LIVINGAGRO

Cross Border Living Laboratories for Agroforestry

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LIVINGAGRO: Innovation, *transfer of* ***knowledge*** *and* ***technology*** *for Mediterranean* ***agroforestry***

Work in progress – discover the advancement of LIVINGAGRO activity 3.1.6

A review of the project challenges in brief

LIVINGAGRO project addresses the challenge of **knowledge and technological transfer in Mediterranean agriculture and forestry systems** for achieving and sharing **good practices** aimed at **sustainable production, protecting biodiversity**, enhancing **transfer of innovation and increasing profitability** for territories and main actors as well as stakeholders involved. Using an **open-innovation approach** for co-creating economic and social values and interactions between supply and demand, **two Living Laboratories (LLs) are established** focusing on **olive multifunctional systems (LL 1) and grazed woodlands (LL 2)** in order to promote the creation of a public-private community experimenting cooperation between companies and research organizations for the **development of innovative startups, activities, services and products**.

What specifically refers agroforestry to and what are Living Laboratories?

Agroforestry is a land use management system in which trees or shrubs are grown around or among crops or pastureland. This **diversification of the farming system** initiates an **agroecological succession**, like that in natural ecosystems, and so starts a chain of events that **enhance the sustainability of the farming system**.

Fo.Re.S.T.A.S.
Viale Luigi Merello, 86 • 09123 Cagliari • Italy
Tel. +39 070 279 91 • livingagro.project@forestas.it
www.enicbcmed.eu/projects/livingagro

A **Living Lab**, **or Living laboratory**, is a research concept, which may be defined as a **user-centered, iterative, open-innovation ecosystem**, often operating in a territorial context (e.g. city, agglomeration, region or campus), **integrating concurrent research and innovation processes** within a **public-private-people partnership**.

Establishing Living Laboratory 1: EU polices for olive multifunctional systems

Photo by Fabio Piras, AGRIS Agency Sardinia

In terms of **preparatory action** for the establishment of **LIVINGAGRO Living Laboratory n.1** (LL1) relating to olive multifunctional systems, an **assessment of European policies dealing with agroforestry and olive multifunctional systems** in particular has been **carried out by CNR** (LIVINGAGRO PP1) within activity 3.1.6 of the project. Below we report the **main findings** of the elaborated policy assessment document starting from the **policy definition of agroforestry**, continuing with an **analysis on agroforestry in the Common Agricultural Policy framework** and ending with an **overview of the EU policy framework for the olive sector**. Enjoy the reading!

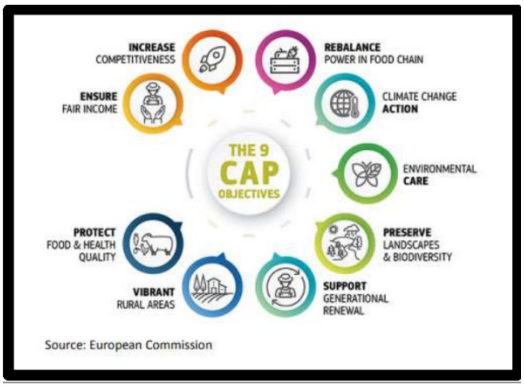
POLICY DEFINITION OF AGROFORESTRY

Agroforestry is recognized as "**the practice of deliberately integrating woody vegetation (trees or shrubs) with crop and/or animal systems to benefit from the resulting ecological and economic interactions**" (Nair 1993). Within the **European Union** (EU), Article 23 of Regulation 1305/2013 defined agroforestry systems as "**land use systems in which trees are grown in combination with agriculture on the same land**." However, this definition **differs from the most common definitions** across the world that take into consideration that shrubs, because of their woody perennial nature, can provide many of the same productive, environmental or social benefits of trees. The **total area under agroforestry in the EU** is estimated to be about 15.4 million ha which is equivalent to **about 3.6% of the territorial area** or **8.8% of the utilized agricultural area** (Den Herder et al., 2017).

AGROFORESTRY IN THE COMMON AGRICULTURAL POLICY (CAP) FRAMEWORK

The **European Common Agricultural Policy (CAP)** recognized that **agroforestry systems** should be encouraged because of their "**high ecological and social value**". For this reason, in the **2007-13 Rural Development Plans (RDPs)** a dedicated **financial support** has been foreseen for the establishment of agroforestry systems on arable land through the introduction of a specific measure (**measure 222**). The measure provides a **grant to cover up to 80% of the establishment costs**, without any additional contribution to cover the maintenance costs. According to the measure, **a limited range of agroforestry systems can be supported under the current RDP programme**. Silvo-pastoral systems, the intercropping between fruit trees and arable crops, linear systems bordering the fields, for example, cannot be supported under the current grant scheme. Furthermore, the fiche explicitly mentions that **agroforestry systems** can be established **in "extensive" agriculture**. But the border

between extensive and intensive is **not clearly defined**. The **measure 222** reveals an extremely **weak implementation** at EU 27 level under the rural development programme, 2007-2013. In order to solve the constraints, the **European Agroforestry Federation, EURAF** (www.agroforestry.eu) was **constituted in 2012**. The **lobby action** conducted by EURAF at level of **European Commission and Parliament** produced **positive effects** and the new fiche of the agroforestry measure **receipts the most relevant constraints that EURAF have highlighted**. In the **CAP 2014–2020**, **agroforestry is promoted through Article 23 of the new Rural Development Regulation 1305/2013** linked to the sub-measure 8.2. **Beneficiaries** of the measure should be **not limited to farmers but may include also municipalities and associations**. Moreover, **supporting scheme include the cost of establishment** (up to 100% of the total costs) **and cost of maintenance** for a period of 5 years through annual premium per hectare afforested. In total, about **68 million Euro** should be **distributed** among **farmers** interested to **adopt agroforestry practices in their farmlands**. In comparison, in the **former programming period (2007-2013)** the total amount of resources allocated to implement the measure 222 was about **15 million Euro**. Indeed, the available resources to create news agroforestry systems are higher but **their effective expenditure depends on the regions interest to open the call**.



THE EU POLICY FRAMEWORK FOR THE OLIVE SECTOR

Olive production is a **significant land use in the southern Member States of the EU** with important environmental, social and economic considerations. **Community policies** are the most significant policies affecting olive farming in the EU Member States. There are **very few national and regional measures of significance** outside the EU policy framework. In the last 20 years, the **CAP** has undergone **five reforms** that have progressively and profoundly **modified the original layout based on guaranteed minimum prices and protection against frontiers, towards a support model decoupled from production**. **Direct payments** are a form of income support granted to EU farmers **on a per-hectare basis**, **independently of the production of a specific product**. In addition to this basic support scheme, **Member States may grant voluntary coupled support** linked to production in the olive oil sector that may be undergoing difficulties, under conditions laid down in Article 52 of Regulation (EU) No 1307/2013. **Only Italy has opted for this voluntary scheme**, with an overall amount of more than €400 million for the years 2015 to 2020 (EPSR Briefing, 2017). Several measures introduced by **Regulation (EU) No 1305/2013** on **support for rural development** can

assist the olive and olive oil sector, whether directly targeting this farming activity or by addressing general agricultural and rural issues closely related to it. In addition to strategic support for **investment in assets, innovation and business development**, it is also worth mentioning **support** granted to participate in **quality or certification schemes** for agricultural products and foodstuffs (Article 16), to facilitate the setting up of **producers' groups** (Article 27), to carry out **agri-environment-climate commitments** on agricultural land (Article 28), to **convert** to or **maintain organic farming practices and methods** (Article 29), and to make **financial contributions** to farmers for **insurance premiums and mutual funds** with the risk management tools (Articles 36 to 39).

Establishing Living Laboratory 1: Lebanese polices for olive multifunctional systems

In terms of **preparatory action** for the establishment of **LIVINGAGRO Living Laboratory n.1 (LL1)** relating to olive multifunctional systems, an **assessment of Lebanese policies** dealing with **agroforestry and olive multifunctional systems** in particular has been carried out **by CNR** (LIVINGAGRO PP1) within activity 3.1.6 of the project. Below we report the **main findings** of the elaborated policy assessment document starting from an **overview of the analysed Lebanese context**, continuing with a **description of the olive oil value chain** in the country and of the main **political issues** which do affect the investigated focuses. Enjoy the reading!

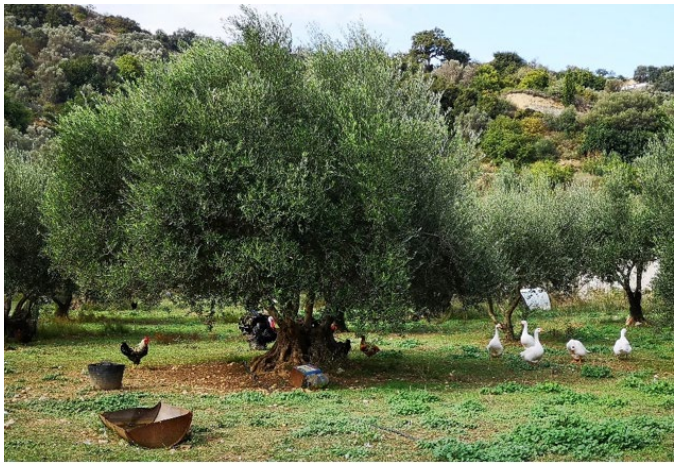
CONTEXT OVERVIEW

Lebanon is a complex country with **several religious communities** and a **difficult political, social and economic structure** due to 15 years of **civil war**. **Agriculture** seemed to have acted as a resilient sector, however, **dynamisms and self-resilience mechanisms are hampered by the lack of public policies**. According to the **Agricultural Census 2010**, the **total agriculture land area** in Lebanon is

estimated at **332.000 ha**, of which **231.000 ha are cultivated** (almost half 113.000 ha are irrigated), with an **average land holding size of 1.36 ha** (1.23 ha for irrigated holdings). The exploitation of these lands moved gradually **from a cereal cropping to a cultivation offering higher added value** (fruits, vegetables, etc.). The number of **agricultural holdings** is estimated at **170.000**, with an average of 1.4 ha per holding. In Lebanon a great effort is being made to **improve the economic and environmental sustainability** of a strategic sector such as **agriculture**. The Lebanese agricultural sector faces **many problems that limit its growth and development**. **Organic agriculture** aims at developing **self-reliant and environment-friendly farming systems.**

THE LEBANESE OLIVE OIL VALUE CHAIN

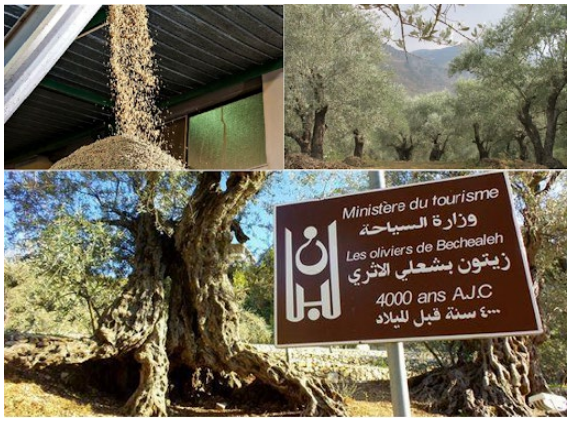
Lebanon is the **historical birthplace of the olive tree**. The **Mediterranean climate and fertile soil are ideal** for the production of olives and the oil is commonly used in the local gastronomy. However, the **country is struggling to develop a quality product** that can be competitive on the **international market**. Thus, the olive oil sector is an important economic and socio-cultural activity in many regions of the country. **Each region in Lebanon prides itself on indigenous olive trees** and therefore a distinct type of **olive oil**. The environment (soil, altitude, climate and cultural practices) also produces special **characteristics and distinct tastes in each region**. Farmers favour managing olive groves because **olive trees do not require excessive labour and day-to-day care** once the seedlings are established, and **also no irrigation** since most areas under cultivation are rain-fed. Therefore, olive oil production is often associated with **regions with poor access to water**. Olive oil in Lebanon is mostly a **family-run** and **seasonal business**, contributing in a **considerable proportion** of household **family** activity and **income**. However, the **olive oil sector is still undeveloped** due to **land fragmentation, low productivity, lack of farmer's knowledge** to adopt **Good Management Practices** and consequently **high costs of production and poor environmental sustainability**. Considering that **23.5% of the agricultural land** in Lebanon is covered by **olive trees**, and more than **half of the registered agricultural holdings** in Agricultural Census 2010 reported **having at least 0.1 ha of land planted with olive trees**, Lebanon policies should focus a great attention on this sector. In terms of economic value, **the production of olives and olive oil represents approximately 10% of the total value of agricultural products**. The olive oil value chain has a **high potential of improvement** and represents a good **opportunity for economic development of the country**. However, olive oil production faces challenges common to the whole agricultural sector in Lebanon but it is widely recognized its importance for **poverty reduction, employment creation, migration, trade, growth potential, the rural landscape, environmental implications** such as waste generation and disposal.



POLITICAL ISSUES AND POLICES FOR THE LEBANESE OLIVE OIL SECTOR

Due to the strategic importance of the olive growing sector in Lebanese agriculture for reviving the Lebanese economy, in recent years the **Government has encouraged olive oil cultivation** through various initiatives **by distributing pruning and harvesting machines, encouraging the planting of more productive cultivars, and participating as an operational partner in various international development projects** (EU/ICU, IFAD/ICU, MAEDGCS / LARI, Coop FR, etc.). Nonetheless, it is largely acknowledged that the **MoA (Ministry of Agriculture)** must rely on **scarce resources**, especially **for supporting the spread of good cultivation practices**. The Ministry of Agriculture's **efforts have**

focused on the increase in the value of the local market by increasing demand on the higher quality olive oil. With this aim, the Ministry of Agriculture has implemented a long-term **partnership with the Italian cooperation through the CIHEAM36 Mediterranean Agricultural Institute of Bari (Italy)**, which are the entities implementing the **"Olio del Libano" program**. Recently (2018), the Ministry has renewed its agreement with the CIHEAM and through it the Ministry **committed to improving the quality of olive oil in Lebanon and ensuring that it is raised to international standards**. Moreover, the **MoE (Ministry of Environment)** resolution **imposes standard procedure of olive oil mill operations in order to minimize waste and residues.** Acidic and contaminated water and large volumes of pomace are the two potential hazardous effluents produced by olive mills. The

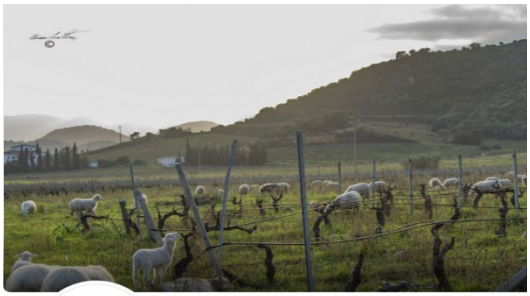


Resolution No. 250/1 of 2009 established the **National Committee for Olive and Oil Olive in Lebanon**. This Resolution constituted the National Committee for Olive and Oil Olive in Lebanon to **propose new legislations** related to the **management and treatment of waste water** resulting from olive oil process, production of organic olive oil and, laying down **sanitary requirements and conditions for olive presses**. To improve the management of Olive Mill Wastewater (OMW) and pomace, Lebanon hosted the **regional project Integrated Waste Management for the Olive Oil Pressing Industries in Lebanon, Syria and Jordan** (2005 and 2008). Funded by the EU, and implemented under the Short and Medium-Term Priority Environmental Action Program II (SMAP II), the MoE hosted the project to **introduce and mainstream an integrated system for olive oil waste management in all three collaborating countries** (http://olivepress.moe.gov.lb). The main achievements of such cooperation include **the definition of environmental limit values for waste** obtained from the olive oil industry, as well as **environmental guidelines for using treated OMW in irrigation**.

FROM THE PROJECT PARTNERS – In this edition: News from ATM Consulting, PP5

Management of the social media campaign for the first 6 months of the project

ATM Consulting has collaborated with the Communication Manager from the start of the project until October 2020. The partner contributed in particular to **communication activities on social media** and in particular for the update of the **LIVINGAGRO Facebook page**. The work consisted in **conveying information regarding the activities carried** out in the various phases of the project, **the role of the various partners and the presentation of the representatives** of each organization involved. **LIVINGAGRO partner 5 collaborated on the elaboration of contents relating to international and Mediterranean agroforestry** in particular with the active **support of the various**



project partners who provided useful material. Finally, the **COVID19 emergency** with its unforeseeable **consequences** on project activities was also one of the **subjects of the proposed contents**. The sharing of content on some agroforestry groups on Facebook was very useful and highly visible. All this produced and resulted in the **publication of about 70 posts** on the **LIVINGAGRO FB page** which **reached more than 131,000 people** with over **8.700 interactions**. Some of these posts were included in an **advertising campaign with paid advertisements** on the social network, edited again by ATM Consulting.

Analysis of economic stakeholders in its finalization phase !

ATM Consulting is the partner in charge of the **analysis of economic stakeholders** for the four countries involved. The analysis, which will continue until month 18 of the project, is **based on the methodology document**, shared among all partners within the LIVINGAGRO consortium.

The **purpose** of the stakeholder analysis is to:

- **Identify all relevant stakeholders** for LIVINGAGRO (LL1 and LL2)
- **Create a basis for stakeholder involvement**
- **Create a basis for communication** among relevant stakeholders at various levels
- **Set the scene for the implementation of virtuous circles** with positive economic dynamics in the medium and long-term.

Since the LIVINGAGRO project intends to facilitate the encounter of demand and offer of innovation in agroforestry/silvo-arable and silvo-pastoral systems of the Mediterranean basin, the **analysis of economic stakeholders is crucial to identify the target of the activities and which stakeholders can actively take part in the two Living Labs** (LLs), one on multifunctional olive systems (LL1) and the other on grazed woodlands (LL2). Until now, ATM Consulting, with the precious help of its international LIVINGAGRO partners, has **drafted the lists of economic stakeholders for LL1 and LL2** respectively, and **for each country**: Italy (Sardinia), Greece (Crete), Lebanon and Jordan. Furthermore, **two questionnaires have been**

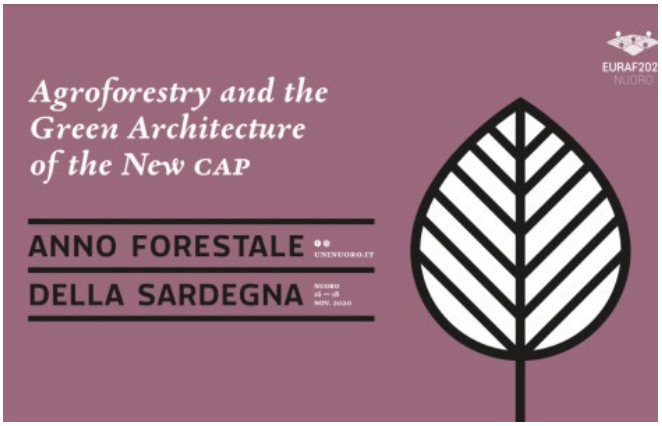
drafted for each LL, which are **in the process of being distributed** to stakeholders at the time of writing, with some of them already having been filled out, and returned. In addition, ATM Consulting is **carrying out interviews** (mostly telephone interviews, due to the impossibility of face-to-face meeting caused by the covid-19 pandemics), with the help of the international partners, **to set up an ongoing dialogue with "prominent" stakeholders**, mainly identified as **public authorities, academia, agricultural research centres, trade unions, food processors** etc.. As soon as a congruous

number of responses will have been gathered, ATM Consulting will proceed with the **in-depth analysis and statistical elaboration of the received data**.

Forest Year of Sardinia, online meeting of November 16th – 18th 2020

Agroforestry represents an opportunity for European farmers as well as **mitigating climate change**, but **administrative and knowledge barriers persist**, greatly hindering its uptake. This is what has emerged at the **online event** "Agroforestry and the Green Architecture of the new CAP" held from November 16th until November 18th 2020, **which opens the fourth Forest Year of Sardinia ahead of the fifth** European Agroforestry Conference **(EURAF2020)** to be held in the city of Nuoro on 17-18-19 May 2021.

Agroforestry corresponds to those land use systems in which trees are grown in combination with agriculture on the same land. It covers a variety of trees ranging from **forest trees** to **fruit trees** such as olive, cherry, pear, apples, almond trees etc.. In the current architecture of the **EU Common Agricultural Policy (CAP) agroforestry** is covered in **article 23** (measure 8.2) **of the Pillar II on Rural Development** whereby **financial aid** is provided for the **establishment and maintenance of agroforestry systems**. The measure can benefit private **landholders, municipalities and their associations** and can cover the **costs of establishment and an annual premium per hectare for the costs of maintenance** for a maximum period of five years. **Member states can define the minimum and maximum number of trees per hectare**, taking account of **local pedoclimatic and environmental conditions**, **forestry species** and the need to ensure **sustainable agricultural use of the land**, as well as the forest species to be planted.

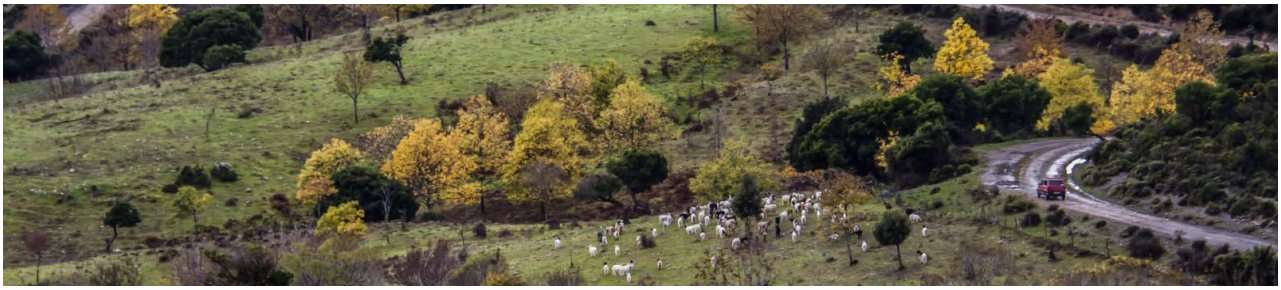


"There are two main **issues with implementing agroforestry in the current CAP architecture**", Patrick Worms, president of the European Agroforestry Federation (EURAF) said. "The first is the **administrative complexity of applying for financial aid** and the second is the **strict, rigorous definition of what you can or can't do on the land**… you are not the master of your trees. If you plant the wrong tree species for instance, you simply lose the subsidies".

The **online event** "Agroforestry and the Green Architecture of the new CAP" has seen an impressive line-up of speakers taking the floor to **emphasise the benefits of agroforestry practices which include soil conservation and improved soil quality, sequestration of atmospheric carbon, increased biodiversity, accrued crop yields, livestock welfare, energy savings.**

"**Several times national and regional rules to establish agroforestry are more restrictive than EU ones**", added Joana Amaral Paulo from the Center for Forestry Studies of the University of Lisbon. The meeting concluded that **lack of education among farmers of the benefits of agroforestry is a limit to its diffusion** within the EU. Therefore, **EURAF and its national counterparts should teach**

and inform farmers as well as lobbying with EU institutions, national and regional authorities so that agroforestry receives its due in the next CAP, which is currently under negotiation between the Commission, the European Parliament and the Council of Agricultural Ministers.



LIVINGAGRO *project has been funded by the EU under the ENI CBC Mediterranean Sea Basin Programme 2014-2020.*

The total budget of ***LIVINGAGRO*** *project amounts to 3.3 Million € with an EU contribution of 2.9 Million € (90%).*

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The ***2014-2020 ENI CBC Mediterranean Sea Basin Programme*** *is a multilateral Cross-Border Cooperation (CBC) initiative funded by the European Neighborhood Instrument (ENI). The Programme objective is to foster fair, equitable and sustainable economic, social and territorial development, which may advance cross-border integration and valorize participating countries' territories and values. The following 13countries participate in the Programme: Cyprus, Egypt, France, Greece, Israel, Italy, Jordan, Lebanon, Malta, Palestine, Portugal, Spain, Tunisia. The Managing Authority (JMA) is the Autonomous Region of Sardinia (Italy). Official Programme languages are Arabic, English and French. For more information, please visit: www.enicbcmed.eu.*

The ***European Union*** *is made up of 27 Member States who have decided to gradually link together their know-how, resources and destinies. Together, during a period of enlargement of 50 years, they have built a zone of stability, democracy and sustainable development whilst maintaining cultural diversity, tolerance and individual freedoms. The European Union is committed to sharing its achievements and its values with countries and peoples beyond its borders.*

CONTACTS

Fo.Re.S.T.A.S. (LIVINGAGRO project Leading Partner)
Viale Luigi Merello, 86 • 09123 Cagliari • Italy
Tel. +39 070 279 91 • livingagro.project@forestas.it

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