

LAYMAN'S REPORT OF THE LIFE MAGIS PROJECT

Calculate and communicate the
environmental impact of products
with Product Environmental Footprint
and Made Green in Italy



THE CONTEXT

Companies use environmental topics in the communication of their products more and more frequently but too often they use vague, inaccurate, unverifiable, or even misleading statements and claims.

Potential customers and consumers, although increasingly interested in evaluating offers also for their impact on the environment, as a result become wary of the credibility of the environmental claims reported on products and the proliferation of unclear commercial practices linked to the topic of sustainability.

To **maintain the economic competitiveness** of European products on global markets, at the same time **minimizing negative impacts on the environment**, it is necessary for all actors involved to have available information on the environmental benefits, economic savings, and commercial opportunities that a more efficient and circular use of resources can bring.

With the **“European Green Deal”**, the European Commission is committed to ensuring that consumers have the power to make more informed decisions and play an active role in the ecological transition.

In **“A new Circular Economy Action Plan for a cleaner and more competitive Europe”**, one of the tools promoted by the Commission to support this objective is the Product Environmental Footprint (PEF), a method that quantifies the environmental performance of products through indicators such as global warming or land and water use, during their whole life cycle (i.e. pre-production, production, distribution, use and consumption, end of life).

At the same time and with the same objectives, in Italy **the Ministry of the Environment has promoted Made Green in Italy**, a voluntary scheme that adopts the PEF for the evaluation and communication of the environmental footprint of "Made in Italy" products.

THE LIFE MAGIS PROJECT

The **LIFE MAGIS – MAde Green in Italy Scheme** project experimented how to use PEF and Made Green in Italy to deal in a reliable and transparent way with the measurement and environmental communication of products in some Italian supply chains in the agrifood, window production, and leather sectors.

The project, co-funded by the **LIFE Programme** of the European Union, started in **September 2019** and ended in **April 2023**.

The two **main goals** of the project partners were:

- contribute to **giving citizens and consumers** interested in sustainability and the environment **reliable and comparable information on the environmental impacts of products**, to help them make informed and conscious choices
- **help Italian companies** that are committed to reducing the environmental impact of their products to **highlight their qualities and efforts**, to make them more competitive.

From the point of view of **results**, the partners involved in the project have:

- developed proposals for new **PEF Category Rules (PEFCRs) and Product Category Rules (PCRs)**, i.e. guidelines for applying PEF and Made Green in Italy
- carried out **tests with some Italian companies** on the use of PEFCRs and PCRs to study the environmental impact of their products
- helped the companies involved to use the results of the studies to integrate the **communication** of their products and identify **improvement plans**
- created **procedures for reviewing** PEFCRs and PCRs **and for verifying and validating** studies
- transferred their **experience** to other supply chains in Italy and abroad
- made **materials and tools** available to facilitate the implementation of other studies.

THE PROJECT PARTNERS

The LIFE MAGIS partners are research institutions and universities, trade associations, consortia, and an agricultural producer organization. The agri-food, window production and leather sectors are represented.



PROJECT COORDINATOR

ENEA is the National Agency for New Technologies, Energy and Sustainable Economic Development, a public body aimed at research, technological innovation, and the provision of advanced services to enterprises, public administration, and citizens about energy, environment and sustainable economic development.

www.enea.it



Apo Conerpo Società Cooperativa Agricola is the main organization of fruit and vegetable producers in Europe. It includes "historic" Cooperatives of Emilia-Romagna region and other important production companies located in Northern, Central, and Southern Italy involved in collection, conservation, processing, packaging, and shipping of fresh fruit and vegetables.

www.apoconerpo.com



The **Consortium for the Protection of Pecorino Romano Cheese PDO** was assigned the task of supervising the production and trade of Pecorino Romano in 1981 by the Ministry of Agriculture. Since 1996 it has held the PDO brand which protects and supervises the production and trade of Pecorino Romano, the denomination in Italy and abroad and deals with increasing consumption and improving the quality of the product.

www.pecorinoromano.com

 **Consiglio Nazionale delle Ricerche
Istituto per la BioEconomia**

The **Institute of BioEconomy of the National Research Council – CNR IBE** deals with the definition of mitigation and adaptation strategies to global changes, and the development of sustainable systems for the use of bioresources for food, manufacturing, construction, and energy purposes.

www.ibe.cnr.it



Legnolegno is a national Consortium which offers services aiming at making the most of entrepreneurial activities in the sector of doors and windows accessories and fittings. It gathers more than 1,000 artisan and small-industry realities of the window and furniture sector and cooperates with 30,000 business operators.

www.legnolegno.it

LINEAPELLE

Lineapelle is the company service of the Italian Tanners' Association (UNIC – Concerie Italiane). In addition to trade fairs organization, Lineapelle supports UNIC by statute carrying out activities of development and promotion of environmental, economic, and social sustainability of the tanning industry by using its own staff.

www.lineapelle-fair.it



The **Institute of Sustainability in Civil Engineering (INaB)** started on 1st June 2017 under the Faculty of Civil Engineering at RWTH Aachen University. Its research focus is on the development and implementation of methods, labels, ratings and tools for measuring the economic, social, and environmental sustainability performance of products, services, and communities.

www.inab.rwth-aachen.de



Scuola Superiore Sant'Anna is a public university working in the field of applied science. In the university, the Institute of Management is one among the research centres of the school's Economics department, within which a team of professors and researchers oversees studies and researches on sustainability (sustainability management).

www.santannapisa.it



quality, taste and pleasure

Unione Italiana Food was born from the union of two of the most representative associations of the Italian food category, AIDEPI (Association of Italian Sweet and Pasta Industries) and AIIPA (Italian Association of Food Products Industries) to enhance and protect companies, products, and sectors among which coffee, baked goods, and ice cream.

www.unioneitalianafood.it

THE REPRESENTED SUPPLY CHAINS AND PRODUCTS

The LIFE MAGIS project experimented with the whole journey of the Made Green in Italy scheme for the following products and their supply chains.

Pecorino Romano PDO

Naturally lactose-free and with a millennial history, more than 95% of Pecorino Romano PDO is produced in Sardinia and for the remaining part in Latium region and in Grosseto province. Within the PDO system, Pecorino Romano represents 52% of sheep milk-based products in the European Union and 85% in Italy. Its production system, regulated by a product specification, involves 12,000 sheep farms, 25,000 workers, and 40 cheese factories. The Pecorino Romano production value is equal to EUR 230 million.



Coffee

Coffee is obtained by roasted and ground seeds of some plants of the *Coffea* genus, which are part of Rubiaceae, a family of tropical plants having more than 66 species. Two of them are universally known, cultivated, and commercialized: *Coffea arabica* and *Coffea canephora*, called Robusta. Consumed with the classic “coffee break” at work, a gesture of hospitality when inviting someone home or simply to start the day loaded thanks to caffeine.



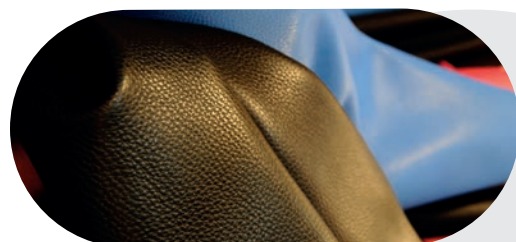
Onion of Medicina

Cultivated in the Bolognese plain since the middle Ages, the onion of Medicina is registered with collective mark at the Chamber of Commerce and is grown on a total area of 700/800 hectares, distributed in 6 municipalities in the province of Bologna (Medicina, Castel Guelfo, Castel San Pietro Terme, Ozzano Emilia, Dozza, and Imola). About 10% of the national production is attributable to the Cipolla di Medicina brand, which sees around 150 farms with 500 operators on the territory.



Finished leathers

Leather is a natural and renewable material. It is an example of circularity because it comes from the recovery of a by-product from the food industry and has exceptional properties, derived from its natural structure that guarantees resistance, flexibility and adaptability to various shapes, transpiration, and thermal insulation. Thanks to its characteristics and versatility, leather has always been able to inspire the creative choices of fashion, the accessory industry, luxury, design, and car interiors.



Ice cream

They include "Impulse" and "Take-away" categories. "Impulse" includes classics of the Italian ice cream tradition, such as "stecco", "cono" or "cornetto" (ice cream cone), "coppetta" (paper-cup ice cream), and "ghiacciolo" (popsicle or ice pop). "Take-away" identifies a packaging modality, in multiple servings, typically targeted to home consumption. This category includes the so-called "multipacks", "vaschette e secchielli" (ice cream cartons and vats), "torte" and "tranci" (ice cream cakes) and the so-called "table specialties".



Italian seasonal leavened cakes

They are Panettone and Pandoro, typically Italian seasonal bakery products, but also true ambassadors of the "Made in Italy" tradition abroad – and they are increasingly appreciated everywhere around the world. Since 2005, the quality of Panettone and Pandoro is guaranteed by a Decree adopted by both the Ministry of the Production Activities and by the Ministry of the Agricultural Policies, establishing the definition and composition of these traditional Italian bakery products.



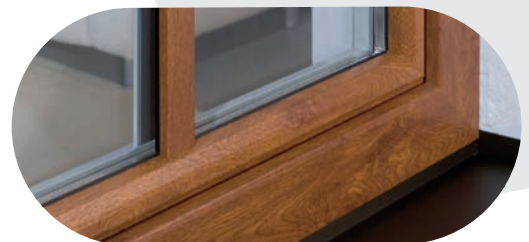
Non-puff pastries

They are small, single-portion cakes based on sponge cake or short pastry. Besides guaranteeing constant control on hygienic and technological features, nowadays' confectionery industry, working at close contact with many nutritionists, ensures the optimal nutritional composition for these products, in order to follow modern nutritional needs by preferring the simpler recipes and enriching them with natural ingredients such as fibres, yoghurt, and fruit.



Wooden windows

Wooden windows and doors constitute one of the main components of the external envelope of buildings. In recent years, the changing and growing needs in terms of energy saving, acoustic insulation, and protection from atmospheric agents have led to a rapid and incisive development of these products, both from a technological and aesthetic point of view. A natural connection point between the inside and the outside, windows and doors today represent one of the main elements of liveability and valorisation of buildings.



THE RESULTS OF THE PROJECT

To learn more about the results produced by LIFE MAGIS, you can consult the “Results” section of the project website (www.lifemagis.eu).

Product Environmental Footprint Category Rules (PEFCRs)

During the LIFE MAGIS project, the partners developed new proposals for Product Environmental Footprint Category Rules (PEFCRs), i.e. **the guidelines for applying the PEF method to specific types of products** taking into consideration the characteristics of their production processes and supply chains.

Seven PEFCRs dedicated to the Italian market have been developed, one for each of the eight LIFE MAGIS product categories except finished leathers, for which a European-level PEFCR developed during the pilot phase of the PEF method is already available.

To obtain this result, the partners carried out **an environmental impact study on an average representative product for each category**, e.g. they studied with the PEF method the average environmental footprint of the non-puff pastry or of the wooden window that the Italian consumer finds available on the market. The experience of these studies has made it possible to define the guidelines that a company that falls into one of the categories considered and wants to carry out a PEF study on one of its products must follow.

In each PEFCR it is specified which category of products the guidelines apply to, which phases of the product life cycle are to be considered, which indicators must be calculated, how to collect data within the company or from its suppliers, which default data are to be used when direct collection is not possible, and how the impacts should be calculated.

The results of the analysis carried out on the average Italian product, which constitutes **the benchmark for that product category**, are also presented.

Product Category Rules (PCRs) for the Made Green in Italy scheme

The LIFE MAGIS project then created new proposals for Product Category Rules (PCRs), i.e. **the guidelines of the Made Green in Italy scheme specific for each product type** and which must be followed by companies that want to try to obtain the Made Green in Italy label.

There are **eight LIFE MAGIS PCRs**, one for each product category on which the project worked, and they were developed starting from PEFCRs by adding the elements that characterize the Made Green in Italy scheme. In fact, in the PCRs there are **not only the rules for carrying out the environmental impact study but also the three performance classes** with which every product that wants to obtain the Made Green in Italy label must compare.

Based on the results obtained from the average Italian product (benchmark), for each category in the PCRs the following are defined: class A, which includes products with better environmental performance than the benchmark, class B, which includes products in line with the average, and class C, which includes products whose environmental footprint is worse than the national average and therefore do not obtain the Made Green in Italy label.

The development of the PCRs is **part of the experimentation of the application path of PEF and Made Green in Italy** carried out by the LIFE MAGIS partners but these documents can also **become in some cases the official ones adopted by the Italian scheme**. This is the case of the PCR for **ice cream cartons and multipacks**, currently already valid, and that of **sheep hard cheese**, being presented at the time of this publication.

Testing of the developed PEFCRs and PCRs with pilot companies

Twenty-one Italian companies were involved in the project, whose products are part of the types studied by LIFE MAGIS. With the support of the project partners, each company **analysed the environmental impact of one or more of its products** using the reference PEFCRs and PCRs and **created the Product Environmental Footprint Declaration for each product**, as required by the Made Green in Italy. **The guideline developers** received from companies **guidance on the clarity, completeness and applicability to real-world cases** of their PEFCRs and PCRs. **The companies** were able to compare themselves with PEF and Made Green in Italy, identifying **environmental critical issues and potential for improving** their products.

Environmental improvement plans

The Made Green in Italy scheme requires that products with class B results to obtain the label must also present, together with the request and the results of the impact analysis, an improvement plan, which details **the actions that will be undertaken in the next three years to improve the environmental performance of the product**.

During the LIFE MAGIS project, regardless of the results obtained, **all the companies** involved in the experimentation **defined improvement plans** for their products, to also deal with this part of the scheme. The plans outline actions that could be taken, for example using renewable sources to produce energy for production processes or designing more environmentally sustainable packaging.

Review, verification and validation procedures

The LIFE MAGIS partners were faced with the need for PEFCRs, PCRs, and studies to also be evaluated by **subjects external to the working groups** that produced them, **to guarantee their quality and reliability**. For this reason, within the project **procedures** have been developed **for reviewing the PEFCRs and PCRs and for validating and verifying the environmental impact studies** carried out following those guidelines.

The review procedures were used for the analysis of the PEFCRs and PCRs by groups of environmental assessment experts internal to the project but not involved in the specific supply chains, who reported **possible corrections and suggestions to improve** the individual guidelines.

For the verification and validation, experts external to the project were also involved who, working in groups and with the project partners, **verified that the studies conformed** to the PEFCR and PCRs followed and **validated that the data used were reliable, credible, and correct**.

Datasets to carry out new studies

For each product category, the project has made public one or more "datasets", i.e. **a set of data that represents all the processes** (materials, energy, manufacturing, etc.) **linked to the life cycle of the product itself or its parts, ingredients, or production processes**. The datasets can facilitate the implementation of other environmental impact studies. For example, a food product that has onion of Medicina as an ingredient can use the dataset to integrate everything that has to do with that ingredient into the calculation of its overall life cycle.

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Communication campaigns to raise awareness on PEF and Made Green in Italy

To **make the PEF method and the Made Green in Italy scheme known to the general public and increase companies' awareness** on these issues, LIFE MAGIS produced a communication campaign through Facebook which, at the time of this publication, has reached **more than 4 million people in Italy and the rest of Europe**. Part of the campaign is **a series of educational posts** that explain, for example, the environmental impact categories considered by the PEF method or what is greenwashing, that facade ecologism at the basis of deceptive commercial practices that PEF and Made Green in Italy want to contribute to fight. The campaign also includes **two videos**, one on PEF and one on Made Green in Italy, both in Italian and English versions, and **some quizzes** to allow visitors to test and improve their knowledge of environmental issues related to products and purchases.

An app to explore the environmental impact of a product

Thanks to the **collaboration with GS1 Italy**, a non-profit organization that deals with communication standards between companies and the issuing of barcodes in Italy, LIFE MAGIS was able to experiment with a way to allow consumers and customers to deepen their knowledge of the environmental impact of a product in a simple and effective way. In fact, **a mobile application has been developed that allows access to environmental information** linked to a product (for example its Product Environmental Footprint Declaration) uploaded onto a dedicated platform **simply by reading the barcode** of a product that has participated in the trial.

Communication campaigns on products, supply chains, and the environment

LIFE MAGIS pilot companies and project partners experimented with **various ways to integrate LIFE MAGIS themes and results into product communication**.

Some companies have made the Product Environmental Footprint Declarations of the products analysed available **on the pages of their company websites or on social networks**. **Television programs** have been created and broadcast to talk about LIFE MAGIS products and their environmental performance, for example the program dedicated to the onion of Medicina, followed by almost 50,000 people and then made available through YouTube to thousands more viewers. **Communication activities in the point of sale** were organized, such as the spaces set up by the window companies in their showrooms to distribute leaflets on the environmental performance of the windows analysed during the project. The **sector fairs** were also a vehicle for the results of LIFE MAGIS, for example Lineapelle, the most important international leather fair, and Cibus, the reference event for the Made in Italy agri-food sector, each with more than 20,000 visitors.

Thanks to the collaboration with **Altroconsumo**, a consumer organisation, some **videos were created to explain the project and its goals** in the ice cream, coffee, non-puff pastries, and Italian seasonal leavened cakes supply chains.

Training for students, professionals, and associations

In addition to making the project activities and results known through events and publications, LIFE MAGIS themes have been integrated into **university and training courses for professionals**, into events dedicated to **journalists** and into information campaigns for **associations and non-profit organisations**.



Transfer the experience to other countries and other supply chains

The LIFE MAGIS partners have collaborated with **associations and groups of companies representing Made in Italy supply chains different from those of reference of the project**, to share the experience gained and encourage the launch of similar paths in other sectors and for other categories of product. **Production of fruit and vegetables, fodder, meat, ornamental stones, fashion:** these are some of the sectors with which the LIFE MAGIS partners have organized meetings and training courses, transferred knowledge and suggestions to start paths to valorise the environmental qualities of Italian products. At the same time, LIFE MAGIS shared the experience gained for the project eight reference product types with **companies and associations outside Italy that work with the same type of products**. This allowed the partners to interact both with national organizations, in particular in **Germany, Austria, Spain, and Belgium**, and with **European organizations that bring together the national representations of various countries**, to discuss the work done for coffee, ice cream, non-puff pastries, onion, sheep hard cheese, and window frames.



LIFE MAGIS

MAde Green in Italy Scheme



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