



Innovations in Non-Wood Forest Products are vital to fully embed them in the bioeconomy, boosting rural development and human well-being

Why Innovations Matter for Non-Wood Forest Products (NWFPs)

Non-wood forest products (NWFPs) such as cork, resins, mushrooms, truffles, nuts, berries, and medicinal plants play a key role in the maintenance of rural livelihoods, cultural heritage, sustainable food systems, and the green economy. They contribute to climate action, biodiversity conservation, rural employment, and healthier diets. Despite generating up to €23 billion annually in Europe, NWFP value chains remain underdeveloped due to fragmented policies, scarce and unreliable production and market data, informal markets, and lack of innovation. This gap highlights the need to place them more firmly on the policy and innovation agenda.



Latest data of EIP-AGRI Operational Groups show that innovations in NWFPs play a key role as they:

- Focus on products, processes, and services, with strong emphasis on technological advancements;
- Contribute to social equity and rural development, although innovations in social and organizational dimensions remain limited;
- Increase sustainability and transparency in production and harvesting;
- Develop competitive, territorial, and fair value chains;
- Foster product differentiation through certification, traceability, and quality standards;
- Link science, practice, and policy.

Who can do what?



EU institutions: The European Union has a central role in setting the framework conditions for NWFP innovation. It should ensure policy coherence across agriculture, forestry, and industrial strategies so that NWFPs are not treated as marginal by-products but as integral resources within the bioeconomy. Strengthening support to thematic networks and knowledge-exchange platforms helps innovations circulate more quickly across Member States. Moreover, EU institutions can provide long-term and stable funding to high-performing innovation groups, ensuring that promising pilot initiatives have the resources and time to mature into consolidated NWFP value chains.

National and regional authorities: At the territorial level, governments can shape an enabling environment for NWFP producers. This means designing fiscal and labor regimes that recognize the seasonality of many NWFP activities and provide protections against informal or undeclared work.

Authorities can also play a key role in establishing price observatories, thereby increasing transparency and trust in markets. Finally, they can promote certification and labeling schemes linked to origin, sustainability, and quality, helping local products gain visibility and competitiveness in both domestic and international markets.



Research and innovation networks: Knowledge institutions should advance research not only on new technologies but also on the scalability, replicability, and cost-effectiveness of NWFP innovations. This involves developing methods to assess ecological and socio-economic impacts, identifying pathways for upscaling successful pilots, and ensuring that research outcomes are accessible to practitioners. Collaboration with Operational Groups is essential to bridge the gap between science and practice.

Operational Groups & producer organizations: OGs represent a unique interface between research, practice, and entrepreneurship. They can co-develop innovative business models adapted to local contexts, improve harvesting and processing techniques, and test new organizational arrangements that strengthen the bargaining power of small producers. By building networks across borders, they also facilitate learning and cooperation between regions with similar NWFP potential, creating the foundations for more resilient and competitive value chains.

Private sector: Companies and entrepreneurs can drive market development by investing in niche products, branding, and certification schemes. This is especially important to position European NWFPs competitively against international substitutes such as imported pine nuts or hydrocarbon-based resins. By engaging with sustainable supply chains, the private sector can also diversify its portfolio with bio-based materials that respond to growing consumer demand for natural, environmentally friendly products.

Civil society & consumers: Ultimately, the success of NWFP value chains also depends on societal demand and awareness. Consumers and community groups can support sustainable NWFPs through informed purchasing choices, participation in certification schemes, and engagement with local food and tourism markets. By valuing NWFPs not only as products but also as carriers of cultural heritage and biodiversity, civil society plays a crucial role in ensuring their long-term sustainability.

Policy implications

For NWFPs to fully realize their economic, ecological, and cultural potential, they must be structurally integrated into mainstream EU policies. Instruments such as the Common Agricultural Policy (CAP), the EU Biodiversity Strategy, and the Farm-to-Fork Strategy already provide entry points, but stronger coherence and coordination are required. Looking ahead, the new EU Bioeconomy Strategy and the forthcoming Circular Economy Act will be decisive in supporting this vision, ensuring that NWFPs are recognized as key resources for a sustainable and innovative bio-based economy.

A critical aspect concerns funding. More flexible funding instruments are needed: longer project lifetimes, cascade funding mechanisms for local initiatives, and tailored tools for small-scale actors such as collectors and producer organizations. These measures would allow experiments to mature into stable business models and territorial value chains. Cross-border collaboration also plays a vital role. Transnational OGs, thematic networks, and structured exchange programs can accelerate the dissemination of knowledge, strengthen cooperation across regions, and help scale innovations beyond local contexts.



Another priority is strengthening transparency and data availability. Price observatories, digital traceability systems, and reliable statistics are essential tools to increase market visibility, attract investment, and build consumer trust in NWFPs. Finally, policies must also emphasize the social dimension. Improving labor conditions and empowering producer organizations are not only matters of equity but also crucial steps for building stable, fair, and competitive value chains. NWFPs are not only economic assets; they are also drivers of gender inclusion, rural employment, and the safeguarding of cultural heritage. By supporting these dimensions, innovation in NWFPs can contribute to more resilient rural communities and a fairer, more sustainable bioeconomy.





NON-WOOD FOREST PRODUCTS: Paving the way to a sustainable future in the EU



NWFP into EU Policies

- CAP
- EU biodiversity strategy
- Farm-to-Fork strategy
- Bioeconomy strategy
- Circular economy act
- Cascade funding
- Tailored for small-scale actors
- Stable business models



FLEXIBLE FUNDING

Longer project lifetimes To set-up new business opportunities



- International Operational Groups
- Thematic networks
- Exchange programs
- Knowledge dissemination
- Regional cooperation

TRANSNATIONAL COLLABORATION

Better tools for small-scale



- Price observatories
- Digital traceability
- Reliable statistics
- Market visibility
- Consumer trust
- Attractive investments

TRANSPARENCY & DATA

- Traditional knowledge and practices protection
- Bridging the gap between people and forests

SOCIAL DIMENSION



Conclusions

Innovations in Non-Wood Forest Products (NWFPs) are vital to fully embed them in the bioeconomy, boosting rural development and human well-being. We must bridge science, practice, and policy to foster comprehensive technological and social innovations. This transition will elevate NWFPs from "invisible" status to central resources in Europe's bioeconomy, a future dependent on empowered local actors, cohesive policies, and strong international cooperation.

About FOREST4EU

The key objective of FOREST4EU, funded by the Horizon Europe program, is to connect Operational Groups across Europe, fostering synergies and facilitating the exchange of best practices. The project is actively collecting and disseminating valuable information developed by these OGs, creating a central resource for the forestry community.



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