and support recovery from crisis caused by COVID-19 in Bosnia and Herzegovina. The EU4Agri project is primarily funded by the European Union (EU) under the Instrument for Pre-Accession Assistance (IPA). Worth EUR 20 million, the project is implemented and co-funded jointly by United Nations Development Programme (UNDP) and Czech Development Agency (CzDA). The project will contribute to an environment of improved competitiveness through following results: 1) Higher levels of production of safe and quality food based on introduced innovative practices, while preserving the natural resources and the countryside, are sustained; and 2) Policy actions are implemented in EU aligned manner, based on sector services and systems improved.
How is innovation and/or results rewarded?	Financial Support: The EU invested 10 million KM in the BiH agri-food sector through 78 projects. - Employment: The project enabled the preservation of 1,463 jobs and created 142 new jobs, including 42 'green' jobs that contribute to sustainable practices and reducing environmental impact. - Training and Development: 158 individuals from the agri-food sector and rural tourism were trained, improving their capabilities for long-term resilience and sustainability. - Innovative Solutions: 60 BiH companies were supported in implementing innovative solutions to improve their business operations.
What is the territory of implementation?	Bosnia and Herzegovina
Is there provision for process and/or product certification through the program?	Project focuses on raising investment in the agri-food sector and increasing the knowledge and skills level of agricultural producers and other participants in the value chains through the expanded provision of advisory services, as well as by improving economic opportunities in rural areas. The project also enhances the policy environment through a coherent and complementary set of activities, including

	strengthening of institutional capacities and services, as well as supporting the improvements in policy and regulatory frameworks: Strategy and Action Plan for the Protection of Biological Diversity of Bosnia and Herzegovina for the Period 2015-2020 https://www.fmoit.gov.ba/upload/file/okolis/NBSAP%20BiH_20160315_bos.pdf FBiH Agriculture and Rural Development Strategy 2021-2027. Guidelines for applicants Invitation to potential users of grants for a measure of support for investments in primary agricultural production https://eu4agri.ba/izmjena-javnog-poziva-za-dodjelu-bespovratnih-sredstava-za-mjeru-podrske-primarnoj-poljoprivrednoj-proizvodnji-koji-je-objavljen-15-decembra-2023/
Link or/and reference (if applicable)	Results of the EU4AGRI-Recovery Project Presented: EU Provides 10 Million KM to Support Resilience and Recovery of Agriculture in BiH | EEAS EU4AGRI – Modernizing Agri-Food Sector in Bosnia and Herzegovina: For Thriving Rural Areas | United Nations Development Programme

Program 2	
Program	The Biodiversity Finance Initiative (BIOFIN)
Subprogram	
Description	Supported by the Global Environment Facility (GEF), BIOFIN aims to identify the current state of biodiversity, strengthen institutional capacities, and develop financial plans to mobilize resources for implementing the Kunming-Montreal Global Biodiversity Framework. The project emphasizes integrating biodiversity conservation into various sectors, including agriculture, to promote sustainable practices.
How is innovation and/or results rewarded?	Financial plans for biodiversity protection will be prepared based on a detailed assessment of the policy and institutional frameworks, as well as an assessment of biodiversity investments and financial needs, including the effectiveness of

	relevant financial plans. Through this process, the project aims to improve the financing process for nature and biodiversity protection through a participatory approach and the inclusion of all relevant stakeholders.
What is the territory of implementation?	Bosnia and Herzegovina
Is there provision for process and/or product certification through the program?	--The 2030 Agenda for Sustainable Development - Strategy and Action Plan for the Protection of Biological Diversity of Bosnia and Herzegovina for the Period 2015-2020 https://www.fmoit.gov.ba/upload/file/okolis/NBSAP%20BiH_20160315_bos.pdf Sixth National Report to the CBD
Link or/and reference (if applicable)	https://www.undp.org/bosnia-herzegovina/news/undp-bih-started-implementation-global-biofin-program

Program 3	
Program	SME Go Green Program
Subprogram	
Description	Launched in October 2024, the SME Go Green program is a collaborative effort between the European Bank for Reconstruction and Development (EBRD) and the European Union. The program focuses on fostering sustainable development by offering financing, investment incentives, and technical assistance to enhance SMEs' access to the green economy. It places significant emphasis on agribusiness value chains, environmental sustainability, and climate resilience within the agriculture sector. This is the first initiative of this kind implemented by UNDP in Bosnia and Herzegovina which tends to promote and support a multisectoral approach to biodiversity conservation and emphasizes the necessary cooperation among institutions from the finance and environmental protection sectors.
How is innovation and/or results rewarded?	In its initial phase, the program provides €120 million in targeted financing to small and medium-sized enterprises (SMEs) in the Western Balkans, including Bosnia and Herzegovina. The loan funds will be used to provide sub-loans to small and medium-sized enterprises in Bosnia and

	Herzegovina to improve their competitiveness and trade potential, increase investments in the green economy and to support small and medium-sized enterprises managed by women.
What is the territory of implementation?	Bosnia and Herzegovina.
Is there provision for process and/or product certification through the program?	-Paris Agreement -Bosnia & Herzegovina Development Finance Assessment (DFA) efaidnbmnnnibpcajpcglclefindmkaj/https://fzzpr.gov.ba/files/Other/BIH%20Road%20Map%20for%20SDG%20Financing%20Framework%20preparation_ENG_15.03.23.pdf -Bosnia and Herzegovina Circular Economy White Paper https://cpu.org.ba/media/50856/White-paper_Publication_280422.pdf
Link or/and reference (if applicable)	https://www.ebrd.com/news/2024/ebrd-and-eu-support-green-and-sustainable-transition-in-bosnia-and-herzegovina.html#:~:text=The%20programme's%20official%20launch%20in,investment%20incentives%20and%20technical%20assistance.

Program 4	
Program	Interreg IPA CBC Croatia – Bosnia and Herzegovina – Montenegro
Subprogram	6
Description	This program promotes cross-border cooperation to transition to a circular and resource-efficient economy. With an allocation of €11.5 million, it supports actions such as developing and implementing approaches to limit landfilling, increasing awareness of circular economy opportunities, and implementing joint pilot projects that involve citizens in sustainable practices. These initiatives contribute to both biodiversity conservation and sustainable agricultural production.
How is innovation and/or results rewarded?	The Programme will support cooperation projects with EUR 106,987,000.00 from the European Regional Development Fund (ERDF) and the IPA III Fund

What is the territory of implementation?	Bosnia and Herzegovina
Is there provision for process and/or product certification through the program?	- IPA III: the Instrument for Pre-Accession Assistance (2021–2027) -The European Green Plan -The United Nations Programme on Sustainable Development.
Link or/and reference (if applicable)	https://interreg.eu/programme/interreg-ipa-cbc-croatia-bosnia-and-herzegovina-montenegro/

11.1.6. GREECE

Program 1	
Program	CAP Strategic Plan 2023–2027 – Intervention Π3-77-3.1
Subprogram	Development of collaborations through Operational Groups (OGs) of the European Innovation Partnership (EIP-AGRI) for agricultural productivity and sustainability
Description	This intervention funds the creation and operation of multi-actor Operational Groups that connect research, farmers, SMEs, and advisors to co-develop innovative solutions. Priority is given to projects that enhance biodiversity, circular economy, digital transition, and climate resilience in agriculture. Activities include experimental cultivation, biodiversity-friendly practices, agro-waste valorisation, smart farming, and improved resource efficiency.
How is innovation and/or results rewarded?	Innovation is directly supported through co-financing of project activities (e.g., pilot testing, demonstration fields, dissemination). Operational Groups are selected based on their innovation potential and expected impact. Best practices may be promoted through national and EU networks (EIP-AGRI), enabling replication and upscaling.
What is the territory of implementation?	Nationwide, open to applicants from all regions of Greece. Priority may be given to underdeveloped, mountainous, or Natura 2000 areas based on project relevance.
Is there provision for process	While not mandatory, projects involving organic farming, biodiversity conservation, or valorisation of

and/or product certification through the program?	endemic species may include steps toward certification (e.g., organic, eco-labels, traditional product status). Certification costs may be eligible depending on the proposed activities.
Link or/and reference (if applicable)	https://www.agrotikianaptixi.gr/parembaseis-sskap-pa/agrotiki-anaptyxi/synergasies-leader-77/p3-77-3-1-anaptyxi-synergasion-me-skopo-ti-diasyndesi-tis-erevnas-me-tin-paragogi-meso-epicheirisiakon-omadon-eo-tis-evropaikis-sybraxis-kainotomias-gia-tin-paragogikotita-kai-viosimotita-tis-georgi/

Program 2	
Program	LEADER / CLLD – Greece Rural Development Program
Subprogram	Local Development Strategies implemented by Local Action Groups (LAGs)
Description	LEADER supports community-driven development in rural areas. It funds small-scale, local projects that promote rural entrepreneurship, cultural heritage, agri-tourism, biodiversity protection, and the circular economy. Projects may include sustainable harvesting of native plants, eco-certification, composting of agri-waste, short supply chains, and added-value product development. Each region's LAG sets its own priorities and eligibility criteria.
How is innovation and/or results rewarded?	Innovation is fostered by supporting pilot initiatives, community cooperation, and the integration of local knowledge with modern solutions. Projects with environmental, biodiversity, or social innovation elements may receive bonus points during evaluation. Knowledge sharing and replication are encouraged across LAGs and EU-wide LEADER networks.
What is the territory of implementation?	Implemented locally by over 50 LAGs across Greece (e.g., in Crete, Thessaly, Epirus, Peloponnese). It specifically targets rural and remote areas, often including Natura 2000 and biodiversity-sensitive zones.
Is there provision for process and/or product certification through the program?	Yes, many projects include support for organic certification, PDO/PGI labels, or eco-friendly branding of biodiversity-related products (e.g., medicinal herbs, traditional crops).

Link or/and reference (if applicable)	https://www.agrotikianaptixi.gr/metra-paa-pages/leader-clld/

Program 3	
Program	NSRF 2021–2027 – Green Transition Operational Programme (Πρόγραμμα «Πράσινη Μετάβαση»)
Subprogram	"Circular Economy and Climate Change" – Investment Priority for sustainable use of natural resources, waste reduction, eco-innovation, and business models supporting green/agro-innovation
Description	This national program funds investments that support circular economy practices, waste valorisation, resource efficiency, and low-carbon production in agriculture, food processing, and rural SMEs. Eligible actions include composting units, reuse of agro-industrial by-products, production of biogas or biofertilizers, eco-design of agri-products, and water reuse systems. It aims to align Greek production models with the EU Green Deal and Circular Economy Action Plan.
How is innovation and/or results rewarded?	Innovation is rewarded through **priority scoring**, grants, and co-financing for businesses that demonstrate measurable improvements in resource use, GHG reduction, and biodiversity preservation. Emphasis is placed on **replicable circular models** in rural/agricultural contexts.
What is the territory of implementation?	Implemented nationwide, with a focus on rural, insular, and mountainous regions, particularly where local production generates significant organic waste or pressure on ecosystems (e.g., olive mills, vineyards, livestock units).
Is there provision for process and/or product certification through the program?	Yes. Certification related to eco-labels, environmental product declarations (EPD), ISO 14001, EMAS, or biobased/organic certifications are eligible expenses under certain calls.
Link or/and reference (if applicable)	https://21-27.antagonistikotita.gr/prasini-metabasi-mme/

11.1.7. ALBANIA

Program 1	
Program	Rural Development Program (RDP)/Ministry of Agriculture and Rural Development
Subprogram	Agricultural and Environmental Measures
Description	The Rural Development Program is an EU-funded initiative that aims to enhance rural development, improve agricultural practices, and promote biodiversity. It encourages the adoption of sustainable farming practices, including organic farming, agroforestry, and biodiversity-friendly approaches. The program also supports measures for the protection of natural resources and the promotion of a circular economy in rural areas.
How is innovation and/or results rewarded?	Innovation is rewarded through the provision of financial incentives for adopting best practices in sustainability, biodiversity conservation, and resource efficiency. Results are assessed based on the implementation of projects that demonstrate tangible environmental and economic benefits.
What is the territory of implementation?	Nationwide, with a focus on rural areas across Albania.
Is there provision for process and/or product certification through the program?	The program encourages certification in organic farming and eco-labeling for products that meet specific sustainability criteria.
Link or/and reference (if applicable)	Bujqesia dhe Blegtoria - Ministria e Bujqësisë dhe Zhvillimit Rural

Program 2	
Program	Support for Sustainable Agriculture and Rural Development
Subprogram	Agricultural and Rural Development Programs managed by AZHBR
Description	The AZHBR supports farmers in adopting environmentally friendly farming practices, including organic farming, agroforestry, and other methods that contribute to biodiversity conservation. These programs are aligned with Albania's commitments under the EU's RDP framework and focus on improving

	agricultural productivity while maintaining ecological balance.
How is innovation and/or results rewarded?	AZHBR incentivizes innovative and sustainable practices through financial support for projects that demonstrate measurable environmental benefits, including improved soil health, biodiversity conservation, and reduced chemical use. Innovations in waste management and circular economy practices also receive rewards.
What is the territory of implementation?	Nationwide, focusing on rural areas, particularly those with rich biodiversity.
Is there provision for process and/or product certification through the program?	AZHBR supports certification processes related to organic farming and eco-friendly production standards, ensuring products meet sustainability criteria.
Link or/and reference (if applicable)	About Us – AZHBR

11.2. ANNEX 2: NATIONAL SURVEY TEMPLATE

Interreg Co-funded by the European Union

IPA ADRION

BFC

Introduction

This document serves as a tool for conducting research at the national level regarding the current state of biodiversity preservation and/or enhancement through innovative cultivation, collection, and processing of plant products for use in the nutraceutical, cosmetic, and pharmaceutical fields. The outcome of this researching process will consist of seven completed templates (one for each partner country: Italy, Croatia, Slovenia, Serbia, Bosnia and Herzegovina, Greece, and Albania), the data from which will be consolidated into a single report by the end of the project's first phase (M1-6). This report will be prepared by JOIST (Greece), the coordinating partner and the scientific leader of this process.

This survey will complement the Market Demand Study (D.1.3.1) in generating knowledge about the situation in each country and region of the Adriatic regarding market demand and provide valuable information and guidance for the development of the toolkit (D.1.5.1), which aims to adopt and disseminate innovative tools and solutions.

The research process focuses on all key aspects of biodiversity preservation and enhancement through agricultural production (European, national, and local policies; legal and strategic frameworks; funding programmes; responsibilities, rights, and forms of participation for farmers and SMEs; certification of processes and products), with an emphasis on circular economy practices, the utilisation of by-products from production and processing, and waste reduction and management. This focus is deemed crucial for the research objectives and outcomes, as researchers are expected to face significant challenges during their work.

Biodiversity cannot be simply analysed into distinct categories (e.g., animal, plant); instead, its various elements interact and depend on one another (for example, human intervention in the reproductive cycles of an insect may influence the variety of flora and fauna in a region). Similarly, the circular economy may involve processes that utilise by-products from plant production and processing within the same production and market chain, as well as the management of raw materials, packaging materials, by-products, petroleum-based substances, and chemical elements.

The effective addressing of these challenges relies on the researchers and their holistic understanding of the vision of the Biofarms (BFC) project that aims to provide a competitive advantage to farmers and SMEs in the Adriatic region and the Western Balkans who love agricultural production, adhere to ethical and innovative business practices, and strive to leave a healthy environment and way of life for future generations.

Methodology of the survey

The research is secondary and relies on materials and information already produced and published by other organisations or in other contexts. Its aim is not to generate new data (no methods such as observation, or collection of quantitative and qualitative data through questionnaires and interviews are employed). Instead, the goal is to create new knowledge by synthesising existing data and information and prioritising them according to the objectives and application areas of the Biofarms project.

The research material can be found online through relevant research using keywords or related phrases (e.g., biodiversity in the country, policies-strategic plans for biodiversity conservation through agricultural production, agricultural production and circular economy, etc.). Searches can be conducted in the internal databases of partner organisations (if available) and on websites of ministries, regional authorities, municipalities, universities, research institutes, national and international research organisations, as well as press announcements. The search and use of online sources must adhere to fundamental principles of verifying their reliability. All official documents, articles, books, and scientific publications must be recorded at the end of the template (References) following the APA style referencing format.

If researchers need additional information or clarifications on any topic, it is highly recommended to contact individuals, representatives of organisations, research centres, programmes, and policymakers who are not part of the project consortium.

When this method of communication is used, researchers should record the individuals they contacted and the organisations they represent in this file (BFC_CommunicationTrackStakeholders). This will help build a stakeholder database that can be used both to review the survey results and for the next stages of the project.

Good luck!

Topics-Questions

Biodiversity Overview at the National Level with a Focus on Cultivated and/or Wild Products of Plant Origin for Nutriceutical and Pharmaceutical Use

(approx. 1.500 characters with spaces)

National Legal and Strategic Framework for the Conservation/Enhancement of Biodiversity through Agricultural Production (focusing on circular economy)

(approx. 5.000 characters with spaces)

How is the contribution of farmers and SMEs to the conservation/enhancement of biodiversity through agricultural production and circular procedures foreseen?

(approx. 4.000 characters with spaces)

- Participation in Planning
- Participation in Implementation
- Participation in Evaluation-Monitoring

Public-Private Sector Collaboration (Nationwide and in Specific Areas). What is the current situation? What are the barriers? What are the opportunities for further development?

(approx. 2.000 characters with spaces)

Funding Programs for the Conservation/Enhancement of Biodiversity through Agricultural Production and Circular Economy

Program 1	
Program	
Subprogram	
Description	
How is innovation and/or results rewarded?	
What is the territory of implementation?	
Is there provision for process and/or product certification through the program?	

Link or/and reference (if applicable)	

Program 2	
Program	
Subprogram	
Description	
How is innovation and/or results rewarded?	
What is the territory of implementation?	
Is there provision for process and/or product certification through the program?	
Link or/and reference (if applicable)	

Program 3	
Program	
Subprogram	
Description	
How is innovation and/or results rewarded?	
What is the territory of implementation?	
Is there provision for process and/or product	

certification through the program?	
Link or/and reference (if applicable)	

(in case of more, please copy and paste the above table and change the numbering to 4, 5 etc.)

Certification Programs for Products from Biodiversity Conservation/Enhancement Programs through Agricultural Production and Circular Economy (focusing on Aromatic-Medicinal Plants). How have they impacted production and/or the participation of farmers and SMEs?

(approx. 1.500 characters with spaces)

References

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