

# THE SUSTAINABILITY OF SMALL AND MEDIUM GIs

A STUDY BASED ON  
AREPO MEMBER  
REGIONS AND  
PRODUCER  
ASSOCIATIONS

# STUDY ON THE SUSTAINABILITY OF SMALL AND MEDIUM SIZED GIS

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## CONTACTS

The [Association of European Regions for Products of Origin \(AREPO\)](#) brings together 33 European regions and more than 700 associations of producers for over 60% of European GIs. AREPO aims to promote and defend the interests of producers and consumers in European regions committed to promoting quality agri-food products.

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## INTRODUCTION

In today's agri-food system, typical products are the object of great attention from many subjects. The system of **Geographical Indications (GIs)** is universally recognised as the most advanced and the most capable, both in Europe and worldwide, of guaranteeing the highest quality to the consumer and enhancing territories of origin, both from a socio-cultural and economic point of view.

They represent the most attractive part of our food system and guarantee a quality product, helping producers market their artefacts better.

The term Geographical Indication identifies a product linked to a specific territory. It is defined in the Agreement on Commercial Aspects of Intellectual Property Rights ([TRIPs Agreement](#)), approved in 1994 by the General Agreement on Customs Tariffs and Trade ([GATT](#)) in Marrakech.

Expressly, in articles 22 and 23, it is stated that *"Geographical indications are, (...) indications that identify a good as originating in the territory of a Member State, or a region or locality in that territory, where a given quality, reputation or other characteristics of the asset is essentially attributable to its geographical indication"*. Therefore, we mean the link between the food product and intrinsic or extrinsic characteristics having a geographical origin.<sup>1</sup>

The bond can be more or less intense; Investigating the link between the quality and the geographical origin of a product means, among other things, exploring how this link can be protected and promoted within a free market, in a necessarily transnational and global dimension. It also means understanding its impact on the area of origin in terms of economic, social and environmental sustainability, favouring healthy and balanced rural development.

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### 0.1.1 PURPOSE AND OBJECTIVES

This study stems from the request of AREPO member regions to analyse and assess the situation and needs of small and medium-sized Geographical Indications and their producers at the EU level, with the aim to gain an in-depth understanding of the context.

Specifically, the study will **investigate the weaknesses and the difficulties that these GIs often face, identifying the main issues related to the sustainability of these productions and the eventual good practices developed**, in order to elaborate policy recommendations. The starting point for this study is the observation of the lack of resilience of small and medium-sized GIs. As a matter of fact, although they are the majority of EU GIs (90%), they represent a small percentage (40%) of the economic value of the EU GI sector. The final report published by the European Commission entitled "[Study on the economic value of EU quality schemes, geographical indications \(GI\) and traditional specialties guaranteed \(TSG\)](#)" highlights the significant differences in size between Geographical Indications, underlining that only 24 products hold 42% of the market.<sup>2</sup>

Furthermore, despite being small productions with limited resources, they are subject to the same obligations and costs as bigger GIs in terms of setting up and managing of the producer group, certification and promotion.

Several Member States and Regions have adopted different measures and aid systems for these small productions, which will be presented as well throughout this analysis.



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### 0.1.2 STRUCTURE OF THE STUDY

The study is divided into five main parts for the purposes mentioned above.

- **The introduction** contextualises the meaning of **sustainability** and the dimensions in which it is declined in relation to agri-food products and, particularly, GIs.
- **The first part concerns collecting and analysing available economic and production data.** The priority is to provide a clear picture based on solid data, to better understand GIs' weaknesses. To this end, data were collected from different AREPO member regions in order to illustrate the economic production situation, always with a view to sustainability.
- **The second part concerns the analysis of the answers to a questionnaire addressed to regional authorities.** AREPO has submitted a questionnaire to its associate members to understand the region's perception of the topic. The questionnaire's objective was to understand the point of view of the public authorities that deals with GIs. It was fundamental for identifying the main needs and the issues faced by producers, as well as the case studies to be further analysed.
- **The third and last part is dedicated to six case studies. Through the questionnaire submitted to AREPO member regions, six GI value chains have been identified: *Gata Hurdes* PDO (extra virgin olive oil), *Höri Bülle* PGI (onion), *Marrone di Caprese Michelangelo* PDO (chestnut), *Patates de Prades* PGI (potato), *Pefkothymaromelo Kritis* PDO (honey) and *Valençay* PDO (goat cheese). Interviews were also used to collect data.** This phase was pivotal as it made it possible to compare the producers' point of view with the feedback collected from the regions, as well as to understand the issues that each production has been facing, how producers are coping with them, and which solutions and good practices could be proposed and shared.
- **The study's conclusion lists policy recommendations and possible strategies** to provide various forms of support for small and medium-sized GIs. Recommendations and suggestions are addressed to different actors on all levels.

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## INTRODUCTION ENDNOTES

<sup>1</sup> TRIPs Agreement adopted in Marrakech 15 April 1994 concerning intellectual property rights relating to trade ratified by Italy with law 29 December 1994, n. 747 [https://www.wto.org/english/docs\\_e/legal\\_e/27-trips\\_03\\_e.htm](https://www.wto.org/english/docs_e/legal_e/27-trips_03_e.htm)

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## PART ONE. CONTEXT: SUSTAINABILITY AND LEGAL FRAMEWORK

## 1.1 SUSTAINABILITY AND LEGAL FRAMEWORK

### 1.1.1 CONTEXT: GIS & SUSTAINABILITY

**The concept of sustainability** is one of the most up-to-date and finds application in many areas, not just food. Together with the concept of **resilience** (See **BOX 1 - RESILIENCE**), the term sustainability is being applied to the agri-food sector to achieve healthy and sustainable development of rural, urban, mountain, island and remote communities. Suffice it to say that alongside the “green” theme, food sustainability has developed a concept that proposes the consumption of nutritionally healthy food grown with a low environmental impact.<sup>3</sup>

**Food and sustainable development promote a careful selection of the foods brought to people's tables**, considering values such as the seasonality of products and adopting a diet that improves the planet's condition.

The Food and Agriculture Organisation ([FAO](#)) of the United Nations defines sustainable food as food with a reduced environmental impact that meets nutritional guidelines regarding affordability, accessibility, and cultural acceptability.<sup>4</sup>

In this sense, sustainable agriculture means an integrated system of plant and animal production with a local application that can develop human needs, improving the quality of natural resources through the use of renewable and self-produced resources.

Economic and social sustainability are considered fundamental to the impact of food systems. On the other hand, the consumer plays an important role in environmental sustainability and proper nutrition. It is important to adopt certain behaviours that play a fundamental role in determining the healthiness of the environment.

**The literature defines sustainability in four primary forms.** It is often mentioned about **economic, environmental, social and nutritional sustainability**. The concept of nutritional sustainability is included in the concept of social sustainability.

As far as sustainability assessment for geographical indications is concerned, the study considers an approach involving the first three declinations.

The concept of sustainability is complex and subject to many interpretations. The most widely accepted definition dates back to 1987, published in the report "[Our Common Future](#)" by the World Commission on environment and development of the United Nations Environment Programme. Sustainable development is defined as *"development that ensures that the needs of the present generation are met without compromising the ability of future generations to meet their own needs"*.<sup>5</sup>

To summarise the concepts helpful in understanding the type of assessment that is carried out, the study lists **three short definitions** based on existing literature:

**BOX 1 - RESILIENCE** is the ability of an individual, a household, a community, a country, or a region to withstand, cope, adapt, and quickly recover from stresses and shocks.

Today in the agri-food sector, it is often associated with the system's ability to adapt to climatic, environmental, economic, social and health crises. New policies are geared towards reinforcing the concept and building an increasingly strong, resilient, and adaptive EU.

- **Economic sustainability: guaranteeing economic efficiency and income for businesses.** The system must produce income and long-term work, benefiting producers throughout the production chain, from producer to consumer. From an economic point of view, GIs have a substantial impact on prices, often ensuring a premium price for the product and a stabilisation of the market price. The system leads to profits for the individual producer and the production chain of GI products. With the GIs system, there are benefits in terms of economic return and added value. This system of intellectual protection and the increased reputation of both the product and the GI system on several levels leads to a diversified production that can open up new marketing channels.<sup>6</sup>

The costs are mainly related to the bureaucratic processes involved, including costs directly linked to inspection and certification. In addition, costs for adapting production to the GI product must also be considered.

From the point of view of the system of governance and producers' organisations, systematic GI production encourages producers to link up. Producers are inclined to create networks and connections by coordinating horizontally and vertically to the chain. If the system is "healthy", it induces cooperation to redistribute profits along the chain. Moreover, cohesion leads to a global image of the chain, which is optimal for marketing and promotion of the product. If the governance related to the producers' organisations is efficient, producers can gain bargaining power along the food chain. They can potentially modify the organisation of the market and intervene in the determination of price, either by controlling supply (creating a higher demand and increased price) or through an agreement among the value chain. Furthermore, the GI product generates value indirectly when it is used as an ingredient in a processed product.<sup>7 8</sup> When considering socio-economic sustainability, the intersection of the two visions emphasises fair taxation, business ethics, trade, workers' rights and sustainable governance (i.e., everything related to management groups at multiple levels, from institutions to producer organisations. The concept of governance sustainability, as you will read in the following chapters, plays a central role in the development of GIs ).

- **Social sustainability: ensuring citizens' quality of life, security, safety and services.** Social sustainability is achieved by strengthening social cohesion and enabling all citizens to participate, creating connections and networks between and among producers and consumers.

Promoting linkages between local producers, their local areas, consumers and their food products through geographical indications is recognised as a pathway to sustainable development. Their food products are recognised as a pathway to nutritious food systems and sustainable development for rural communities through GIs. GIs can reduce asymmetrical information between producers and consumers by providing information about the origin link and consequently increasing consumers' willingness to pay higher prices, awareness, and perception.<sup>9</sup>

The creation of networks between the various stakeholders strengthens the social net and consumer awareness of being part of a quality system. The GI system impacts the communication of culture and territory, carrying forward the various aspects of traditionality by transmitting them both outside and inside the area.

The GI system also impacts the educational field by attracting young people to production and encouraging generational change. If the GI is included in public procurement systems, consumer awareness is raised, starting with the youngest consumers, strengthening cultural cohesion and education towards quality systems.<sup>10</sup> Moreover, from a social point of view, the system encourages and promotes the development of GI tourism. Several examples of this process can be observed in the effect that GIs have on tourism, encouraging gastronomic tourism even in disadvantaged and

## **BOX 2 - Foodscape**

The term 'Foodscape' is a fusion of the words 'Food' and 'Landscape'. The term has developed in the geographical field and has been extended to the social and environmental spheres. The term refers to the alimentary landscape, i.e. the set of all the actors and elements that make up a food system (from the producer to the consumer) and that are part of a geographical area, impacting on it and modifying its landscape both in a narrow and broader sense.

The idea of foodscape is declined by considering different types of food systems and analysing their influence on the social, economic and productive sectors.

rural areas. This is the driving force for investing in the community by creating social activities, events, and projects to enhance and manage cultural heritage.<sup>11</sup> Social sustainability also involves nutritional sustainability and thus factors concerning adequate nutrition, the concepts of **nutrition security, food safety, food security and food system sustainability**.<sup>12</sup> The intersection between the social and environmental fields leads to the enhancement of respect for the environment and the places we live in, public involvement in positive environmental actions, reporting & publishing.

- **Environmental sustainability: ensuring the availability and quality of natural resources, respecting the environment in all its forms, and implementing a kind of renewable resilience to new climate challenges,**

**now exacerbated by human action.**

The GI system has an impact in the field of agrobiodiversity, succeeding in supporting it and maintaining varieties of plants and animals that have been established over time and are part of a culture. In addition, the GI scheme, although voluntary, has positive effects on animal welfare, land, soil, water, and other resources involved.

More indirectly, strong tourism and social fabric development raise awareness of environmental protection and maintaining landscapes, including the "*foodscape*" (See BOX 2 - Foodscape ).<sup>13</sup>

Environmental sustainability also includes provisions to reduce food waste. According to the FAO, the primary objectives to be achieved are:

- **Consuming less food:** undernourishment is still a reality in large part of the planet. Overconsumption of food is widespread globally. Overeating encourages a type of agriculture and livestock breeding that is intensive and disrespectful of nature's rhythms, as

well as having an often-noticeable environmental impact;

- **Less food waste:** an estimated 88 million tonnes of food are wasted in Europe, 53% of which is household waste.<sup>14 15</sup>

- These three pillars are thought to go hand in hand, but a **scale of priorities** is identified in the literature. **Economic sustainability** is given greater importance in today's productive society than **social sustainability**, which comes second, and **environmental sustainability**.

However, the trend is currently changing, which can be seen in the orientation of the European institutions. It can increasingly be said that without one of these pillars, the others will have great difficulty holding up.<sup>16</sup> The intersection between the concepts of environmental sustainability and

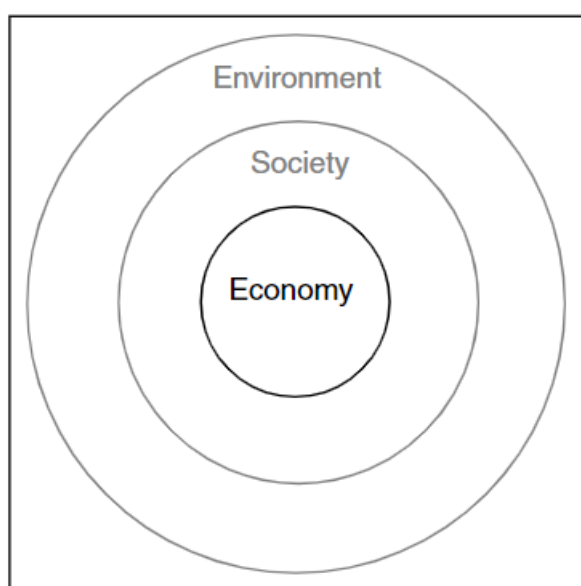


Figure 1 "Old" sustainability scale of priorities. Source: see reference 18

economic sustainability leads to the enhancement of energy efficiency in production, the development and use of specific subsidies and all actions, including carbon credits, to promote emissions reduction.

In geographical indications, **the sustainability of governance** and management also plays a critical role in the supply chain itself.

This concerns the issues of company management inspired by good practices and ethical principles. In this context, the issues under scrutiny concern the logic linked to remuneration, everyday actions dictated regarding protection, promotion and innovation, transparency of decisions and common choices concerning the other pillars.<sup>17</sup>

It must be emphasised that sustainability has a more significant impact if the consumer is sustainable. **The consumer** is then the element that enhances these choices and, if the system is appropriately interconnected, leads to the achievement of the set objectives.<sup>18 19 20</sup>

Sustainability is an element that accompanies the supply chain at all stages.

The following section will contextualise the legislative framework in which the link between sustainability and GI is found.



Figure 2 "New" sustainability concept. Source: see reference 19

### 1.1.2 SUSTAINABILITY IN THE EU LEGISLATIVE FRAMEWORK

This study will mainly deal with the sustainability of agricultural products and foodstuffs.

GIs and TSG products are an integral part of the **Common Agricultural Policy (CAP)**, that, following its reform<sup>21 22 23</sup>, has brought **a streamlining of the legal framework concerning GIs and addressed** sustainability in a voluntary way, thus leaving to producers the choice of including sustainability criteria in the product specifications.

In order to maintain farming activities throughout the European Union, the CAP also implements funding schemes for farmers. The CAP aims to ensure that farmers receive a fair return from the market and improve their food value chain position. Rural development programmes, particularly, contain a measure supporting farmers and groups of farmers wanting to join quality schemes, established at the national/regional or EU level (including GIs and TSGs), and provide support for information activities on quality products.<sup>24</sup>

Leading the way in implementing sustainability for agrifood stuff production is the [Farm to Fork strategy](#).

In the **Farm to Fork strategy**<sup>25</sup>, the Commission commits to strengthen the legislative framework for GI schemes, including specific sustainability criteria where appropriate, as well as the position of farmers and GI producer groups in the food supply chain. Furthermore, it intends to propose a legislative framework for a sustainable food system by the end of 2023.

From another perspective, the [Commission's Intellectual Property Action Plan](#) aims to improve the GI protection system to make it more effective and combat counterfeiting.<sup>26</sup> Considering the benefits of intellectual protection, the action plan will be crucial for GIs economic and social sustainability.

Moreover, [Promotion policy](#) aims to boost the competitiveness and consumption of European quality products both in internal and third countries markets.

Plus, [EU regulations on organic agriculture](#) must be mentioned. Organic production is regulated at the EU level by Council Regulation (EC) No 2018/848<sup>27</sup> and amending regulations published between 2020 and 2021.<sup>28</sup>

These two quality schemes are complementary, sharing many features and objectives. Hence, synergies can be created between organic production and GIs/TSGs, promoting environmental and social sustainability. Consumers would benefit from a 'double' quality linked to communication, traceability, and tracking factors, ensuring a premium price to producers and an adequate return and investment potential.

The European Commission's study on economic value of EU quality schemes showed that more than half (61%) of GIs/TSGs are produced to some extent in line with the rules for organic production; 23 % of these reached a proportion of organic production exceeding 25 %.<sup>29</sup>

Results from the survey of national authorities suggested that there is no competition between the two types of schemes. As reported by the EC study, out of 27 Member States that responded, 20 did not believe that the producer is discouraged from producing organically due to the success of GI schemes.<sup>30</sup> It will be observed at a later stage of this research, however, that a case study will present a reversed situation where producers prefer to certify organic instead of producing under geographical indications.

Concerning social sustainability and, specifically, nutrition, the [European food safety policy, as well as measures adopted in the framework of EU](#) health policy must be mentioned.

Food and nutrition play a crucial role in achieving the EU's health objectives, especially when it comes to obesity and Noncommunicable diseases (NCDs).<sup>31</sup>

European Commission intends to address these issues in the Farm to Fork strategy and in the [European beating cancer plan](#).<sup>32</sup> The provisions mainly concern the transition to a more plant-based diet and provisions for the healthy consumption of alcoholic products.<sup>33</sup> In the framework of the transition towards a healthy diet, [food labelling policy](#) is also crucial as an effective tool for the correct communication of information to consumers. Food labelling at European level is disciplined by [Regulation \(EU\) 1169/2011](#) on the provision of food information to consumers.<sup>34</sup>

The nutrition declaration is mandatory and harmonised on the back of the package and can be complemented with a voluntary communication on the front of the package (FOPNL).

According to the EC roadmap, there will be further harmonisation of rules in the future, especially with regard to environmental claims and **food sustainability aspects**.

EU [trade policy also takes sustainability aspects into account](#). It contributes to economic growth, job creation and the integration of all countries, including developing countries, into the world economy. As an intellectual property right, GIs are among the EU's trade policy interests, as reflected in the EU's trade agenda in recent years. Trade agreements have helped to protect EU GIs against unfair practices in non-EU markets. In particular, trade policy greatly assists the export of GIs products.<sup>35</sup>



## ENDNOTES PART 1

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## PART TWO. DATA COLLECTION AND ANALYSIS

## 2.1 DATA COLLECTION AND ANALYSIS

### 2.1.1 METHODOLOGY

This chapter will contextualise the world of geographical indications from a socio-economic point of view. The reference text, which best represents this situation, is the report "*Study on the economic value of EU quality schemes, geographical indications (GIs) and traditional specialties guaranteed (TSGs)*" conducted by AND International Studies for DG Agri and published by the European Commission on 12/02/2021.<sup>36</sup>

This study collected and analysed economic data on GIs and TSGs registered in the 28 Member States (including UK) of the European Union over the 2011-2017 period (3,153 GIs and 54 TSGs).

Commissioner for Agriculture, Janusz Wojciechowski, said: *"European Geographical Indications reflect the wealth and diversity of products that our agricultural sector offers. Producers' benefits are clear. They can sell products at a higher value to consumers looking for authentic regional products. GIs are a key aspect of our trade agreements. By protecting products across the globe, we prevent fraudulent use of product names, and we preserve the good reputation of European agri-food and drink products. Geographical Indications protect local value at the global level."*

According to the European Commissioner for Agriculture and Rural Development's statement about this report, the benefits of the tools for protecting quality indications are manifold based on the data presented.

According to the study, there is a clear economic benefit for producers in marketing. It registers an increase in sales thanks to the high quality and reputation of these products, and a significant willingness of consumers to pay, with the idea of getting an authentic product.

### 2.1.2 PRESENTATION OF THE CURRENT SITUATION OF THE GI WORLD: THE ECONOMIC STATUS

The main findings of the study are very positive.

From the sales point of view, there is significant sales value: GIs and Traditional Specialities Guaranteed, all together, accounted for an estimated sales value of €77.15 billion in 2017, 7% of

Figure 3 Sales value by the scheme in the EU between 2010 and 2017 (million euros)

	2010	2011	2012	2013	2014	2015	2016	2017
Wines	29 630	32 099	33 934	34 976	35 741	37 586	37 889	39 418
Agricultural products and foodstuffs	16 603	19 672	21 433	21 922	23 068	23 714	26 074	27 339
Spirit drinks	8 249	9 140	9 458	9 500	9 063	9 456	9 493	10 347
Aromatised wine products	31	36	35	32	37	39	39	43
Total GIs (excluding TSGs)	<b>54 513</b>	<b>59 357</b>	<b>62 852</b>	<b>64 215</b>	<b>66 151</b>	<b>69 483</b>	<b>71 592</b>	<b>74 759</b>
Total (GIs + TSGs)	<b>54 513</b>	<b>60 946</b>	<b>64 861</b>	<b>66 431</b>	<b>67 909</b>	<b>70 794</b>	<b>73 495</b>	<b>77 148</b>

Source: AND International study for DG AGRI

the total sales value of the European food and drink sector. It was estimated at €1,101 billion in 2017. Wines represented more than half of this value (€39.4 billion), agricultural products and foodstuffs 35% (€27.34 billion), and spirit drinks 13% (€10.35 billion). Out of the 3,207 product names registered in 2017 (both GI and TSG), 49% were wines, **43% were agri-food products**, and 8% were spirits drinks.<sup>37</sup>

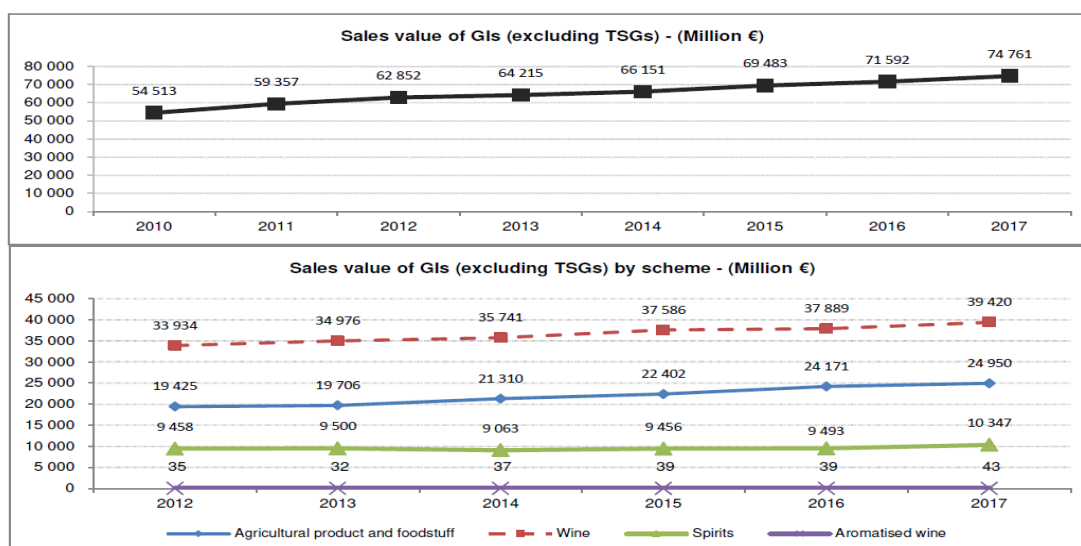


Figure 4 Sales value of GIs (excluding TSGs) in EU. Source: AND international study for DG AGRI

The evaluation registers a higher sales premium for protected products; the sales value of the products covered by the study was on average double the sales value for similar products without a certification. The value premium rate stood at 2.85 for wines, 2.52 for spirits and 1.5 for agricultural products and foodstuffs.

This represents the strength of a truly European policy. Cohesion and collaboration make the system work. Each EU country produces products whose names are protected at the EU level and serve as flagships for the traditional culinary heritage of regions and economic drivers for the national agri-food sector.

It also has an enormous impact on sales in terms of exports.

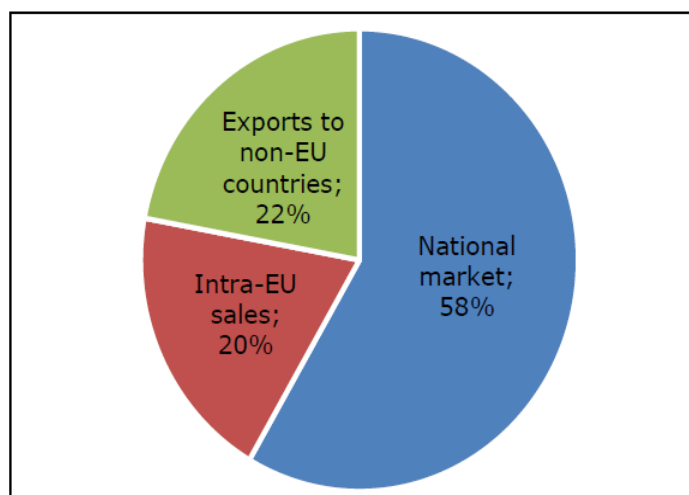


Figure 5 Sales value of GI/TSG products by destination, 2017 (%) Source: AND international study for DG AGRI

GIs represent 15.5% of the total EU agri-food exports. Wines remained an essential product in total sales value (51%) and extra-EU trade (50%). The US, China, and Singapore are the first destinations for EU GI products, accounting for half of GI products' export value.

Exported European GI/TSG products to non-EU countries came mainly from France (44%), Italy (20%) and the United Kingdom (19%). In these three cases, exports were pulled up by a tiny number of designations: *Champagne* and *Cognac* in France, *Grana Padano*, *Parmigiano Reggiano* and *Prosecco* in

Italy and *Scotch Whisky* in the United Kingdom. Products from these three MSs represented 83% of exports to non-EU countries of GI/TSG products.

The overall structure of trade has been relatively stable between 2010 and 2017. The national market remained the most important for GI/TSG products, with 58% of the total sales value, while intra-EU trade reached 20% of sales, and extra-EU trade reached 22%.

However, other data arouse confusion and give way to the development of this work; they represent a problem that does not, in any way, show the positive socio-economic status that is highlighted.

France and Italy were the leading Member States in terms of GI/TSG value in 2017, at more than € 10 billion. They were followed by Germany, the UK and Spain, with values between € 5 billion and € 10 billion, Portugal, the Netherlands, Austria and Greece, with values between € 1 billion and € 5 billion. The other 19 MSs had a GI/TSG value of less than € 1 billion.<sup>38</sup>

**This data highlights a significant disparity between the various states** and, therefore, also a big difference in size between the different GIs.

However, the data concerning GIs' economic and production size attract attention.

There is a significant scale difference between individual GIs, ranging from a few thousand euros (or even no sales) to a few billion euros for a single GI.

**If the most extensive GIs in terms of sales value is considered**, in 2017, **there were nine products (0.3% of the total number of products)** with total sales of over € 1 billion; these nine products accounted for 27% of the total sales value at EU28 level under GI. The following 15 products, with sales value between € 500 million and € 1 billion, accounted for 15% of total sales value. The following 113 products with a total sales value between € 100 million and € 500 million accounted for 31% of the sales value. Thus, 137 GIs (4.3% of GIs) accounted for 73% of the total EU28 sales value and GIs in 2017.

**If the smallest GIs are considered**, 7% of the GIs were not on the market in 2017, and the sales volume was under € 1 million for 41% of them, accounting for 0.5% of the total sales value under GI. The sales value of 30% of the GIs ranged from € 1 million to € 10 million and accounted for 5% of the total sales value.

The calculation of the average sales value by GI and the median of sales value illustrates the sales value's concentration among a limited number of GIs. Indeed, while the average sales value was € 23.8 million in 2017, the mean value was € 1.1 million. **This indicates that 50% of the GIs' sales value was lower than 1.1 million euros** and was higher for another 50%. Regarding TSGs, the mean was € 44.2 million, and the median was € 1.5 million in 2017. The means and median for each sector are detailed in table 1.<sup>39</sup>

Table 1 Means and median of total sales value by GI in 2017 (1.000 euros) (data processed by the author. Source: AND international study for DG agri

	Agri-food products	Wine	Spirit	Total
Means	19163	25012	39950	23793
Medians	1032	1228	667	1090

Therefore, these data exemplify how quality policies are incredibly flattering, but the benefits have a polarised distribution.

**The terms “small and medium” GI refer to the economic size and production area. Considering exclusively the agri-food sector**, small scale GIs/TSGs cover the value chains with less than 1 million euros in sales value. In 2017, they accounted for 48% of the total number of EU GIs (about 1,600), only 0.5% of total sales value under GI (for an economic value of 418 million euros).

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#### 2.1.4 THE CASE STUDY: ANALYSIS OF SMALL AND MEDIUM GEOGRAPHICAL INDICATIONS

The case study is developed precisely starting from these data, which represent the disparity of sizes.

The study's objective is to collect data to know the situation and needs of small GIs and their producers to outline policy recommendations to improve the situation of this category.

AREPO member regions have highlighted the relevance of this issue since small GIs represent the majority of geographical indications and play a significant role in rural development (for example, they maintain economic activities in mountain and disadvantaged areas by preventing depopulation).

However, **these GIs have survival problems** because, **despite being the majority (90%), they represent a small percentage (40%) of the economic value of the GI sector at the European level.** In addition, given the limited resources at their disposal, they are subject to the same obligations and costs as the significant geographical indications in creating and managing the association of producers, certification, and promotion.

Several Member States and Regions have adopted different measures and aid systems for these small productions. Unfortunately, however, there is no global picture of what is happening at the European level.

The study should help to outline this picture in order to know the actual situation of these GIs, answering, in particular, the following questions:

- Is small GIs able to pay for all costs?
- How far can they go without public support?
- Do they need special treatment from the public administration (specific measures/support)?
- Is there a need to develop a uniform measure at the European level for all these GIs?

Based on the study's conclusions, recommendations for an EU policy will be developed where appropriate to prevent these GIs from disappearing.

With the improvement of quality systems and their economic impact, the aim is to achieve specific objectives.

GIs have been developed for various objectives over time, and these different objectives directly impact the economic features observed. **The objectives are competition opportunities, market regulation, rural development, patrimony, quality insurance and other indirect impacts on the territory.**<sup>40</sup>

GIs were initially developed as an intellectual property tool to prevent the misuse of product names in the market. This mainly aims at protecting products sold outside their production area. This objective is still pursued by GIs that have been registered recently. It should be noted that, when this objective is pursued, the most important aspect for stakeholders is the use of the protected name to prevent competitors from using it. The GI logo and communication of the GI status may be secondary.<sup>41</sup>

Quality schemes (GIs and TSGs) have recently been developed to support small and/or specific supply chains with a rural development objective.

However, these barriers between market segments are not rigid, and some PGIs or products without GIs may develop in high-quality markets, while some PDOs may be sold in lower-range markets.

They are considered the link between product protection at an institutional level and product protection at an economic and production level. Hence, **the governance system plays a central role in management.** However, the investigation is made complex by the differences they present. In some EU states, the management is more institutionalised, while in others, they are more independent associations, committees, or organisations.<sup>42</sup>



It must be considered that the types of governance are decidedly different within the individual states, and each geographical indication decides to focus on different types of approaches.

**The factors that significantly influence the management of the indication are mainly:**

- The complexity of information and knowledge transfer required.
- Specific knowledge for the process, often also dictated by the experience handed down over time.
- The transaction needs to be supported, in particular concerning product and process specifications. The extent to which this information and knowledge can be encoded and thus transmitted efficiently and without transaction-specific investment between the parties to the transaction is crucial.
- Assessment of the capabilities of current and potential suppliers in relation to the requirements of the transaction.<sup>43 44 45</sup>

These four factors combined determine the management and protection of the geographical indication, leading in many cases to success.

The topic will then be explored through questionnaires to understand the significant difficulties to be faced and the points to improve.

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## 2.1.5 METHODOLOGY

Some regions were selected from the AREPO network to construct the database to conduct the study. The member states initially involved were Portugal, Spain, Italy, France, Germany, Poland and Greece.

Unfortunately, Greece, Poland, and Germany have been excluded due to the data's unavailability, pending a more detailed collection through direct questionnaires. For France, the available aggregate data are used.

An essential amount of information exists on GIs/TSGs from national and regional public authorities and professional organisations. Consequently, the data collection phase's first step was to gather this information owned by public and professional organisations.

However, except in a few cases, this centralised data was insufficient to complete the database with all requested information. That is why the dataset has been implemented with complementary data collection among producers' groups to identify sites.

This covers data for volumes, values and whole exports (intra-EU trade and exports to non-EU countries) of GI/TSG products annually.

For some member states and sectors, all the information requested in the context of this study was available from public or professional bodies at the centralised level. This concerns Spain, Italy, France and Portugal. In other cases, public and professional bodies had only some data needed. Numerous data have been collected through the direct request to the delegations of the regions belonging to the AREPO network and the administration of direct surveys.

**The datasets involved** are presented in the "Study on the economic value of EU quality schemes, geographical indications (GIs) and traditional specialities guaranteed (TSGs)", both the final report and the country fiches.

**The other data were collected and processed from various sources**, such as INAO<sup>46</sup>, Ismea Mercati<sup>47</sup>, Eurostat Agriculture<sup>48</sup>, Ismea Qualidò<sup>49</sup>, the Spanish agricultural Ministry website<sup>50</sup>, internal AREPO data<sup>51</sup>, the Portuguese agriculture Ministry<sup>52</sup>, the foundation Qualivita<sup>53</sup>, Atlante Qualivita<sup>54</sup>, European Commission dataset<sup>55</sup>, PRODCOM<sup>56</sup>, CNAOL, INAO data<sup>57</sup>, Eurostat, Eurobarometer.

The criteria for defining micro, small and medium-sized GIs are established according to thresholds that take into account the ratios of surface area, the number of actors in the supply chain, the economic value generated and the commercialisation and export volumes, referring to the criteria used in the aforementioned study.

The data are presented as aggregated and raw data. The elaboration work was fundamental to gather the essential data from different sources and to obtain a clear picture of the situation, mainly including the economic data and the data representative of the "physical" size of the individual indications.

It should be noted that the results are to be contextualised on the nature of the data collected and on a regional scale. For the results, the data collection methodologies analysed in accordance with the different sources and studies were taken into account. Data refer to annual values. Where not specified, data refer to 2019 productions.

**The study represents the economic data and production dimensions of 489 agri-food products (considering French data as aggregate) protected by Geographical Indication, belonging to 22 different European regions.**

For **Portugal**, the Geographical Indications analysed are 6, 5 PDOs and 1 PGI. For **Italy**, the geographical indications analysed are 186, 99 PDOs and 87 PGIs. For **Spain**, there are 54 GIs, of which 37 PDOs and 17 PGIs. For **France**, estimates are for 244 geographical indications, 110 PDOs and 134 PGIs.

Table 2 GIs analysed (data processed by the author)

COUNTRY	PDO	PGI	TOT
Portugal	5	1	6
Italy	99	87	186
Spain	37	17	54
France	110	134	244
TOT	250	239	489

Table 3 Regions and their products (data processed by the author)

Regions considered in the study	Number of GIs	Regions considered in the study	Number of GIs
France	244	Italy	185
Auvergne-Rhône-Alpes	60	Emilia Romagna	44
PDO	29	PDO	19
PGI	31	PGI	25
Bourgogne-Franche-Comté	23	Friuli Venezia Giulia	5
PDO	14	PDO	4
PGI	9	PGI	1
Bretagne	10	Lombardia	26
PDO	3	PDO	14

PGI	7	PGI	12
Centre - Val de Loire	25	Piemonte	20
PDO	5	PDO	12
PGI	20	PGI	8
Corse	9	Puglia	20
PDO	7	PDO	12
PGI	2	PGI	8
Nouvelle-Aquitaine	33	Toscana	30
PDO	8	PDO	16
PGI	25	PGI	14
Occitaine	49	Valle d'Aosta	4
PDO	19	PDO	4
PGI	30	Veneto	36
Pays de la Loire	10	PDO	18
PDO	9	PGI	18
PGI	1		
Provence-Alpes-Côte d'Azur	25		
PDO	16		
PGI	9		
Spain	54	Portugal	6
Andalucía	22	Azores	6
PDO	17	PDO	5
PGI	5	PGI	1
Catalunya	17		
PDO	9		
PGI	8		
Extremadura	12		
PDO	10		
PGI	2		
País Vasco	3		
PDO	1		
PGI	2		

Tables 2 and 3 show that the PDOs analysed are 250 overall, while the PGIs are 239 to 489. The aggregate data belong to France, while the other 245 from the other countries is raw data.

For the assessments of size in geographical terms, the data available are the region to which they belong, the number of operators involved in the supply chain, starting from production to packaging and the surface area (mainly for the production of agricultural products, expressed in hectares) or the number of farms (mainly livestock production) registered in the system for the use of the denomination. As far as production is concerned, the data collected concerning the production volume in certified quantities, the quantity of product exported, and the quantity produced in a single region.

Finally, the economic data collected represent the turnover, average prices recorded at origin and purchase, and the regional economic value.

In the next chapter, the data will be differentiated by country and product category to relate the various sizes and identify the small geographic indications. The figures and tables in the next chapter, where not specified, are re-elaborations and calculations applied to the dataset. Where not specified, data are updated to 2019.

## 2.2 ANALYSIS BY COUNTRY

### 2.2.1 FRANCE

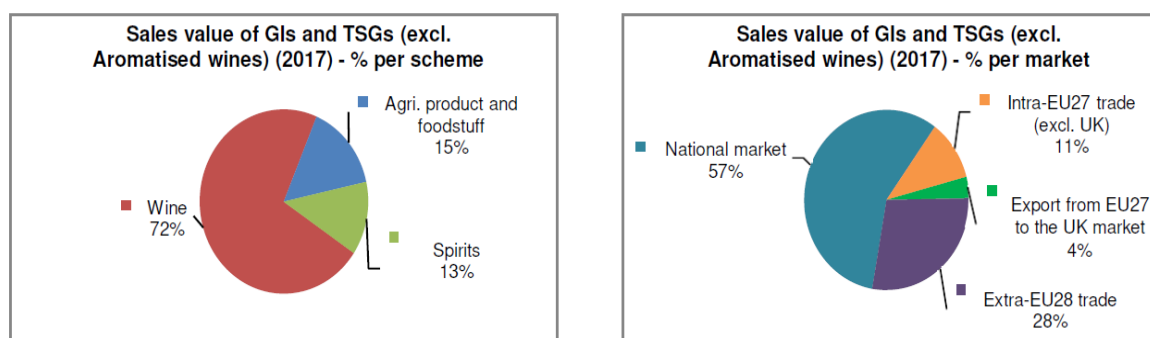


Figure 6 Sales value of GIs and TSGs, France. Source: AND International study for DG Agri

As already mentioned above, the data for French geographical indications illustrate elaborations carried out by the European Commission and INAO.

The data elaborated by the European Commission dates back to 2017. The turnover value in 2017 is mainly given by the wine sector, which occupies 72%. The most interesting data for us is agricultural food production, which corresponds to 15%.

In 2017 France was the leading country in the sector, with a sales value equal to 34.8% of the total of the 28 Member States of the European Union.

Exports at a national level are again occupied by the wine and spirits sector, leaving only 8% of the total exported for agri-food products, mainly in intra-EU states.<sup>58</sup>

Sales value by type of product

	Nb GI / TSG	Val. K€					
	2017	2012	2013	2014	2015	2016	2017
Fresh meat	76	678 232	719 889	740 209	761 588	749 757	741 568
Meat products	18	336 310	316 326	345 872	391 873	423 473	424 969
Cheeses	52	1 636 168	1 686 653	1 789 717	1 877 810	1 874 484	1 928 081
Other products of animal origin	9	57 150	59 280	58 489	62 767	66 446	71 016
Oils and fats	11	158 848	145 079	175 398	170 424	172 350	193 003
Fruits, vegetables, cereals	53	231 702	237 272	256 362	284 681	314 577	313 214
Fish, molluscs and crustaceans	5	118 419	117 919	167 488	179 389	239 458	241 621
Other products from Annex I *	6	66 719	72 782	75 405	77 275	81 054	77 493
Bread, pastry, confectionary	3	s	s	9 464	13 894	13 976	14 687

Figure 7 France: sales value by type of product. Source: AND International study for DG Agri

In Figure 7, it can be seen that there has been an evolution and an increase in the value of geographical indications throughout France. An increase was mainly recorded in meat products, cheeses, other products of animal origin, the fish sector, the pastry sector, oils and fats and other products<sup>59</sup>.

Although other sectors such as fresh meat and fruit and vegetables have recorded a slowdown and a slight decrease, on the final total, the value of the 240 geographical indications recorded an increase from 2016 to 2017 of about € 70,000.

In 2019 the situation changed, recording a growth in the agri-food sector. French farmers deliver at least one production under AOC/PDO, PGI. 101 are registered for the PDO category, half of which belong to the dairy category. On the other hand, there are 143 PGIs products. Together, agri-food productions total 4.1% of the food products market.

Therefore, it is interesting to observe that in a complex context, the sector under **Quality and Origin Identification Sign (QOIS)** is less impacted than the general sector by reducing its volumes sold. Other sectors, which were growing in 2018, are down in 2019 due to **weather events**.

The volumes sold concerning fishery products and aquaculture continued to decline (-8%) and did less well valued, showing a decrease in their 11% turnover. The fruit and vegetable sector is the most affected, and it can be observable a decrease in volume production and sales value of 10%. The strong development of the Organic label in this sector undoubtedly weighs on other QOIS.

It can be observed a 1% decrease in the volume of poultry and a 6% in value. The decline is still larger within the egg sector, with 6% by volume and 7% in value.

Marketing of dairy products under QOIS continues to grow by 3% by volume compared to 2018. Charcuterie-seasons present volume growth (+ 2%) and in value (+ 6%). Flours, bread, and pastries under QOIS constitute a sector whose growth continues in 2019, whether in volume (+ 10%) or value (+ 6%).

Meats excluding poultry see their volumes increase by 6%, an increase accompanies this marketing in value (+ 5%).

The **Auvergne-Rhône-Alpes** region is rich in quality products, with 31% of farms producing under Geographical Indications. In the region, meat products occupy the first place, with 3 PDOs and 11 PGIs, which produce 23,130 tons.

Regarding cheeses, there are 16 PDOs and 4 PGIs. There are also two PDOs for cream and butter, bringing 18 GIs in the dairy category with a production value of 83,612 tons. The least productive category is fruit and vegetables, the olive sector and pastry production. In total, the productions of the three categories amount to 15,120 tons.

The sum of the regional productions of the geographical indications of agri-food products is equivalent to about 121,870 tons.

Auvergne-Rhône-Alpes, therefore, has a strong presence of operators qualified for GI production. The **dairy sector** has a turnover of 697 million euros, and 38% of operators are qualified for GI production.

Figure 8 shows that micro-productions can be distinguished from small and medium ones (referring to volumes).

The micro productions can be identified with a production equal to or less than 100 tons. In this case, they are the *Chevroton*, the *Charolais*, and *Rigotte de Condrieu*, all 3 PDOs. The small productions can be identified by observing the ranges from greater than 100 tons to a maximum of 1,000. The average production is instead starting from greater than 1,000 tons.

The GI with the highest production for the fruit and vegetable sector is the *Noix de Grenoble* PDO, accounting for 10,158 tons of, almost 70%. The minor productions are those instead of the PDOs *Chataighe d'ardèche*, *Lentilles Vertes du Puy* and the PGIs *Pommes et points de Savoie*, and the smallest, *Ail de la Drome* which has only 131 tons of production.

Production concerning the **meat category**, the protected products are 19, 16 PGIs and 3 PDOs. Production amounts to approximately 116 million euros. For processed meat, 4 PGIs with 6,646 tons of production are worth about 61 million, while for fresh meat, 3 PGIs and 1 PDO from 2,351 tons are worth about 14 million euros.

There are two products protected for the oil sector, both intended as small productions, having volumes produced of around 300 tons. The essential oils of lavender from Haute Provence, *Huile essentielle de lavande de Haute-Provence* PGI appear to be a micro-production, with 21 tons produced in 2019 and 11 distilleries for a total of 40 operators in the supply chain.

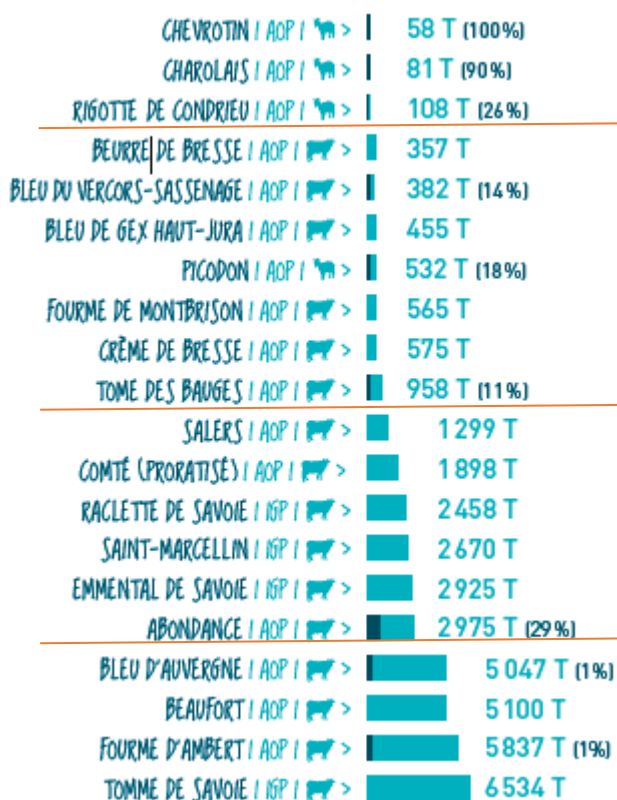


Figure 8 France: List of dairy GIs organised by production volume.  
Source: INAO

The remaining micro productions are *Petit epeautre de Haute Provence* PGI and *Farine de petit epeautre de Haute Provence* PGI. They have a production of less than 100 tons.

Concerning the **Bourgogne-Franche-Comté** region, there are 135 geographical indications.

For dairy products, 10 PDOs and 4 PGIs involve 2,884 farmers and 297 processing sites for 81,260 tons, or 31% of the national volume.

3 PDOs and 6 PGIs produce 17,350 tons of meat products, 7% of the national volume involving 990 breeders and 130 processors. As another product, moreover, to be considered small production, it is the PGI *Moutarde de Bourgogne*; it involves 42 producers with four storage sites for 134 tons of product, 100% of the national production of the category.

For the **Nouvelle-Aquitaine** region, the numbers indicate 78 PDOs, 46 PGIs and 1 TSG. Fruit and legumes certify 4 PDOs and 17 PGIs. The meat sector has 3 PDOs and 13 PGIs; the dairy production is contained with 2 PDOs and 1 PGI kinds of cheese plus PGI butter. The other products are a PGI for the fish sector, 1 PGI for salt and a TSG for mussels.

The smallest production concerns *Chabichou du Poitou* PDO, representing 374 tons produced, less than 1% in the French goat cheese sector.

Unfortunately, it is not possible for the other regions mentioned to re-elaborate the information because either they are obsolete data or unremarkable.<sup>60</sup>

It is essential to add a note on the governance aspect. Unlike other states, producer organisations in France are protected by a single body, the Body of Defense and Management of Food Products.

Any request for recognition of a sign of identification of origin and quality, except for organic farming, is made by a defence and management organisation (ODG). The ODG is formed on the initiative of a set of producers and processors ensuring the same production that joins together within a structure to recognise a sign of the quality of the production from specifications to product protection and enhancement.

The defence and management body is recognised in its capacity by the **National Institute of Origin and Quality (INAO)** director after consulting the competent national committee of the Institute.

The defence and management organisation develops and contributes to implementing product specifications (product specificity, production area for AOC, PDO and IGP products whose characteristics are linked to a geographical location), rules for production, processing and possibly packaging and labelling. He participates in actions to defend and protect the name, product and “*terroir*”, promoting and enhancing the sector's product and economic knowledge (information on volumes, number of operators by category, means of production, product development and outlets).

A study called “*AOP et IGP : Quelles ressources et quels coûts pour les Organismes de Défense et de Gestion (ODG) de produits agroalimentaires ?*”<sup>61</sup> published by INAO studies the impact of ODG maintenance costs on producers. ODG's resources come from contributions paid by operators adhering to the ODG (at 64%, on average) and other resources (subsidies, services, etc.) (36%). ODG charges represent, on average, 3% of the managed sector's turnover; they include personnel costs, communication and promotion costs, the cost of external control (13%), the fee paid to the INAO and other charges (cost of internal control, overheads, etc.).<sup>62</sup>



## 2.2.2 ITALY

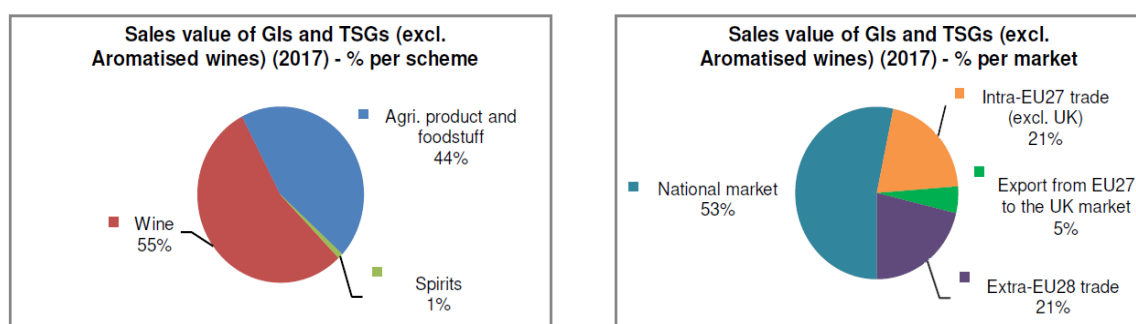


Figure 9 Sales value of GIs, Italy. Source: AND International study for DG Agri

As shown in Figure 9, agri-food products occupy a more significant part of the sales value than France. The sector is valued at 44%. Wine sales remain at the top, representing 55%.

The GIs have a healthy weight on the national market, valued at 53%. Exports are equivalent to 21%, both for European Union exports and non-EU countries. Between 2015 and 2017, there was an increase in sales for PDO products and a decrease in PGI products.

In 2017, sales volume reached 24.5 Mhl (+ 4% since 2010) and sales value was 8.6 billion euros (+ 51% since 2010). The main producing regions were Friuli-Venezia Giulia, Piedmont, Tuscany and Veneto. Prosecco PDO has become one of Italy's leading products in the GI world, gaining one of the largest market shares in the sector. The area with the highest prices was in the northwest of Italy in Piemonte and Tuscany. The main PDOs in these areas were *Chianti*, *Chianti Classico*, *Piemonte*, *Asti*, *Barbera d'Asti* and *Toscana / Toscana*, so only the wine products sector.<sup>63</sup>

Sales value by type of product

	Nb GI/ TSG	Val. K€					
	2017	2012	2013	2014	2015	2016	2017
Fresh meat	5	71 100	86 146	87 691	87 086	86 368	87 604
Meat products	41	1 771 146	1 752 585	1 818 293	1 826 700	2 015 770	2 064 264
Cheeses	53	3 891 698	3 629 407	3 680 454	3 636 142	3 749 004	3 941 578
Other products of animal origin	4	s	s	s	796	822	1 132
Oils and fats	45	82 248	65 316	62 334	74 133	73 833	76 457
Fruits, vegetables, cereals	109	470 953	434 044	474 346	414 371	316 189	289 238
Fish, molluscs and crustaceans	5	s	s	s	s	s	s
Other products from Annex I *	8	s	s	s	s	s	s
Bread, pastry, confectionary	13	1 934	2 068	1 763	14 960	15 841	21 235
Beers	0	0	0	0	0	0	0
Other food products **	7	s	s	s	s	s	s

Figure 10 Italy: Sales value of GIs by type of product. Source: AND International study for DG Agri

In addition to the wine sector's supremacy, in figure 10, it is possible to identify two other sectors that generate enormous economic value. The two sectors are the dairy sector (concerning cheeses) and the production of processed meat.

Out of the total, in 2017, Italy had an increase in the sales value of about 250,000 euros, having almost all the sectors in growth.



For Italy, on the other hand, the available dataset consists of raw data, and it is possible to conduct a more in-depth analysis. The regions that are considered are Emilia-Romagna, Friuli Venezia Giulia, Lombardy, Piedmont, Puglia, Tuscany, Valle d'Aosta and Veneto. The total of foodstuff GIs analysed is 185.

**Table 4 Number of products listed per region (data processed by the author)**

Regions	Number of Products
<b>Emilia Romagna</b>	<b>44</b>
PDO	19
PGI	25
<b>Friuli Venezia Giulia</b>	<b>5</b>
PDO	4
PGI	1
<b>Lombardia</b>	<b>26</b>
PDO	14
PGI	12
<b>Piemonte</b>	<b>20</b>
PDO	12
PGI	8
<b>Puglia</b>	<b>20</b>
PDO	12
PGI	8
<b>Toscana</b>	<b>30</b>

PDO	16
PGI	14
<b>Valle d'Aosta</b>	<b>4</b>
PDO	4
<b>Veneto</b>	<b>36</b>
PDO	18
PGI	18
<b>Total</b>	<b>185</b>

In table 5, it is easy to see how the productive dimension varies between the different regions. However, the difference in surface area between PGI and PDO poses a different point of view than usual. The surface and the number of registered farms of the PDO are greater than those of the PGI. This data is due to the more significant number of PDOs taken into consideration, and because all the farms registered for certified production are considered to produce processed meat. Regarding the number of operators involved, on the other hand, the PDOs of these regions involve about 38,000 more operators. The number of operators involved grows based on the number of products in the individual regions and the area of farms registered for certified production.

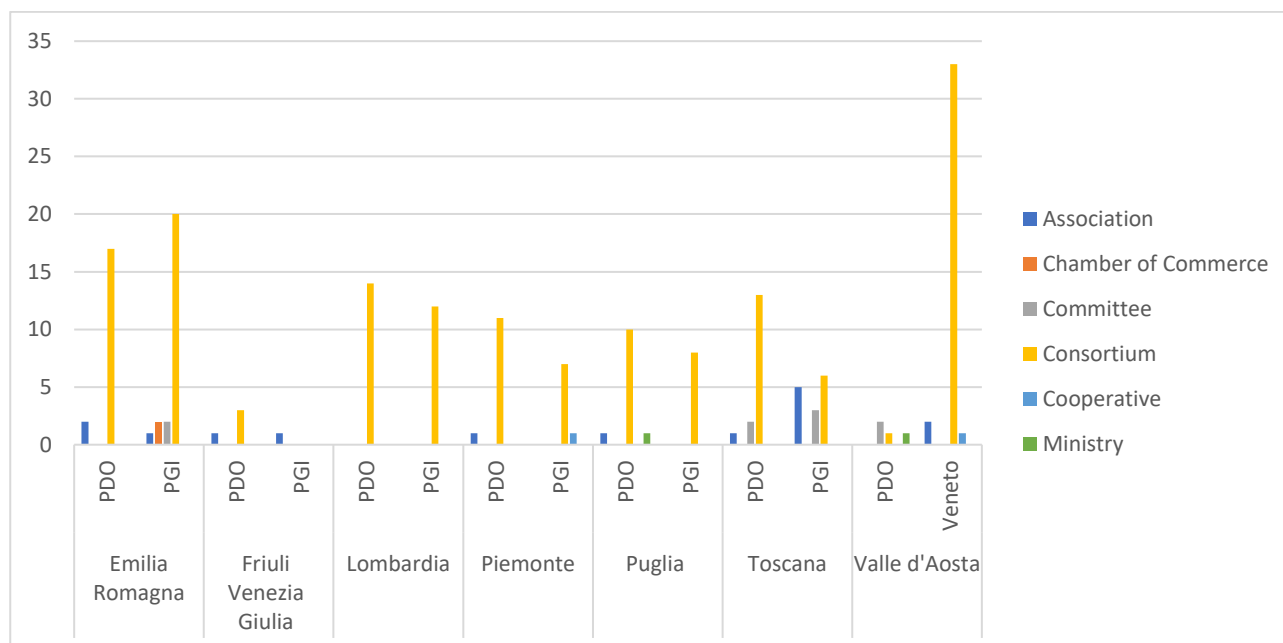
Table 5 Size by production area and number of operators (data processed by the author)

Regions	Number of Products	Area (Ha)	Number of operators
<b>Emilia Romagna</b>	<b>44</b>	<b>347336</b>	<b>54678</b>
PDO	19	208316	42527
PGI	25	139020	12151
<b>Friuli Venezia Giulia</b>	<b>5</b>	<b>28527</b>	<b>7551</b>
PDO	4	24868	4269
PGI	1	3659	3282

<b>Lombardia</b>	<b>26</b>	<b>280538</b>	<b>27828</b>
<b>PDO</b>	<b>14</b>	<b>262731</b>	<b>12441</b>
<b>PGI</b>	<b>12</b>	<b>17807</b>	<b>15387</b>
<b>Piemonte</b>	<b>20</b>	<b>187562</b>	<b>15909</b>
<b>PDO</b>	<b>12</b>	<b>173202</b>	<b>7774</b>
<b>PGI</b>	<b>8</b>	<b>14360</b>	<b>8135</b>
<b>Puglia</b>	<b>20</b>	<b>74345</b>	<b>5717</b>
<b>PDO</b>	<b>12</b>	<b>72152</b>	<b>5385</b>
<b>PGI</b>	<b>8</b>	<b>2193</b>	<b>332</b>
<b>Toscana</b>	<b>30</b>	<b>210983.3</b>	<b>22441</b>
<b>PDO</b>	<b>16</b>	<b>30802.9</b>	<b>3637</b>
<b>PGI</b>	<b>14</b>	<b>180180.4</b>	<b>18804</b>
<b>Valle d'Aosta</b>	<b>4</b>	<b>25146</b>	<b>6580</b>
<b>PDO</b>	<b>4</b>	<b>25146</b>	<b>6580</b>
<b>Veneto</b>	<b>36</b>	<b>188205</b>	<b>15059</b>
<b>PDO</b>	<b>18</b>	<b>185460</b>	<b>14285</b>
<b>PGI</b>	<b>18</b>	<b>2745</b>	<b>774</b>
<b>Total</b>	<b>185</b>	<b>1342642.3</b>	<b>155763</b>

The organisation of governance in Italy is slightly different. Often the protection and promotion of the product are carried out by groups of producers organised in different forms.

Table 6 Distribution of different types of producer's organisation in Italy AREPO's regions (data processed by the author)



The protection consortia are born as voluntary associations, without profit, promoted by the economic operators involved in the single supply chains with the precise function of protecting the agri-food productions DOP and IGP.

These products, deemed worthy of special legal protection, are then included in specific quality schemes established and regulated by Community legislation. In carrying out their business, they can: make proposals for regulatory discipline and carry out advisory tasks relating to the product concerned; define programs containing structural and technical adaptation measures aimed at improving the quality of production in terms of hygienic-sanitary safety, chemical, physical, organoleptic and nutritional characteristics of the marketed product; promote the adoption of specific resolutions containing agreements, approved by the Italian **Ministry of Agricultural, Food and Forestry Policies - Mipaaf** and without any anti-competitive content, between economic operators who benefit from the same GI and tend to a correct production planning according to the needs of the market; collaborate, in accordance with the directives issued by Mipaaf, in the supervision, protection and safeguarding of the PDO and PGI from abuses, acts of unfair competition, counterfeiting, improper use of the protected denominations and any behaviour prohibited by law; this activity is carried out at every level and towards anyone, at every stage of production, transformation and trade.

The same consortia are also entrusted with the essential and delicate tasks of managing trademarks and marks as distinctive signs of compliance with the production regulations of PDO and PGI.

The second most important kind of management is the association of producers. Committees are also present. Both the associations and the committees carry out the same tasks as the protection consortia. Within individual companies, associations, or committees, entire organisations of producers or processors also carry out economic interests. Smaller geographical indications or those who decide not to form a form of association benefit from protection and protection directly from the chamber of commerce or the ministry itself.<sup>64</sup>

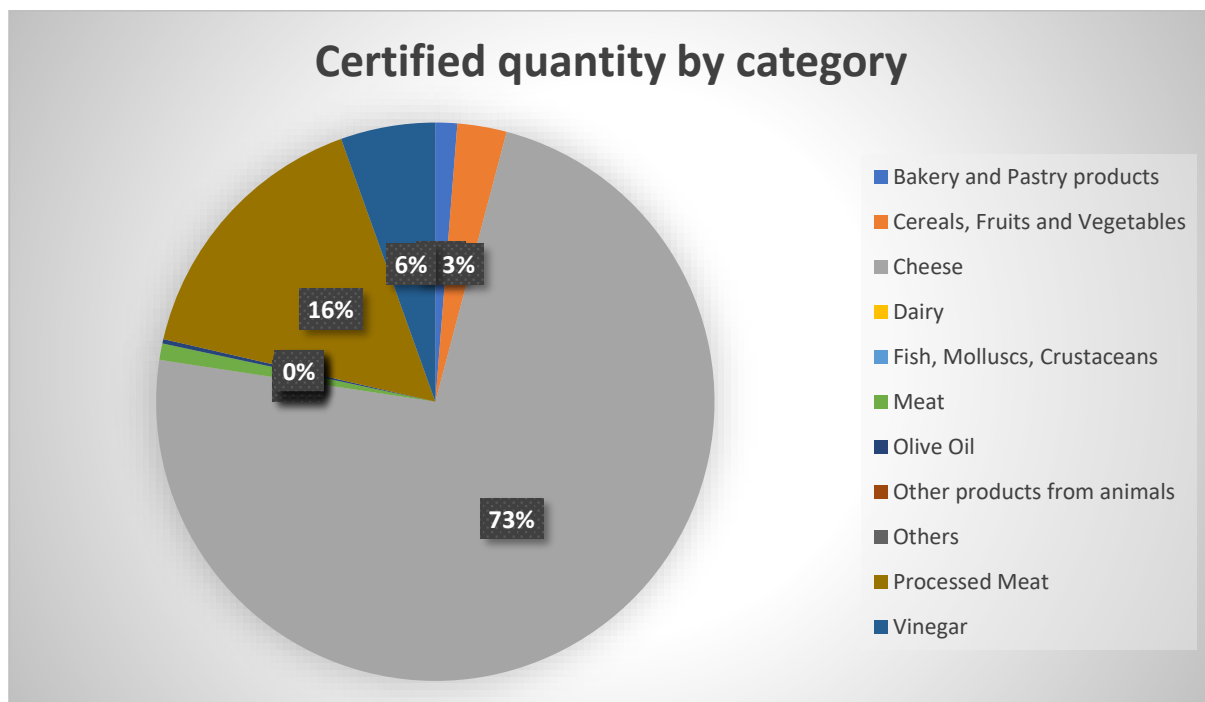
Regarding the economic-productive data, the standard deviation formula was applied to the various quantities analysed to conduct a descriptive analysis. Unfortunately, some results are illegible from a

statistical point of view; some data are outliers, and the differences in economic and production size between some geographical indications are immense. The most important data is found in the production turnover. The mean of the production revenues is 77,717 euros with a low standard deviation that indicates the overall production revenues range between  $(77,717 \pm 15.23)$  77,000 to 77,800 euros. On the contrary, the standard deviation of local revenues (.000) and export revenues (.000) indicate a very high variation. The overall mean origin price is 140 euros, lower than the average end price of 243 euros. The average regional value is 33,388,169 euros.

Exports can be related to production. According to the data collected, the production volume is a key factor for exporting, even if many indications with a high production volume do not have data on export. **Out of the 186 geographical indications data, only 78 are recorded export data.** What makes the difference is the governance body's ability to enhance the product and the product's reputation also on foreign markets.<sup>65</sup>

The highest production revenues earned by the cheese category belong to the Lombardia region. Among the Emilia Romagna region category, cheese also has the highest production revenues. Fish, Molluscs and other products have the higher production revenues in the Veneto region.

**Table 7 Certified quantity by category in Italy AREPO's selected regions (data processed by the author)**



Around 73% of certified quantities belong to cheese products, higher than any other quantity for any category of products. The second-highest quantity belongs to the processed meat category, with 16% of the total. Driving these two categories are mainly *Parmigiano Reggiano* PDO, *Grana Padano* PDO (cheeses) and *Prosciutto di Parma* PDO and *San Daniele* PDO (cured meat); these appear to have much higher data than other regional and category products.

By relating the different quantities, such as certified production, number of operators, surface area and registered farms, a scale of size between the different GIs can be obtained.

The region with the smallest productions (micro) is Tuscany, with *Zafferano di San Gimignano* PDO, *Marrone di Caprese Michelangelo* PDO, *Castagna del Monte Amiata* PGI, *Farina di Neccio della Garfagnana* PDO, *Toscano* (Extra Virgin Olive Oil) and *Farina di castagne della Lunigiana* PDO.

Production data are not present for eight geographical indications. This will be a point of investigation to understand if production has stopped and the main problems for a producer regarding economic and social sustainability. Furthermore, to be considered small productions are *Salame d'oca di Mortara* IGP (Lombardy), *Miele delle Dolomiti Bellunesi* PDO (Veneto), *Marrone di Caprese Michelangelo* PDO (Tuscany), *Tinca Gobba Dorata di Pianalto di Poirino* PDO (Piedmont), *Castagna del Monte Amiata* PGI (Tuscany) and *Farina di Neccio della Garfagnana* PDO (Tuscany). These have a production of between 100 and 1000 tons of product.

In some consistent cases, ANOVA analysis was applied.

ANOVA or ANalysis Of VAriance indicates the assumption testing whether there is a significant difference among two or more categories in any particular numeric variables based on the sample dataset for the population.

The following ANOVA has been conducted to determine whether there is a significant difference in production revenue among regions based on the sample dataset for the population.

**Set hypotheses:**

**$H_0$ :** There is no significant difference in production revenue among Italian regions.

**$H_a$ :** There is a significant difference in production revenue among Italian regions.

**Set significance level:**

$P = 0.05$ ; Two tailed

**Compute test statistics:**

Table 8 ANOVA to understand which hypothesis can be accepted. (Author data)

	Mean	Df	F	P – value
Emilia Romagna	117375.60	7	0.75	0.63
Friuli Venezia Giulia	70953.56			
Lombardia	174960.03			
Piemonte	128721.96			
Puglia	28803.14			
Toscana	7747.78			
Valle d'Aosta	7762.98			
Veneto	68344.11			

**Decision:**

Null hypothesis ( $H_0$ ) cannot be rejected ( $P\text{-value} > 0.05$ )

**Interpretation:**

The table shows that the mean production revenue for each region is different according to the data found in the sample dataset.

The p-value is 0.63, higher than the significance level of 0.05 ( $0.63 > 0.05$ ), indicating that the null hypothesis cannot be rejected. So, there is no significant difference in production revenue among regions based on the sample dataset for the population.

This is a good observation as it allows us to understand that the distribution of revenue is relatively evenly distributed among the regions, although the difference in the size of some geographical indications leads us to believe the opposite.

However, applying the same method and cross-referencing it with data from other studies reveals that at the regional level, there are significant differences dictated only by a few products with very high economic values. Furthermore, there is a marked disparity between sectors in the same region and sectors between regions.

It is very difficult to obtain reliable data for other quantities, as some data are missing or equal to the value 0.

### 2.2.3 SPAIN

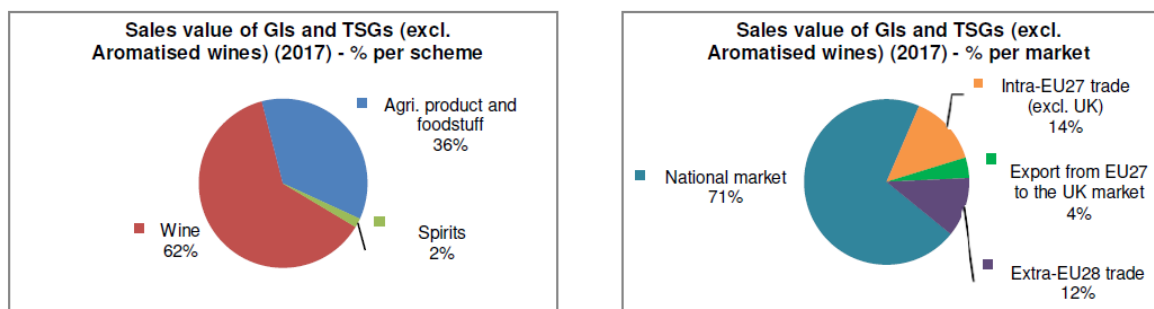


Figure 11 Sales value of GIs and TSGs in Spain. Source: AND International study for DG Agri

The largest market share belongs to the wine sector for the Spanish sector. Agri-food products account for 36% of the sales value. 71% of the entire geographical indications sector is destined for the domestic market, while for exports it is divided equally between extra and internal EU, with 2% more sales obtained from exports to the EU. the European Commission points out that over time the whole sector of agri-food production has grown. To suffer a slowdown, which also affects the total, is meat production, both fresh and processed. The loss is almost 200,000 euros. These categories' slowdown led in 2017 to a slight decrease in the total, equal to 30,000 euros in value.

Sales value by type of product

	Nb GI / TSG	Val. K€					
	2017	2012	2013	2014	2015	2016	2017
Fresh meat	20	197 717	213 797	202 277	203 397	411 561	220 397
Meat products	16	s	s	s	740 881	s	s
Cheeses	28	199 762	203 160	234 233	253 202	271 147	283 988
Other products of animal origin	6	12 130	13 805	12 203	13 182	16 312	15 411
Oils and fats	31	101 225	105 980	131 912	138 296	136 152	140 855
Fruits, vegetables, cereals	56	154 848	193 515	270 701	274 832	541 736	594 630
Fish, molluscs and crustaceans	5	34 626	57 683	41 679	50 970	39 500	40 089
Other products from Annex I *	16	39 487	41 504	59 243	42 668	59 060	66 307
Bread, pastry, confectionary	15	69 237	76 059	92 501	327 995	85 037	101 625
Beers	0	0	0	0	0	0	0
Other food products **	2	s	s	s	s	s	s

Figure 12 Spain: sales value of GIs by type of product. Source: AND International study for DG Agri

Data from 55 geographical indications belonging to 4 regions were analysed for Spain. The 37 PDOs and 17 PGIs belong to Catalunya, Andalucia, Extremadura and País Vasco.

The Spanish report from the Ministry of agriculture immediately highlights that production has stopped over time. In many cases, it happens in small businesses that the lack of generational turnover puts an end to production because some small products are produced in challenging areas (for example, the mountain ones) where the phenomenon of depopulation occurs. These will be investigated to understand the social or economic problems encountered.

The indications that are no longer productive are three, and all belong to the Andalucia region. Belonging to the fruit and vegetable sector, *La Tomate La Cañada* PGI has been inactive for four years. *Jamón de Serón* PGI has four years of inactivity in the processed meat sector. In the pastry sector, *Alfajor de Medina Sidonia* PGI is registered with **five years of non-certification**. Always for the pastry category, there is a small production for *Torro d'Agramunt* PGI, a product of Catalunya that has been certified for a total of 187 tons.

Table 9 Total economic value by dairy product (data processed by the author)

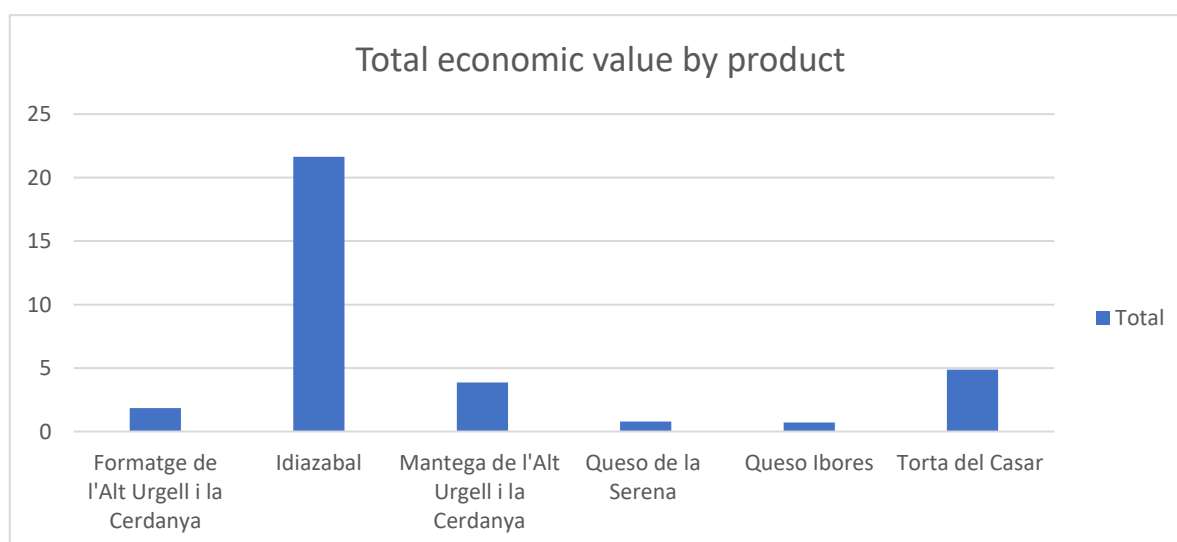
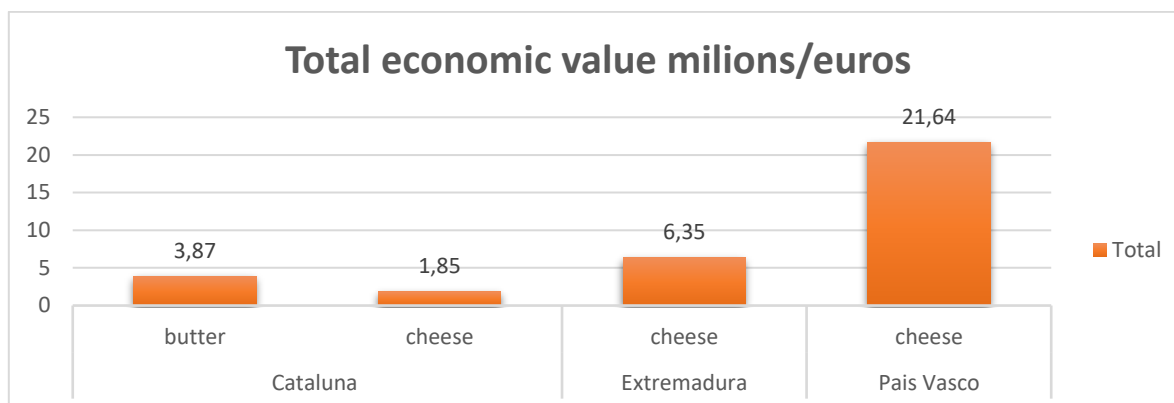




Table 10 Economic value by type of product, dairy sector (data processed by the author)



For the dairy products sector, the data can be analysed in aggregates. The productions are relatively high, starting from 60,000 kg of certified product in 2019. The productions cannot be defined as small, even looking at the individual products' economic value on a national scale. The pie chart of protected cheese shows that most butter products (82%) are protected in Catalunya while a low portion of cheese products (3%) are in Extremadura. Among the total commercialised dairy products, most cheese production is commercialised in País Vasco (55%). A few amounts are commercialised in Catalunya (4%) among the total product related to cheese. Most cheese products from the Catalunya region are marketed in UE, and from Extremadura, low amounts of cheese products are marketed in the UE. Most of the cheese products are marketed in countries outside the EU from País Vasco. This is interesting because the export is more than the national market. The highest-priced dairy products belong to Extremadura (around 35 euros), while the lowest priced dairy products belong to Catalunya (around 6 euros). More than in other regions, around 22 million euros of cheese products are supplied from País Vasco. The cheese products have the highest economic value in the nation and belong to País Vasco (22 million euros). Again, the cheese products also have the highest economic value in the EU and belong to Catalunya (1.3 million euros); the third part shows that the highest economic value belongs to País Vasco. The highest total economic value also belongs to cheese products from País Vasco. *Idiazabal* PDO is a dairy product mostly commercialised over Spain with a higher economic value of above 20 million.

The following table shows the mean values and the standard deviations of the items on all the dairy products included in the sample. The average number of farmers is 553 with a standard deviation of 939, which indicates outliers that mean that some product has a very high number of Farmer compared to others. The average number of protected amounts of fruits and others is 2,411.60 tons. The average amount of marketed dairy products for the nation, UE and countries outside the EU are 931.11, 363.37 and 124.64, respectively (tons). The total average marketed dairy product is 1,419.13 tons, with an average economic value of 3.13 million.

Table 11 Overall descriptive for fruits, vegetables and cereal products (data processed by the author)

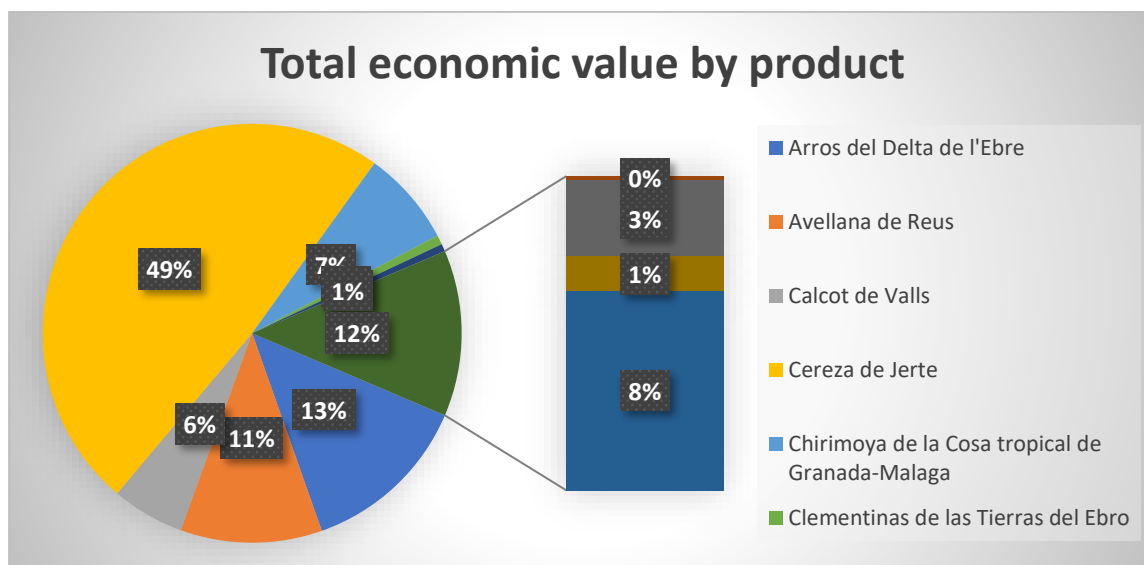
Variables	Mean	Standard deviation
Area (ha)	2567.00	4008.83
Number of farmers (primary operators)	553.00	939.40

Registered conditioning, packaging and warehouses facilities	9.73	13.66
On the inscribed surface (ha)	13139.52	19470.61
Apt to be protected (Kg)	8847.25	17191.79
Protected (t)	2411.60	3552.66
National (t)	931.11	1672.03
EU (t)	363.37	754.45
Third countries (t)	124.64	392.16
TOTAL (t)	1419.13	2425.96
The average price of the protected product conditioned at origin (€ / kg)	5.56	8.59
Economic value € (m)	2.71	4.84
% of the total economic value	0.02	0.02
Economic Value NATIONAL MARKET (m)	2.43	3.53
EU Economic Value (m)	0.58	1.37
Economic Value THIRD COUNTRIES (m)	0.11	0.30
TOTAL Economic Value (m)	3.13	4.78

The highest number of farmers belongs to the fruit category in Extremadura, with nearly 2,900 farmers. Only a few farmers belong to Catalunya in the fruit and vegetable category. Among the total amount of products, a high amount marketed in the nation belongs to the food category from Catalunya and Extremadura. The most amount of the product marketed nationally also belongs to the fruit category from Catalunya and Extremadura regions. For fruits, the highest average price belongs to the Catalunya region, while for vegetables, the highest average price belongs to Pais Vasco (27 and 22 euros approximately). The national market's total economic value and production value belong to the fruit category in Extremadura (17 million euros, nearly). Around 51% of *Cereza de jerte* PDO product is commercialised over the country, higher than others. Compared to EU and third countries' commercialisation, fruits are primarily marketed in the EU than in third countries.

On the other hand, *Cereza de jerte* PDO also has the highest economic value of above 16 million euros. For *Pimenton de la Vela* PDO, the national economic value is higher than the value of the EU and third countries. The national commercialisation for the product is comparatively significantly higher than others.

Table 12 Total economic value by-product Fruits and Vegetables (data processed by the author)



The following table shows the mean values and the standard deviations of the items on all the olive oil products included in the sample. The average number of farmers is 5,480 with a standard deviation of 3,234, which indicates outliers that mean that some regions of this product have a very high number of farmers compared to others. The average number of protected amounts of virgin and extra virgin olive oil is 5,388.12 litres. The average amount of marketed olive oil products for the nation, UE and countries outside the EU are 1,073.10, 105.49 and 401.55, respectively. The total average marketed olive oil product is 1,580.14 litres, with an average economic total value of 6.96 million.

Table 13 Overall descriptive Olive oil products (data processed by the author)

Variables	Mean	Standard deviation
Inscribed area (ha)	29,579.59	16,247.50
Number of Farmers (primary operators)	5,480.12	3,234.88
Oil mills	12.76	7.51
Packaging / Marketers	12.65	10.48
Total virgin and extra virgin olive oil produced following the specifications (t)	12,183.46	23,133.44
Total virgin and extra virgin olive oil protected (t)	5,388.12	12,356.41
National (t)	1,073.10	1,048.17
EU (t)	105.49	258.49
Third countries (t)	401.55	1,119.99
TOTAL (t)	1,580.14	2,167.66
Price (€/kg)	4.24	1.71

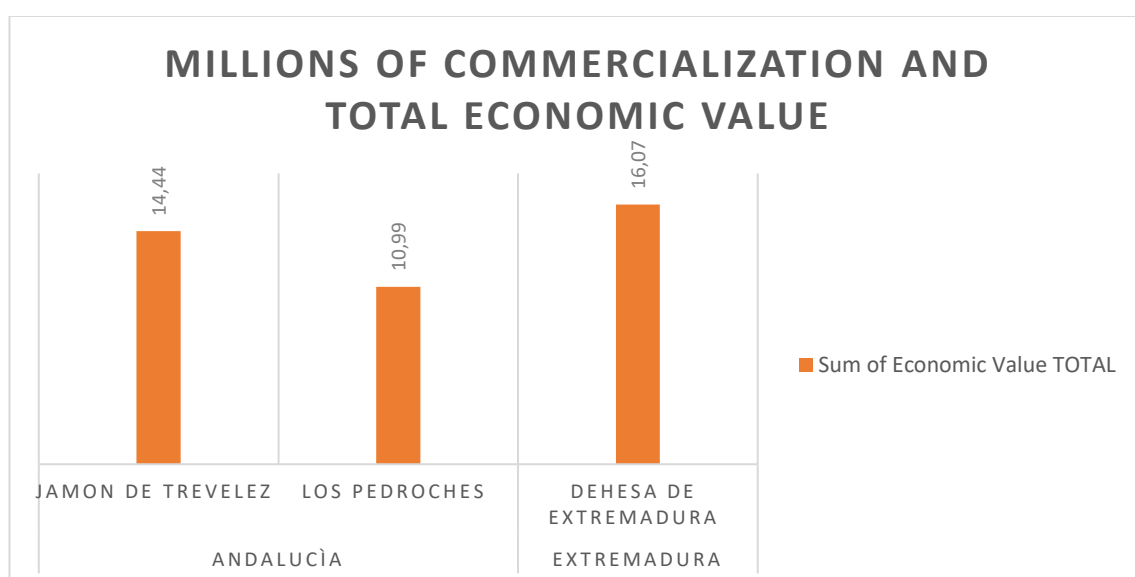
€ Millions	6.96	11.48
% Of the total economic value	0.05	0.08
Economic Value NATIONAL MARKET (m)	4.48	4.79
Economic value EU (m)	0.54	1.44
Economic Value THIRD COUNTRIES (m)	1.94	6.07
Economic value TOTAL (m)	6.96	11.48

The highest number of farmers belongs to Andalucia. It is nearly 80% of farmers. Only a few portions of farmers belong to Extremadura (7%). A considerable amount of protected and produced oil belongs to the Andalucia region. Most of the total oil mills belong to Andalucia, with around 149 oil mills. The second-highest oil mills (64 mills) are in Catalunya. *Baena* PDO has the highest economic value (41% in the sector), and *Priego de Cordoba* PDO has the second-highest economic value (17% in the sector). Most olive oil products are commercialised from the Andalucia region in the national markets, which are also higher than the EU and third countries' markets. Around 96 million euros of olive oil comes from the Andalucia region, while a low amount of olive oil comes from the Extremadura region. The highest total economy belongs to Andalucia, with 81% market economy value. *Baena* PDO is also the most commercialised olive oil product in Spain. These products' national economic value trend is higher than the EU and third countries' markets.

Unfortunately, further descriptive analysis cannot be conducted because of the lack of data for each variable by each product.

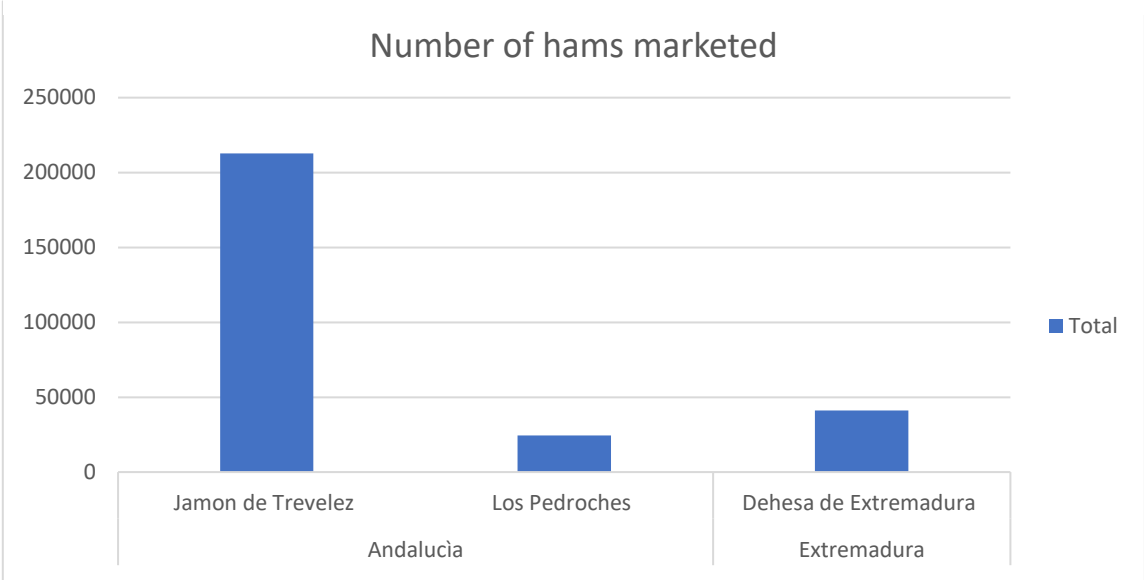
The graphs below show the comparative discussion of processed meat products by region, category, and product.

Table 14 Commercialisation of processed meat products by region (data processed by the author)



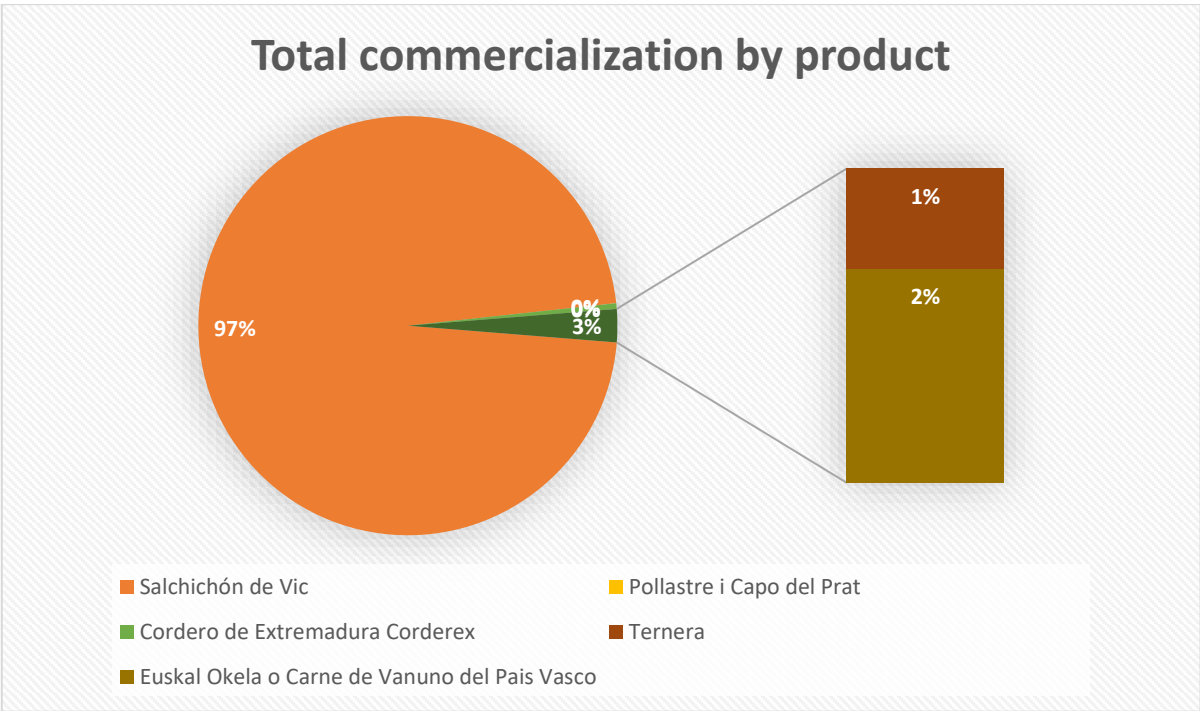
The graph shows that around 16 million euros of *Dehesa de Extremadura* PDO processed meat products are the highest commercialised product in Spain. Comparatively, the lowest (11 million) amount of euro is generated by *Los Pedroches* PDO in Andalucia. *Dehesa de Extremadura* PDO has the highest economic value, and *Jamon de Trevelez* PDO has the second higher economic value.

Table 15 Number of certified hams marketed (data processed by the author)



A considerable portion of hams marketed belongs to *Jamon de Trevelez* PDO in Andalucia, while the smallest amount of hams marketed belongs to *Los Pedroches* PDO in Andalucia.

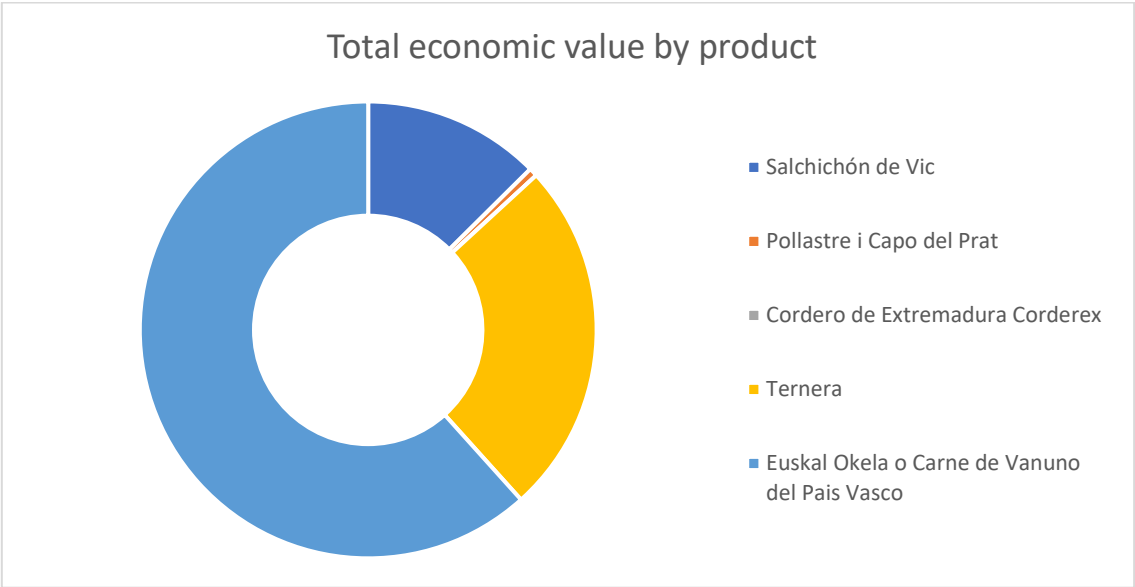
Table 16 Total commercialisation by meat product (data processed by the author)



The graph explicitly shows that a significant portion of commercialised products is *Selchichon de Vic* PGI with 97% of total commercialisation. On the other hand, the lowest commercialisation occurs for *Cordero de*

Extremadura PGI, while *Ternera de Extremadura PGI* is the second-lowest commercialised product among processed meat in Spain.

Table 17 Total economic value by meat product (data processed by the author)



Though *Salchichon de Vic* PGI is the most commercialised product, the most economic value belongs to *Euskal Okela o Carne de Vanuno* PGI del País Vasco, with a 62% economic value. *Salchichon de Vic* PGI is the second-highest economic value, with a 13% economic value.

An important point to investigate is to understand why, especially in the category of olive oils, there is a good production that respects the specification but is not certified.

Region	Product	Total virgin and extra virgin olive oil	Total virgin and extra virgin olive oil protected (2)	product not protec
Andalucía	Antquera	2.856,02	917,52	1.938,50
Andalucía	Baena	97.143,50	52.040,50	45.103,00
Andalucía	Montes de Granada	459,9	459,9	0,00
Andalucía	Montoro-Adamuz	8.290,20	145,02	8.145,18
Andalucía	Poniente de Granada	28.831,00	1.065,00	27.766,00
Andalucía	Priego de Cordoba	17.664,73	7.065,89	10.598,84
Andalucía	Sierra de Cadiz	3.266,49	543,4	2.723,09
Andalucía	Sierra de Cazorla	6.000,00	5.000,00	1.000,00
Andalucía	Sierra de Segura	4.654,00	4.654,00	0,00
Andalucía	Sierra Magina	11.265,00	10.125,00	1.140,00
Andalucía	Estepa	12.500,00	3.158,95	9.341,05
Cataluña	Les Garrigues	3.286,00	3.286,00	0,00
Cataluña	Oli de Terra Alta	527	502	25,00
Cataluña	Oli de Baix Ebre- Montsià	179,14	179,14	0,00
Cataluña	Siurana	2.361,00	2.356,00	5,00
Extremadura	Aceite Monterrubio	7.780,00	45	7.735,00
Extremadura	Gata-Hurdes	54,76	54,76	0,00

Figure 13 Certified and not certified production of olive oil. (Data processed by the author)

As shown in figure 13, in some cases, even more than 10,000 litres of the non-certified product are exceeded, as far as the specification is respected.

## 2.2.4 PORTUGAL

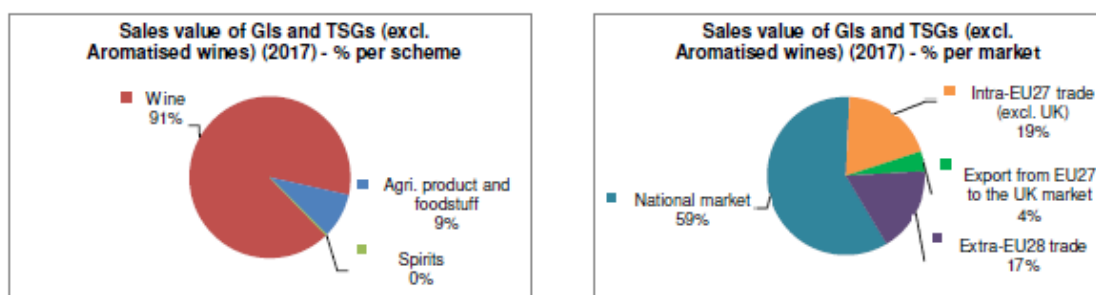


Figure 14 Sales value of GIs and TSGs for Portugal. Source: AND International studies for DG Agri

According to the European Commission data, the production of agricultural products protected by geographical indication is decidedly lower than that of wine. The certified agri-food sector occupies only 9% of the market value. In general (including the wine sector), exports are slightly higher. The product sold on the national market is 59%. In line with most European countries, the certified production sector has grown over the years, even in 2017. However, the data are partly unreliable as they are statistically confidential.

For Portugal, only 6 GIs belonging to the Azores region were analysed.

The *Azores archipelago* is the most suitable region for dairy production in Portugal. The region represents 30% of the overall Portuguese dairy production. The production system consists of an average 6,216 kg/cow/year milk yield. The transport system represents the most significant obstacle with the Azores Islands dairy sector, representing the major cost. The main markets are located in continental Portugal, over 1,500 km away, and local dairy products have an essential competition with dairy products produced in mainland Portugal and the rest of the European Union.<sup>66</sup>

In 2017, total milk production in Portugal reached 1,863,440 tons. The dairy sector has major importance to regional production and the economy in the Azores. According to data, the milk sector represented 2017 about 30% of the gross regional agricultural production (30% of the farms/companies), a value increasing since 2007. The Azores has two PDO kinds of cheese: *São Jorge PDO* and *Pico PDO*, from the islands with the same name. The latter has a shallow production level; it is defined as “extinct”. However, according to documents, among PDO products of the Azores, the most successful story so far has been the *S. Jorge* PDO cheese (also known as *Queijo da Ilha*). It is sold in most supermarkets on the continent, where it fetches high prices and it is widely recognised by consumers. The major limitation is the relatively low production volume for these cheeses and the associated transport costs, making it difficult to compete with mainland PDO cheeses manufactured with goat or sheep milk.<sup>67</sup>

*Carne dos Açores* PGI has a production of about 600,000 certified animals for the meat product. The production is about 46,000 kg of product, for a value of 2,000,000 euros. 10% of the sale is in the region, while 90% has national distribution.

For fruit products, pineapple and maracuja, a healthy pineapple production is found but with a weak production of maracuja. *Maracuja dos Açores* PGI can be considered a small production, given the intended surface area of only 2 ha for a total of 7,132 kg of product.

Table 18 Production data of Fruit: Portugal (data processed by the author)

Product (2019)	Production (Kg)	Price (euros/Kg)	Production Value (euros)
Ananás dos Açores/S. Miguel DOP	442,679	1.90	841,090
Maracujá dos Açores/S.Miguel DOP	7,132	2.80	19,970

Pineapple and passion fruit are mainly marketed in the region.

No raw data are available for honey, except for the national scale. Marketing is mainly local for direct sales. Observing that the total production is 13 tons, it can be deduced that *Mel dos Acores* PGI is a tiny production, but no public data on the production structure are available.

## 2.3 FINAL CONSIDERATIONS

In the data analysis above, a significant difference between the various geographical indications emerges based on the data collected. **The data analysis conducted for the AREPO member regions shows a strong consistency with the study conducted for DG Agri.** The study shows a substantial economic and production difference between the larger and the smaller indications. Even if it is possible to identify the smallest GIs and establish a scale of size, from these calculations, it is impossible to understand the reasons for this gap and how some GIs are in danger of disappearing. The data just presented show only the most evident aspects related to the size of GIs. Many other data have not been presented due to a lack of consistency for the purposes of the study or the impossibility of having solid results.

The interest in geographical names by companies and other actors involved in the production and valorisation of specific products has always been reliable, as shown by the great numerical development of PDOs and PGIs recorded in EU countries and the continuous increase of initiatives at recognising new names. The actual level of use of company names is growing, considering a substantial increase since 2015, mainly for PDOs.<sup>68</sup>

The recognition of a geographical denomination exerts a plurality of both direct and induced effects, which must be assessed at the level of the company system and the level of the individual company.

The two aspects must be kept separate as the effects are distributed differently than uniformly between the companies due to a plurality of parameters. The effects of designations derive both from the process of constructing the collective rules (the specification) as such, then from the structure of the rules themselves that the actors have defined, from their methods of application and, finally, from how the control body operates. To analyse the effects of a designation, it is, therefore, necessary to consider the individual and collective dimensions as strongly correlated, just as the side of the benefits that can be obtained must be kept closely linked to that of the costs to be sustained for the actual use of the designations.<sup>69</sup>

However, in order to assess the sustainability of geographical indications, economic and production data are not sufficient. In the following parts of the study, questionnaires and interviews will investigate the possible causes of this big difference and what influences the sustainability of small and medium geographical indications.



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## ENDNOTES PART 2

- <sup>36</sup> Study on the economic value of EU quality schemes, geographical indications (GIs) and traditional specialties guaranteed (TSGs), Final report <https://op.europa.eu/en/publication-detail/-/publication/a7281794-7ebe-11ea-aea8-01aa75ed71a1/language-en>
- <sup>37</sup> Study on the economic value of EU quality schemes, geographical indications (GIs) and traditional specialties guaranteed (TSGs) Country fiches <https://op.europa.eu/en/publication-detail/-/publication/73ad3872-6ce3-11eb-aeb5-01aa75ed71a1/language-en>
- <sup>38</sup> International study for DG AGRI / EU Food & Drink Europe. Study on the economic value of EU quality schemes, geographical indications (GIs) and traditional specialties guaranteed (TSGs) Country fiches <https://op.europa.eu/en/publication-detail/-/publication/73ad3872-6ce3-11eb-aeb5-01aa75ed71a1/language-en>
- <sup>39</sup> Study on the economic value of EU quality schemes, geographical indications (GIs) and traditional specialties guaranteed (TSGs), Final report <https://op.europa.eu/en/publication-detail/-/publication/a7281794-7ebe-11ea-aea8-01aa75ed71a1/language-en>
- <sup>40</sup> Géographiques. Sylvander, B., Allaire, G., Belletti, G., Marescotti, A., Barjolle, D., Thévenod-Mottet, E., Tregear, A. Qualité, origine et globalisation : Justifications générales et contextes nationaux, le cas des Indications. Canadian Journal of Regional Science, (2006) 29 (1), 43-54.
- <sup>41</sup> Barjolle, Chapuis and Dufour, The competitive position of some PDO cheeses on their reference market identification of the key success factors, 2005
- <sup>42</sup> D. Barjolle, B. Sylvander, Quelques facteurs de succès des “produits d’origine” dans les filières agro-alimentaires européennes: marches, ressources internes et institutions.
- <sup>43</sup> G. Gereffi, J. Humphrey, T. Sturgeon, The governance of global value chains Review of International Political Economy 12:1 February 2005: 78–104
- <sup>44</sup> Analysis of local supply chains. <https://www.ncub.co.uk/wp-content/uploads/2021/05/SUPPLY-CHAINS.pdf>
- <sup>45</sup> Gary Gereffi, John Humphrey & Timothy Sturgeon The governance of global value chains, Review of International Political Economy, 12:1, 78-104 (2005) DOI: 10.1080/09692290500049805
- <sup>46</sup> <https://www.inao.gouv.fr/>
- <sup>47</sup> <http://www.ismeamercati.it/analisi-e-studio-filiere-agroalimentari>
- <sup>48</sup> <https://ec.europa.eu/eurostat/web/agriculture/data/database>
- <sup>49</sup> <http://www.ismeamercati.it/flex/FixedPages/IT/QualidoVetrina.php/L/IT>
- <sup>50</sup> <https://www.mapa.gob.es/es/>
- <sup>51</sup> <http://www.arepoquality.eu/it>
- <sup>52</sup> <https://www.portugal.gov.pt/pt/gc21>
- <sup>53</sup> <https://www.qualivita.it/>
- <sup>54</sup> Atlante Qualivita 2020, Treccani
- <sup>55</sup> [https://ec.europa.eu/info/food-farming-fisheries/food-safety-and-quality/certification/quality-labels/eu-quality-food-and-drink\\_it](https://ec.europa.eu/info/food-farming-fisheries/food-safety-and-quality/certification/quality-labels/eu-quality-food-and-drink_it)

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<sup>56</sup> <https://indata.istat.it/prodcom/>

<sup>57</sup> <https://www.inao.gouv.fr/>

<sup>58</sup> International study for DG AGRI / EU Food & Drink Europe. Study on economic value of EU quality schemes, geographical indications (GIs) and traditional specialities guaranteed (TSGs) Final report

<sup>59</sup> (Chocolate and derived products, Beverages made from plant extracts, Natural gums and resins, Mustard Paste, Pasta, Salt, Prepared meals)

<sup>60</sup> For the French regions, data was taken from the INAO dataset and regions cards.  
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<sup>61</sup> INAO, 2019, AOP et IGP : Quelles ressources et quels coûts pour les Organismes de Défense et de Gestion (ODG) de produits agroalimentaires ?  
[https://www.inao.gouv.fr/eng/content/download/2866/26805/version/2/file/AOPIGP\\_Infographie\\_Ressources\\_couts\\_ODG.pdf](https://www.inao.gouv.fr/eng/content/download/2866/26805/version/2/file/AOPIGP_Infographie_Ressources_couts_ODG.pdf)

<sup>62</sup> PDO and IGP: What resources and what costs for the Defense and Management Organizations (ODG) of agri-food products?, INAO 2020, <https://www.inao.gouv.fr/Publications/Donnees-et-cartes/Informations-economiques>

<sup>63</sup> The CE 2017 Data Quality Profile - Bureau of Labor Statistics. <https://www.bls.gov/cex/dqreport2017.pdf>

<sup>64</sup> <https://www.politicheagricole.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/202>

<sup>65</sup> G Bertoli, E. Valdani, Marketing internazionale, 2018, EGEA

<sup>66</sup> INE, 2019. Agricultural Statistics – 2018. Instituto Nacional de Estatística (Statistics Portugal). <https://www.ine.pt/>

<sup>67</sup> Almeida, A.M., Alvarenga, P. & Figueiro, D. The dairy sector in the Azores Islands: possibilities and main constraints towards increased added value. Trop Anim Health Prod 53, 40 (2021). <https://doi.org/10.1007/s11250-020-02442-z>

<sup>68</sup> Diasa C., Mendes L., Protected Designation of Origin (PDO), Protected Geographical Indication (PGI) and Traditional Speciality Guaranteed (TSG): A bibliometric analysis, Food Research International Volume 103, January 2018, Pages 492-508

<sup>69</sup> Filippo Arfini, Elena Cozzi, Maria Cecilia Mancini, Hugo Ferrer-Perez, José María Gil, Are Geographical Indication Products Fostering Public Goods? Some Evidence from Europe, Department of Economics and Management, University of Parma, Italy

### PART THREE. QUESTIONNAIRE TO REGIONS

### 3.1 SECOND PHASE: THE REGIONS' PERSPECTIVE

#### 3.1.1 METHODOLOGY AND STRUCTURE

After the first phase of data collection and analysis, the study proceeds to the second phase.

Data collection has given a general idea of the GI world's economic, productive, and social levels.

In order to gain a better understanding of the case, it is **necessary to understand the mechanisms and reasons why some GI sectors are facing problems that may even lead to the disappearance of some products.**

This second phase used the questionnaire as a tool. The questionnaire is a widely used tool for evaluating opinions and allows much information to be gathered relatively quickly.

The questionnaire was constructed according to a well-defined objective: to **understand the perception of regional governance bodies of small and medium-sized GIs** and understand if they are aware of the possible mechanisms and shortcomings that lead small and medium-sized GIs to be in difficulty.

The creation of the questionnaire took place in three stages:

- Initial exploratory phase: based on the data and the analysis conducted, the scope of action, and the actors involved, the possible variables were defined.
- Pre-test phase: identification of the macro topics and creation of the questionnaire.
- Preparation phase: Remaking, implementation, and revision.

Sharing among all the actors involved in the administration of the questionnaire of the following elements:

1. Definition of the purpose of the research.
2. Explanation of the questionnaire.
3. Preparation of any requests.

In order to achieve the final objective of the study, i.e., to understand if more protection is needed at the legislative and strategic level for small and medium geographical indications and to understand which practices can be more effective for the management of the system, the questionnaire is structured in three parts.

The first part is entitled "**ECONOMIC STATUS - SMALL GIs AT RISK OF DISAPPEARANCE**".

After a brief introduction to economic and production data, the representatives of the regions were invited to answer questions related to the perception of small GIs. In some cases, some GIs have disappeared by ceasing production or by deciding to no longer certify the product.

This is not just an economic problem; considering the intrinsic value of the geographical indication, it means that a cultural and traditional product is lost.

The second part is dedicated to **PROTECTION AND STRATEGY**. The regions were invited to indicate what they consider the priorities in protecting GIs and which are the most relevant fields of intervention.

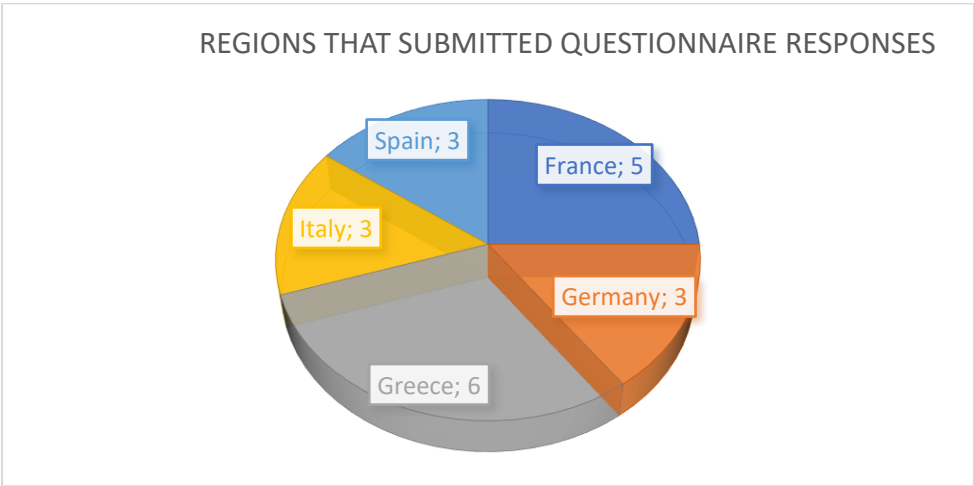
In the third part, they were asked **to express their opinion on the matter, suggest solutions, and provide information on current good practices.**

A cross-sectional approach was chosen to collect information, using exact **closed questions** to collect data for statistical use, **structured questions** to obtain a perception of ideas and open questions helpful in expressing opinions and suggestions.

For a total of 39 questions, 10 are closed-ended questions, 24 structured-response questions and 5 open-ended questions.

The questionnaire **was sent to the 31 member regions of AREPO. Twenty regions completed the questionnaire** in a very comprehensive and detailed manner. The prevalence of the answers came from the French and Greek regions.

Table 19 Regions that submitted questionnaire responses (data processed by the author)



The respondents were 6 Greek regions, 5 French regions, 3 Spanish regions, 3 Italian regions and 3 German regions.

For Greece, responses were provided by **Attica, Crete, Epirus, Central Macedonia, Thessaly and Western Macedonia**. For France, responses were received from **Bourgogne-Franche-Comté, Brittany, Centre-Val de Loire, Corse and Occitanie**. For Spain, **Catalunya, Extremadura and País Vasco** replied. For Italy, the regions of **Tuscany, Valle d'Aosta and Veneto** replied. Finally, for Germany, **Baden-Württemberg, Bavaria and Hessen** replied.

After assessing the answers collected through the questionnaire, the analysis revealed further issues and aspects that had not been considered yet.

This process served as a basis to **recognise good practices, organise specific discussion groups, and elaborate recommendations** so that even the smallest geographical indications have a chance of success to prevent the potential of a territory, tradition, and culture from being lost over time.

In the following section, the results are presented.

The regions have indicated **more than fifty geographical indications that have disappeared or are in severe difficulty.**

In some cases, the production chain is healthy but has problems that do not allow exponential development. For example, they may face economic, social, and even environmental problems. In other cases, the GIs reported are no longer productive. The period of non-production ranges from two to even five years.

The regions interviewed identified several reasons for exposing small and medium-sized GIs to disappearance.

A weak **governance structure of the producer groups has been identified as the main reason why production stops** and producers lose interest in certifying the GI. Where it exists, it does not have the strengths, interests, and competencies to keep producing under GI certification and motivate producers. The weak point is a lack of cohesion and coordination between producers. This disorganisation leads to a loss of focus on common objectives, causing producers not to see the benefits of an organisational governance structure and to lose interest in the certification system.

It prevents the elaboration of common strategies, i.e., concerning promotion, and it does not lead to shared objectives. The reasons underlying this weakness can be traced to a lack of workforce, the organisations' business structure that does not participate in promotional programmes, and a lack of information and communication.

This shortcoming affects the training of producers but also the consumer's side, as the low level of understanding and awareness of the GI starts with the producers. Authorities and institution bodies also play a fundamental role but, in some cases, do not provide adequate support.

The second priority factor mentioned by the regions concerns **the lack of economic sustainability.**

More than 50% of the companies involved in PDO/PGI production are **family-run**. In most cases, PDOs/PGIs do not represent the principal source of economic return, rather they are part of a diversified production.

**The little economic return from small-medium PDOs and PGIs does not allow to cover the costs of production and certification**, including workforce and bureaucracy, reverberating on the management of the producer group. Since the production is on a small scale, costs are higher, and profit levels are not sufficient to be reinvested in technological and productive improvements nor in promotion and distribution. This leads to the creation of a secondary market in which the product, whose characteristics would comply with the product specifications, is sold without certification.

As a matter of fact, without the costs related to the certification, producers perceive to earn higher revenues. Therefore, the lack of economic sustainability concerns the cost of certification and control, which are higher than the turnover of the certified product.

At the same time, producers often choose to sell a potentially certifiable product at a lower price to maintain the relationship with consumers. Specifically, for small productions with low production volumes and no exports, the product is mainly marketed regionally, at most nationally. In these cases, although the quality indication system is functional and brings advantages, **it is perceived as unnecessary, determining a low demand for certified products.**

This happens because the product is **well-known locally and deep-rooted in the local dietary tradition**. Furthermore, a **strong relationship of trust** has been developed over time between consumer and producer, since the purchases are made directly from the producer, and the consumer is not willing to pay the added economic value of certification. Hence, certification is perceived as necessary only when going beyond the local dimension for product identity and promotion factors.

Social sustainability plays a crucial role as well. Many regions consider the **lack of generational change** a problem, especially concerning disadvantaged production areas. The education system, both **training and information for producers and consumers**, has a significant impact on this issue.

In addition, the survey revealed **producers' lack of confidence in geographical indications and the lack of flexibility in the bureaucratic system**, particularly concerning the amendments to product specifications.

The difficulty of amending product specifications and red tape means that the evolution of the production process, especially from a technological point of view, is prolonged and entails higher costs for producers. In some cases, regions are experiencing difficulties for producers in adapting the product and the production to new changes in agri-food policies. This limits innovation and leads to difficulty in competing in the market, low economic sustainability and technological and innovative obsolescence.

As a consequence, **simplification of procedures is necessary**. The simplification intersects with the future revision of the quality policy, which is expected to streamline the registration and modification process.

Some regions are struggling with **climate change**: rising temperatures, fires, drought, floods, frosts, strong winds and the increased attack of pathogens require adaptation efforts from producers. The climatic effects lead to economic disruptions that represent costs for small producers. In addition, production in disadvantaged areas, such as mountainous areas and islands, makes the establishment of a GI more complex due to shortcomings in terms of governance and logistics.

To conclude, the survey raised other critical points, namely **polarised bargaining power** unbalanced along the production chain (production-processing-distribution) and **food fraud**.

These aspects can also be seen as consequences of the weak structuring of the producer group mentioned before.

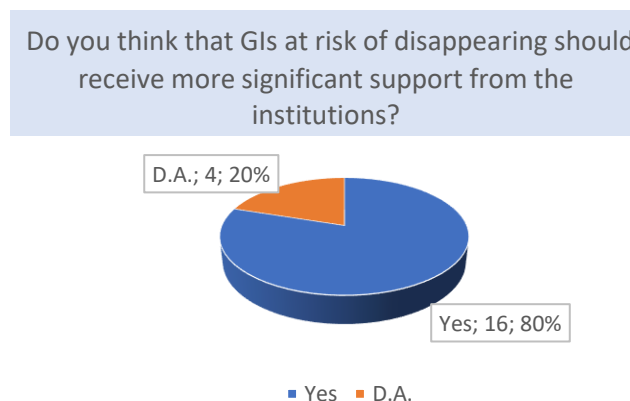
The producer group fails to develop means to adequately protect its product and intellectual property. Thus, some similar but non-certified local products mistakenly enjoy the same reputation without meeting the requirements of the GI. Plus, the fragmentation of supply does not allow the development of a strategy (price, promotion, logistics) vis-à-vis organised sales channels.

### 3.1.2 PROTECTION AND STRATEGY SUGGESTIONS

According to most of the regions interviewed, small and medium-sized GIs need more support from Institutions. It is stressed that the strategic area of intervention is **governance**. Local administrations and relevant regional bodies play a crucial role.

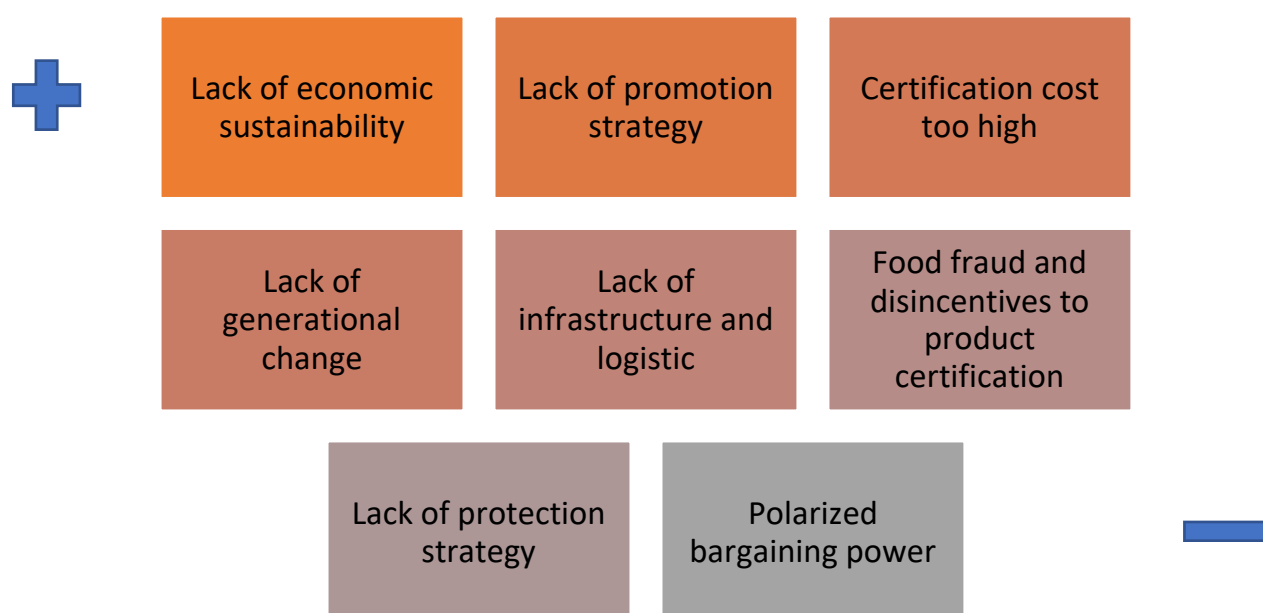
In the following table, we highlighted the results and thus the preferences expressed by the regions in identifying the fields that need more action.

Table 20 Preference expressed by regions (data processed by the author)



Using the colour scale, it can be observed which critical points emerged, mainly the first three. All eight issues were identified as needing the most attention.

Table 21 Fields that need more action according to the regions. (Data processed by the author)



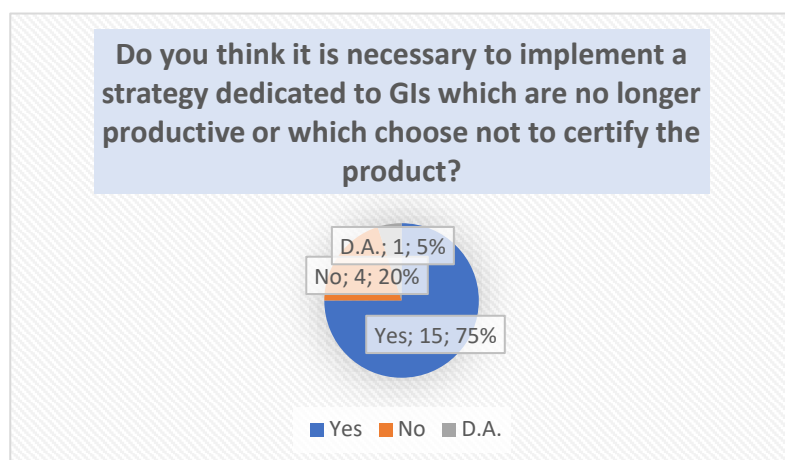
In the light of the data collected, a critical point emerged that might be fundamental for the future strategy and the implementation of some solutions. Several regions have recorded a **lack of specific training** on the GI system, and producers are often unaware of the bureaucratic procedures to be dealt with for certification or receive little support even from producer organisations, consortia, or dedicated bodies.

Most regions think that geographical indications at risk of disappearing **should receive more institutional support**, although in some cases, it is indicated that they already receive subsidies from the regional authorities. Several strategies are already in place and are mainly economic support.

Concerning the regions' suggestions, some interesting views emerged.



Table 22 Preference expressed by regions (data processed by the author)



With regard to the strategy dedicated to GIs that are no longer productive, regions suggested implementing specific strategies. **Nevertheless**, they do not all agree on the need for an EU strategy. **Actions are mainly seen as local, tailor-made for the territory and the production sector under consideration.**

Some regions stressed that **climate change is not a factor to underestimate**. Producers, especially those dealing with agriculture and fruit growing products, often face climatic disasters that make them lose a large

part of their production.

In some cases, some producers decide not to certify the product. According to the replies to the survey, this is due to the **certification cost being too high compared to the return on investment**. The cost is monetary, but the bureaucratic burden has a strong impact because producers lack knowledge and training on the procedures and requirements to comply with.

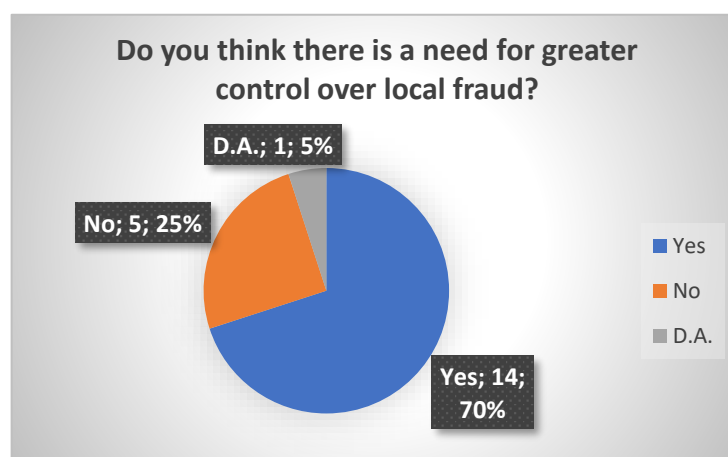
The idea developed in the conclusions is to set up a **regional support table for GIs**. The basic concept is to give strong support to small and medium GIs at the level of governmental bodies. A shared suggestion is that strategies should be identified for each territory through all stakeholders' regional/local involvement (producers, processors, public authorities, etc.). Specific lines of action are required to strengthen and subsidise their management and certification structures and establish means of accompanying management and promotion. Each GI presents both shared and specific needs. This diversity emerges in the chapter dedicated to case studies.

**Most regions agree that reducing bureaucracy**, simplifying processes, and making them understandable and accessible to all can play an essential role for small and medium-sized GIs.

Table 23 Preference expressed by regions (data processed by the author)

For the other problems that emerged from the answers to the questionnaire, the data analysed are inconsistent to be able to enhance the analysis in this paragraph.

Regarding protection against local fraud, 70% of the responding regions favour strengthening the system. However, among the suggestions, the recommendation for a more significant **investment in education** stands out.



**The idea is to strengthen the education system**, starting with schools. Local producers must be guided and educated by providing the basic knowledge on production and distribution, infrastructure management, financial incentives, and processes for creating cooperatives or producer organisations.

Education and training should also concern the elaboration of valorisation strategies, encompassing related activities, such as tourism.

On another level, education strategies also need to stimulate the research and must include universities to foster research on sustainability issues and the protection and recovery of local biodiversity.

Education must be complemented by information activities aimed at both consumers and producers. Consumers should be made aware of quality certifications, while producers should recognise the intrinsic value and potential of the system.

In addition, it is considered essential to evaluate **intellectual protection strategies**. This process can also be done by collaborating with other institutions at different levels. The process would strengthen the character of local distinctiveness and authenticity, bringing benefits on all fronts of sustainability on the ground for resilient rural development.

Finally, the regions share the idea that more needs to be done when it comes to **promotion** and communication, emphasising the positive externalities of EU quality schemes, nutritional profiles and inclusion of GI products in healthy diets, as well as their contribution to other economic activities, e.g., tourism.

Therefore, the following elements have been identified through the questionnaire:

- The majority of the regions surveyed would be interested in **having a centralised and coordinated system for collecting data** and monitoring geographical indications. Some restrictions should be set up in order to protect sensitive information, such as economic data.
- The majority of the regions surveyed indicated that **it is necessary to maintain and increase small and medium-sized GIs' sustainability** through increased support and legislative clarity.
- The regions surveyed expressed a strong preference **for giving producer organisations and governance bodies more power and responsibility** to boost the protection and promotion of GI products.
- Regarding promotion, all agree on **improving product communication**, providing more information, and educating consumers.

## PART FOUR. INTERVIEWS WITH PRODUCERS

## 4.1 CASE STUDIES

### 4.1.1 METHODOLOGY

The interview with the producers was the tool used to collect producers' opinions. Indeed, producers are best placed to identify the problems encountered daily in the production chain. Furthermore, interviews allowed to assess the answers provided by regions.

The interviews were conducted by video call by AREPO staff with a representative of the production chain and, in some cases, a representative of the regional authority. In only one case, the interview was in written format.

The choice of the production chains for case studies respected the following criteria: **homogeneity of size** (micro, small and medium productions), **homogeneity of denomination** (DOP/IGP), **nature of the product** (processed/semi-processed/fresh), and **homogeneity of origin** (among AREPO member regions). The aim was to **have a balance within the case studies and to understand if some issues were only specific to some types of products**. The choice of the product was also made in collaboration with the regional bodies that were available to support the work and to put AREPO in contact with the supply chain.

The interviews lasted about one hour and were carried out as follows:

- In the first part, **general questions were asked to understand the product and the supply chain**. **Questions concerned** the production chain structure, notably the economic and production data for the last year (turnover, production volume, sales price, shelf price, differences with non-certified products, trends in recent years, etc.). They were looking to explore the governance structure and the dynamics between the actors.
- From an economic perspective, **the aim was to understand costs and issues on the production side**.
- **On the social side**, the objective was to understand the production structure, the links, the relationships with consumers, the activities to promote tourism and the involvement of young people to promote generational change.
- **On the environmental side**, questions were asked to understand the extent of the effects of climate change, the impact of pesticide and fertiliser use and the relationship with organic production.
- Finally, **the sustainability of governance was investigated**. The objective was to understand the functioning of producer organisations and the link with local and regional bodies and authorities. The final aim was to understand the type of support they receive and the degree of involvement of these organisations.

In the following paragraphs, the case studies are presented.

## 4.2 CASE STUDIES

### 4.2.1 GATA HURDES PDO

Extra virgin olive oil (EVOO) is one of the most popular products in the Mediterranean diet. Spain produces 63% of European Union olive oil production.<sup>70</sup>

In the EU context, olive growing is very heterogeneous as there are several differences in terms of growing area and farm organisation (i.e., traditional, intensive and high-density plantations). Olive oil production is typically concentrated in the Mediterranean area (mainly Spain and Italy), but its consumption is widespread globally.

The European Parliament's Research Service provides a comprehensive overview of the European Union's olive and olive oil sector. The EU's olive oil policy aims to maintain and strengthen its role in world markets by stimulating the production of a high-quality product with benefits for all stakeholders (growers, processors, traders and consumers). Olive plantations cover a total area of 5 million hectares, with a production value of more than €7 billion.<sup>71</sup>

Ranking	Production		Imports		Exports		Consumption	
1	Spain	1599	USA	310	Spain	320	Spain	525
2	Italy	265	Italy	85	Italy	186	Italy	500
3	Greece	225	Brazil	78	Tunisia	130	USA	316
	World	3131	World	874	World	844	World	2861

Figure 15 Publications of the International Olive Oil Council. Source available online: <http://www.internationaloliveoil.org/>

**Gata-Hurdes PDO extra virgin olive oil is produced in the west of Spain, in the province of Cáceres in the Autonomous Community of Extremadura.**

*Gata-Hurdes* PDO owes part of its unique characteristics to the particular production area. It is characterised by a Mediterranean climate halfway between humid and dry, while the soil consists mainly of granite rocks with slate and sandstone and siliceous materials.

**The olive variety used to produce the extra virgin olive oils certified by the *Gata-Hurdes* PDO is the *Manzanilla Cacereña* (Cacereña olive).** It is a variety whose name refers to the spherical or ovoid shape of its fruit, grown mainly in the north of Cáceres, where it occupies 48,000 hectares, with a dual-use: olives used to produce oil and table olives, either green (preferably Campo Real style) or rust black (Californian style), thanks to the quality of its flesh.

The long-lived olive trees from which it originates are not very vigorous but have a high rooting capacity and are resistant to winter cold. It grows to a height of about 4 meters and has small, shiny, dark green leaves about 50 mm long and 10 mm wide.

Although it is grown mainly in poor soil, this variety soon comes into production, even if its productivity is not high. However, its oil content and extractability are low (around 15% of wet matter, representing an

industrial yield of 10-12%). It is, therefore, a variety that adapts perfectly to the soil and climate in which it grows, making it unique and unrepeatable.

Harvested early, *Manzanilla Cacereña* is not very sensitive to the biennial bearing, but susceptible to *verticillium*<sup>72</sup> and not tolerant to flies. Without a doubt, *Manzanilla Cacereña* is a highly prized delicacy in the extra virgin olive oil production sector because of the ease with which the pulp and kernel can be separated and its fine and delicate taste.



Figure 16 This photo by Author Unknown is licensed under CC BY-NC

The relief of the area covered by the *Gata-Hurdes* PDO is typical of the Sierra<sup>73</sup>. The prolific olive groves of Extremadura cover part of the sierras of Gredos, Béjar, Peña de Francia and Gata, and the rocky units with smooth profiles that rise between the steep slopes of Gredos and the Tiétar river ditch, and the southern slate system of Las Hurdes and the Sierra de Gata.

Therefore, the regions covered by the *Gata-Hurdes* PDO are **Sierra de Gata, Las Hurdes, Valle del Alagón, Trasierra - Tierras de Granadilla, Valle del Ambroz, Valle del Jerte and La Vera.**

The extra virgin olive oils certified by the *Gata-Hurdes* PDO come from the first healthy olives of the season, exclusively of the *Manzanilla Cacereña* variety, harvested and selected by hand using the milking<sup>74</sup> method.

Once harvested, they are transported to the mill, where they are ground in less than 12 hours. They are cleaned, washed, and sorted to extract all their juice at low temperatures (no more than 27°C). After resting in the storage tanks, the juice obtained is sent for packaging, always in suitable containers to keep its properties intact.

100% *Manzanilla Cacereña*, the extra virgin olive oils certified by the *Gata-Hurdes* PDO, are olive juices with a high aromatic intensity, characterised by an intense fruitiness reminiscent of green fruits, preferably apple and banana.

According to the data collected, ***Gata Hurdes* has about 30.000 hectares of olive groves registered for PDO production** and is concentrated in the north of the region. Only two companies process and market the product. Production is between 50 and 60 tonnes per year for a value of about euro 120.000, which corresponds to 0.8% of the total value of national production. Export is limited to small quantities. Most of the production is, however, dedicated to table olives.<sup>75 76</sup>

#### SUSTAINABILITY AND CRITICAL POINTS

**Concerning environmental sustainability**, there is an increase in temperatures due to climate change, which allows the olives to have a **better qualitative and nutritional value**. The impact of drought is not felt too much, as olive growing partly prevents the spread of fires. There have been no major phytosanitary problems over time, probably due to the lower humidity in the production area. **The worst-case scenario would be if olive growing were to be abandoned.** This process would lead to problems for environmental sustainability of a landscape nature, land use management, and the loss of a circular economy that has supported the area's social fabric for decades.

**From the point of view of economic sustainability,** several problems emerge. The potential of the denomination is great, and the possibility of production is much higher than that realised.

**Many producers, however, decide not to certify because they do not find it convenient.** The certified product assumes a higher value, which translates into higher selling prices that consumers, especially the local, are not willing to pay. Therefore, many producers in the area prefer to sell the product at lower prices to guarantee a minimum economic return, even if the oil complies with the criteria for certification. Moreover, there is no established average reference price, but the processor sets it. **There is no protection from this point of view, a thing that leads to unfair practices.** Hence, the sale of the same product with no certification while exploiting the PDO's reputation, have been identified as the cause of product devaluation.



Figure 17 Sierra de Gata. This photo by Author Unknown is licensed under CC BY-NC

**Price and sales are an issue for both olives and oil.** Olives for oil production must have a minimum price. As a solution, the price could be set before the campaign so that all producers have the same competitive opportunities.

**The governance system is a critical point too.** The certifying producers are brought together in the [denomination's regulatory council](#). Initially, all producers in the area were registered, but numbers declined over time to two producers for

oil and seven for olives. The processors are two private, family-run businesses with medium to high production volumes. Indeed, one of them even has a small export share to EU countries and third countries (European countries, Asia, the United States, and Canada). However, the council faces **very high management costs**.

Some producers are gathered in cooperatives in the area, **but they are not on the regulatory council for certification because certification has high costs, including bureaucracy costs in terms of money and time.**

Despite the region providing aid to support part of the certification costs and to help producers, in order to be economically sustainable, more members would be needed to support the costs of the regulatory board. *Gata-Hurdes* PDO is a high-quality product, but the lack of operators in the sector means that its potential cannot be fully exploited. Furthermore, the regulatory council does not take any action to increase producers' involvement. **This is also true when it comes to promotion and training.** Promotion does not follow any common strategy, but it is only carried out individually, with few funds available, generating very little economic return. The local administration and the Region facilitate promotion mainly through tourism channels.

The low economic return means fewer resources to invest in training and information on the subject. As a consequence, lack of generational turnover might be accounted as another issue that *Gata-Hurdes* PDO is forced to face.

**From the point of view of social sustainability, there is a lack of a common strategy for tourism promotion,** leaving oil tourism in the hands of the companies. Some of it is managed by the Tourism Service of the Provincial Council of Cáceres, but there is little coordination with the regulatory council.



A final point that is definitely interesting is the '**competition**' between certifications. Many producers decide to certify under organic rather than PDO. This is because the organic certification costs are lower, and there are fewer administrative and bureaucratic steps to deal with. The best solution would be to have a quality production certified both under organ PDO.

#### 4.2.2 HÖRI BÜLLE PGI

**Höri Bülle PGI** is an onion that obtained registration in 2014. The product belongs to the fresh fruit and vegetable sector, and it is grown in the German region of **Baden-Württemberg**.

*Höri Bülle PGI* is a red onion with a characteristic shape and colour, traditionally grown on the Höri peninsula on Lake Constance. The term *Höri Bülle* is used in Germany in trades and in everyday language to describe the certified onion grown on the Höri peninsula for centuries.

The production of the onions, from sowing to cleaning and drying the harvested bulbs, takes place entirely within the defined geographical area, which **includes the municipalities of Gaienhofen,**

**Moos and Ohningen in the district of Constance (Baden-Württemberg) and the neighbouring town of Bohlingen in the municipality of Singen (Hohentwiel).** This is regarded as a historical and economic entity, bounded to the north-east by Lake Zeller and the south-east by the Untersee.

Lake Constance acts as a natural climatic mitigator, creating a microclimate with a slow release of the water's heat.

As attested in official documents, onions have been cultivated in the geographical area for over a thousand years.

The cultivation of vegetables and onions in the western part of Lake Constance dates back to the 8th century, as reported by the historians of the Reichenau Monastery. Later, independent Höri farmers grew onions as their main vegetable and sold them at onion markets in neighbouring Switzerland and until the 1990s in Constance. At the same time, weekly markets developed in the neighbouring towns of Radolfzell and Singen, which are still supplied mainly by the Höri farmers. Because of its rich cultivation of red-skinned and white-fleshed edible onions, called *Bülle* or *Bölle*, the peninsula received the popular name "**Zwiebelhöri**" or "**Bülleland**" (= **land of onions**). *Höri Bülle* differs from other red onion varieties mainly in its characteristic shape and colour. The typical flat, bulbous shape is particularly suitable for braiding traditional onion braids. The **delicate and tender outer skin** is a relatively light red-brown that does not discolour when cut, unlike the dark red varieties.

The product's very tender texture means that harvesting is not completely mechanised, **leaving many processes traditionally manual.**<sup>77</sup> Because of these characteristics - **self-produced seeds, traditional manual harvesting,** and **preservation of the cultural landscape of the Höri peninsula** - the product is also part of the Ark of Taste international catalogue of endangered heritage foods maintained by Slow Food<sup>78</sup>. Intellectual property rights granted by biodiversity NGOs such as the Slow Food Foundation for Biodiversity can be an



Figure 18 Höri Bülle PGI Logo. See reference 77



important tool to preserve indigenous species or traditional or local knowledge. The example of Höri Bülle represents a good example that the inclusion of a product in the international catalogue Ark of Taste may favour its later protection under the EU quality scheme.<sup>79</sup>

The local skills of preserving and caring for the seeds and growing Höri Bülle have been handed down from generation to generation and largely contribute to the product's current characteristics.

Concerning the taste, *Höri Bülle* is characterised by a delicate aroma and mild, discreet pungency. This makes it ideal for eating raw but also an indispensable ingredient in traditional regional dishes. Thus, the product enjoys strong recognition at the territorial level, **which turns into tourism potential** with festivals and fairs dedicated to this product, among which the "**Bülle Fest**", a typical festival that has been organised for years in October in the municipality of Moos.

#### SUSTAINABILITY AND CRITICAL POINTS

The table below provides data on *Höri Bülle* PGI's production.

Table 24 Höri Bülle PGI's production data. Source: interview with the producers' representative

Year	2015	2016	2017	2018	2019	2020
Number of producers	15	15	14	11	11	11
Cultivation area (ha)	4,87	7,05	8,8	8	6,64	6,89

The number of producers registered for PGI certified production has decreased over time. **In 2021, there were 11 producers<sup>80</sup>, mainly farmers with small businesses.**

There are no big companies in the production chain, and certified onions are not the major source of income: production is diversified into other agri-food products.

*Höri Bülle* PGI is sold both fresh and processed as an ingredient in preparations. Selling the product as fresh onion, the producer's weekly and direct market price varies from 1.80 to 2.50 euro/kg. On the contrary, the price for the distributor ranges from 0.80 to 1.30 euros per kilo.<sup>81</sup>

In 2020, German's overall onion production was estimated at around 630,000 tonnes.<sup>82</sup> The *Höri Bülle* PGI production represented less than 16 tonnes of onions per hectare, meaning that the **production for 2020 was about 112-120 tonnes, for an average turnover of less than 100,000 € for the whole year** value chain.

**In terms of the costs faced by producers**, the items that have the greatest impact on the budget are **labour costs, irrigation and fertilisation costs, and machinery costs.**

The workforce cost is one of the highest because many production steps are still **manual and time-consuming**. For each hectare cultivated, the average working hours required are 692 hours.

**As far as certification costs are concerned, they amount to less than 90 euros per manufacturer.**

For this kind of production, producers claim that **the added value is greater than the cost of certification**, therefore, **it is worthwhile to certify**. The PGI onion is only produced within the Höri peninsula, and it is only sold if certified.

Furthermore, producers report that **the bureaucratic system is too burdensome in terms of time and complexity, especially when it comes to controls and the use of fertilisers and pesticides**. In this respect, the Baden-Württemberg region has implemented a solution to reduce the bureaucratic burden in the control system. The system focuses mainly on small production chains (See Box \*).

**From the social sustainability point of view**, producers have confidence and believe in the GI scheme, and at the same time, consumers recognise the importance and value of certification. Hence, unlike the case studies previously described, there are no similar products sold exploiting the reputation of Höri Bülle PGI. Additionally, the certification has a greater impact on communication and marketing outside the geographical area of production.

Regarding producers' skills and knowledge to deal with the certification scheme, a training programme on aspects of production and bureaucracy is available for producers.



Figure 19 Höri Bülle PGI Logo. See reference 77

Addressing sustainability in terms of **governance and support**, the work of the producer association with the support of the local authorities leads to the **implementation of tourism initiatives** such as festivals, fairs, and boat trips on Lake Constance with the *Höri Bülle* theme. In addition, they also aim at promotion through the publication of books, brochures, websites<sup>83</sup> etc.

Local and regional authorities also provide **financial and promotional support in various forms**. In particular, the Agency for the promotion of food from Baden-Württemberg ([MBW](#)) is very active on this front.

**From the point of view of environmental sustainability**, producers have not registered problems related to climate change yet. The major concern is linked to the production area, and the economically viable cultivation of vegetables represents it in the context of biodiversity enhancement. In

order to solve this critical point, some bodies already provide support, e.g., [Slow Food](#), [ILE-Bodensee](#) and the agency for food promotion Baden-Württemberg (MBW).

To conclude, no competition between the PGI quality scheme and the organic quality scheme is reported, with some producers certifying with the organic label under the EU-notified regional quality programmes ([QZBW/BioZBW](#)).

### **BOX 3 – BUNDLE CONTROL**

The **Baden-Württemberg region** implements a control system called "**Bundle controls**" (a bundle is a group of tiny producers for a PDO/PGI/TSG) **to streamline the system and make it easier for small of producers**. This system is put in place by selecting producers on the basis of their product specifications. In order to obtain bundle status and the implementation of bundle controls, several agreements have to be implemented.

This system has four main actors: **the manufacturers' group, the manufacturing group leader (Control Bundler, CB), the control body, and the control authority**.

Once the sector and type of products have been identified, a group of producers is identified too. After several checks and a review by the competent authority, the latter releases the bundling control. The authorities and producers through the controls within this group elect a "Control Bundler".

**The manufacturing group can produce only one specification and must be located in the geographical area. The group appoints a leader and commits** to perform according to the specification through a self-documentation system. On the one hand, the self-bundle control system includes the organisation and implementation of checks at the producers of the bundle, which prove that the production conforms to the specification. On the other hand, the group and the CB take responsibility for taking action when non-compliances are identified. **If no non-compliances are recorded**, the CB completes an annual report. **If non-compliances are recorded**, a report is made to the control body to clarify what measures have been put in place. If the measures are not adequate, the competent authorities are informed immediately.

The bundle control system has a great advantage for the group members. On the one hand, producers can participate in the prescribed control system. On the other hand, the controls are not implemented annually at the producer level, like the "normal" controls, but are part of an extended control cycle. In return, all members have to engage in a self-control procedure, which is reviewed internally by the group and the controlling body, to ensure its effectiveness.

**The CB** is committed to control the manufacturing group by ensuring that manufacturers follow the specifications. It also collects and manages production data, verifies productions through sanctions and collects self-produced documentation from manufacturers. Part of the control consists of an annual review of the bundler to a control body. Here the effectiveness of the self-control system is checked based on the self-control documents.

Only the group leader is controlled annually. Thus, it is a combination of the effectiveness of self-control and control of the group members. Costs can also be shared among group members.

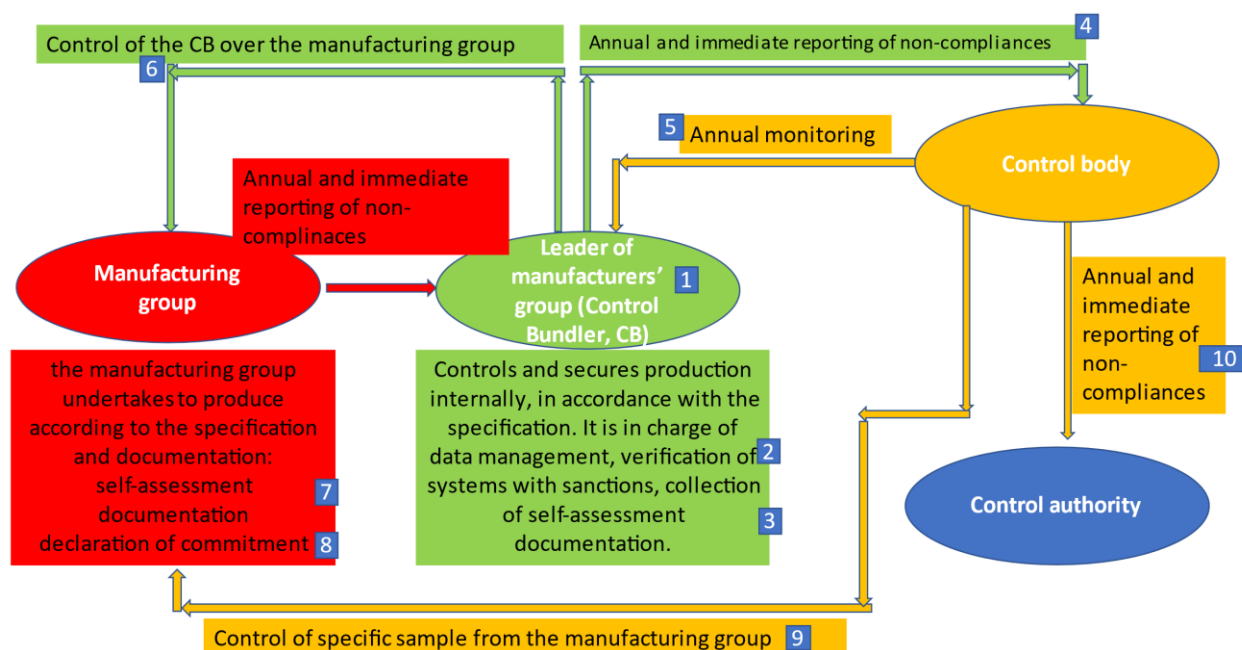
The participation contract stipulated between the CB, and the manufacturers' group includes the obligation to participate in the self-monitoring system and to agree to inspection group members and the control body. Annually the control body forms a random sample group of minimum 10% of the manufacturers' group in a risk-oriented manner to check the product specification requirements.

**The control body** works mainly with the CB and the sample group and then reports annually on the whole control system and immediately for non-compliance to the **control authority**.

Each control area is defined in advance by the competent authority: e.g., what the minimum content of the self-control system must be or what tasks the CB must perform. Likewise, which control tasks the CB assumes in this system. This introductory system is then adapted to the individual specification and production.

The scheme below represents the simplification of the bundle system mechanism. **The numbered system** in the diagram highlights the steps of the requirements set by the control authority in the respective areas. Please note that **this is a closed control system**. The only functions overlapping on the self-control system are the instructions of the control authority.

Table 26 Simplification of the mechanisms of the bundle system. Source: Author's elaboration on data collected by the regional authority



#### 4.2.3 MARRONE DI CAPRESE MICHELANGELO PDO

The *Marrone di Caprese Michelangelo* PDO is one of the smallest designations among those analysed.

The Tuscany region has a long history of chestnut cultivation and reflects a territorial vocation for chestnut production. Suffice it to say that there are four other names in the region linked to the fruit: *Castagna del Monte Amiata* PGI, *Marrone del Mugello* PGI, *Farina di castagne della Lunigiana* PDO and *Farina di Neccio della Garfagnana* PDO.<sup>84</sup> The table below shows the production data of Tuscan GIs concerning chestnuts. The data are representative of the 2019 production.

Table 27 Chestnut IG production data, Tuscany region Source: data processed by the author, Ismea-Qualidò

Product	G.I.	Producers	Governance	Surface (ha)	Certified Quantity (t)
Farina di castagne della Lunigiana	PDO	5	Committee	20	4,1
Farina di Neccio della Garfagnana	PDO	8	Association	18	0.71
<b>Marrone di Caprese Michelangelo</b>	<b>PDO</b>	<b>2</b>	<b>Committee</b>	<b>2</b>	<b>0.13</b>
Marrone del Mugello	PGI	133	Consortium	686	40.7
Castagna del Monte Amiata	PGI	79	Association	194	0.35
Product	Production Revenues (.000 )	origin price (Kg)	End price (kg)	Regional quantity (Kg)	Regional Value (EUR)
Farina di castagne della Lunigiana	61.5	14,99 €	0,00 €	4100,00	€ 61.459,00
Farina di Neccio della Garfagnana	5.8	8,10 €	20,29 €	710,00	€ 5.751,00
<b>Marrone di Caprese Michelangelo</b>	<b>0.6</b>	<b>4,30 €</b>	<b>4,75 €</b>	<b>0,00</b>	<b>€ 630,00</b>
Marrone del Mugello	152.9	3,75 €	8,78 €	40781,00	€ 152.929,00
Castagna del Monte Amiata	-	-	-	3390,00	€ -

*Marrone di Caprese Michelangelo* PDO is produced in the mountainous territory of the municipalities of Caprese Michelangelo and Anghiari, in the province of Arezzo, where all the chain activities (production, sterilisation, drying of dried chestnuts and packaging) must take place. Within the area defined by the specification, the agricultural production area registered for certification varies from year to year, depending on the producer's willingness to certify the product. Whether a producer decides to devote part

of the surface area of the chestnut grove to PDO-certified production depends on the harvest forecast and the operator's assessment of opportunities.

Certified chestnuts are marketed fresh and dry, belonging to the *Castanea Sativa* Mill species. **The product's distinctive features determined by the cultivation area give the chestnut a crunchy, sugary flesh with a slight scent of almond and vanilla.** The particular characteristic of this chestnut is the presence of a **high quantity of starch** due to the water reserves in the area's soils. The higher quality product also derives from the excellent exposure of the chestnut groves to sunlight and the ventilation of the high-altitude areas, which makes it possible to eliminate potentially pathogenic factors such as high humidity.

Production in the area is historical: the varieties found today in the chestnut groves are ecotypes that have evolved through centuries of a careful selection of propagation material taken from the most representative and best specimens in terms of agronomy and pomology, which are best suited to the environmental characteristics. The chestnut is also well established in local culture, appearing both in popular songs and nursery rhymes and in more than twenty recipes.

The conditions for cultivation are not restrictive. **The mechanical practices and plant and fertilisation treatments permitted for organic chestnut cultivation** are allowed. Harvesting may begin on 20 September each year. After harvesting, the product undergoes sorting and sizing processes to remove damaged fruit. **Certification requirements impose a maximum of 5% defects, and the number of fruits must not exceed 90 per kg.** The chestnuts can be dried or undergo the curing process for best conservation.<sup>85</sup>

#### SUSTAINABILITY AND CRITICAL POINTS

At present, the chestnut production chain in the area comprises around 200 producers. **The producers are mainly small**, owning between 1 and 3 hectares under cultivation. Only four or five producers are bigger, with an area between 8 and 10 hectares under cultivation. Each hectare under cultivation yields between 10 and 15 quintals of chestnuts.

**Holdings are mainly family-run**, with a few exceptions, **and chestnut production is not considered the primary source of income.** Farms make a living by diversifying into other agricultural products.

For certified production and the protection and promotion of the product, there is the **"Comitato Promotore per il riconoscimento della DOP Marrone di Caprese di Michelangelo"** <sup>86</sup> - (**Promotional Committee for the recognition of the PDO Marrone di Caprese di Michelangelo**), which brings together **a dozen chestnut growers.**

The product commercialisation is managed by a **cooperative**, **"Cooperativa Valle Singerna"**, which brings together about half of the producers in the area, around 120-130, plus a few private traders. The role of the cooperative is to bring the producers together, collect the product and process it for marketing by providing the premises and machinery for the production process. Hence, the cooperative deals with the packaging and marketing stages.

Concerning the volume of production, the latest recorded data for the certified product date back to 2019, with a production of 0.13 tons. **The certified chain remained unproductive for both the year 2020 and the year 2021.** Despite the **substantial setback in marketing caused by the pandemic**, other reasons have led to a progressively abandon of the product's certification.

The production of *Marrone di Caprese Michelangelo* PDO has been affected by **climate change**. Rising temperatures and increased intensity of sunlight lead to very dense canopies with reduced fruit production. The area of production has also been hit by severe drought, which leads to harvest loss. Climate emergencies have become frequent problems to face, farmers no longer have access to public funds to cope with their consequences and often rely on **private insurance**.

Furthermore, in recent years, chestnuts have been attacked by **the chestnut gall wasp** (*Dryocosmus kuriphilus*). Thanks to integrated pest control by introducing the antagonist in the area, the risk has been reduced but not eradicated.

Additionally, it should be noted that the delayed beginning of the hunting season as well as its stop during the pandemic, **facilitated the presence of wild boar** raiding, especially during the first harvest, thus contributing to a drop in production.

The lack of generational change and hand-over is among the major causes affecting the *Marrone di Caprese Michelangelo* PDO production. On the one hand, the **producers are mainly elderly** and unwilling to take on the bureaucratic burden of the PDO. On the other hand, no **initiative** from the committee, the cooperative or local institutions has been set into motion **to introduce information, training or outreach campaigns for young people**.

**In terms of economic sustainability**, the certification has a low cost; **the most significant impact**, in terms of cost and especially availability, for producers with larger plots of land, **is pruning**, as chestnut pruning is a complex, acrobatic operation, requiring a young specialist team to climb the tree because it reaches great heights.

**Market dynamics mainly dictate the selling price of chestnuts**. On average, the producer price varies between 3.00 € and 4.50 €, the most important variable being the **production volume** each year. Producers do not recognise any polarisation of bargaining power.

**The certification adds a sale value to chestnut between 0.80 € and 1.00 €**. Yet, production being minimal, **this margin barely covers the packaging costs for the certified product, which is a specific feature of this PDO**, marketed in sealed packages of 1, 2, 3, 5, 10 and 25 kg.

On the contrary, the non-certified chestnut produced in the same geographical area is sold loose, controllable, and viewable in large bags and at a lower price. This seems to be preferred by consumers who still recognise the product as *Marrone di Caprese Michelangelo* PDO, even without certification, since it comes from the same geographical area. Producers as well keep using the name of origin even without certifying their product, thus enjoying the committee's historical reputation built up over time. Therefore, **exploitation of the name's reputation** can be identified as an additional problem for the PDO under consideration.

The product is certified, and it is often marketed by the cooperative or directly by the producers within the region, with a few exceptions for large-scale distribution outside the region. **The product is not exported**.



Figure 20 Logo of Marrone di Caprese Michelangelo PDO  
Source: specification, see reference 85



Furthermore, **the limited profitability of the product makes it hard to invest in promotion**. Producers only receive support from the Region for the organisation of B2B events. However, they also **lack of human resources** to deal with the promotion of the PDO products, even during local events.

Focusing on the **governance**, a low level of coordination between producers has been observed, particularly between the committee for the valorisation of certified chestnuts and the cooperative. This is the result of the lack of communication between the two, a shortage of coordination personnel, and producers' average age.

In the light of what has been pointed out thus far, **the certified production being small with a low-profit margin means there is not enough return for producers to continue to have an interest in certifying the product, compared to the economic and bureaucratic burdens involved**. In addition, the lack of actions to support promotion at the local level and to protect the PDO, reduces the possibility of creating links between **producers, distribution channels and consumers**, as well as the opportunities for **information activities and training**, thus reducing the benefits that a quality certification system can generate.



Figure 21 Chestnuts Source: online copyright-free photo CC BY-SA-NC

For the Region of Tuscany, the chestnut sector is a resource of great value in economic terms and for enhancing the agricultural and forestry landscape and combating hydrogeological instability. In Tuscany, chestnut groves for both fruit, honey and wood have led to the development of sectors of excellence.

**Therefore, to boost the chestnut sector, an initiative of the Tuscany region in collaboration with the National Association of Italian Municipalities - ANCI was put in place in October 2021.** The document is a multi-stakeholder protocol of intent to carry out technical studies, identify solutions to the problems of chestnut cultivation, promote the valorisation of the product and support

local entrepreneurs in the wood, honey, and chestnut sectors, with the aim to prevent the loss of its production, tradition, and culture.

#### 4.2.4 PATATES DE PRADES PGI

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For 2019-2020, the data published on the Spanish Agriculture Ministry's website illustrate a picture that sees an area of 5 hectares registered for *Patates de Prades* PGI production, with around 14 operators in the sector. Production is rounded up to the nearest 31 tonnes of the certified product. A single cooperative, which also manages other products, pulls the production strings for marketing. Here is a quick product presentation before addressing the issues with consideration of the data collected.<sup>87</sup>

***Patatas de Prades* is a PGI from the [Region of Catalunya](#).** This geographical indication concerns a fresh, unprocessed product that still retains a tradition rooted in the territory. Although it is a relatively recent GI, it has seen a decline in economic and social sustainability over time.

The product has few producers and few hectares registered for the designation. Specifically, out of the total potato production in the territory, **the area dedicated to certification represents about 5%**, six designated hectares. For centuries, the town of Prades has been growing potatoes. The Prades Agricultural Cooperative has been marketing and cultivating these potatoes in an artisanal way since 1944. The careful

selection of varieties, techniques, and favourable climate has earned the PGI quality scheme. **The Prades potato obtained the PGI in 2001**, which guarantees its prestige and reputation.



Figure 23 Patates de Prades PGI logo. Source : specification, see reference 88

The geographical conditions of Prades can explain the potato's specificities: it is cultivated **at a high altitude**, at the foot of the Sierra de Prades. The area covers the land located in Prades, Capafonts, La Febró and Arbolí, all of them belonging to the Baix Camp region, in the province of Tarragona, in the Autonomous Community of Catalunya.

The particularities of the Prades potatoes arise from **the selection of the tubers at planting**. These are potatoes of the Kennebec variety, grown in the Catalan pre-coastal mountain range at about 1,000 meters above sea level. The relatively low temperatures, the humidity and the silicic soils provide the ideal conditions to obtain **a product of the highest quality**. The purity of the region's water also comes into play. As for the climate, the intense cold eliminates all traces of insects that could damage the product.

Prades potatoes belong to the *Solanum tuberosum* species, particularly the Kennebec variety. **Their skin is very smooth, hard, and firm**. Their flesh tends to be white, with a consistent texture while being mealy. Their flavour is sweet, persistent, and has an aroma reminiscent of chestnuts.

They range in size from 40 to 80 mm. They are sold in bags of five kilos maximum and must always bear the PGI label. Thanks to their **high content of starch**, a double amount compared with the other potatoes, and to their compactness, they can be cooked in different ways, keeping their characteristic good taste unaltered. The Prades potato planting area is approximately 0.50 metres by 0.70 metres, obtaining 5 to 10 tubers per plant, with an average density of 28,000 plants per hectare.

**Prades potatoes are picked once a year, after letting the plant die before picking**. In other words, the plant is never destroyed mechanically or chemically using herbicides to harvest the tubers ahead of time. Prades organises a party when picking the potato sown six months before. It usually takes place in mid-September and offers many opportunities to locals and tourists.

**Annual production ranges between 350,000 and 400,000 kg and is marketed by the Prades Agricultural Cooperative**. Production is not very high compared to other kinds of non-certified potato, but it is of high quality. Once harvested, the potatoes undergo the following processes:<sup>88 89 90 91</sup>

- External quality control: tubers that do not meet the required characteristics are disposed of following quality standards.
- Classification: to have homogeneous sizes that satisfy the taste of the different destinations.
- Preservation of potatoes: thanks to the particular climate of the area, the tubers are preserved naturally in authorised warehouses. Therefore, it is essential to maintain the quality of the potato during the storage period since it is carried out in suitable premises, under natural conditions of temperature and humidity.
- Packaging: the potatoes will be carried out in 1, 2, 3, 4 and 5 kg breathable paper bags.



- Labelling of the potatoes: the labelling is inscribed on the bag's outside with the PGI *Patates de Prades* logo. In addition, a numerical code is marked on the bag of potatoes to identify the producer and keep traceability.

#### SUSTAINABILITY AND CRITICAL POINTS

2021 saw a decline in production of the certified product. From a production volume of 50 tonnes in the first year of certification, it dropped to around 30 tonnes. Average production is therefore between 35-40 tonnes per 30 hectares cultivated.

However, it should be noted **that producers keep favouring the certification**. This is because **the product has a strong reputation in the area**. There is a demand from local consumers who are willing to pay more for the product under the PGI Scheme. The consumer has great confidence in the product, and because of the short production chains, there is a relationship of trust with the producer.

The average selling price of the potato without certification is around 1.15 euros, while with the PGI certification, it is 1.45 euros. **The price is set according to market dynamics**, considering the years in which the product hits lower prices and the years in which the product hits higher prices. Lately, competition of potatoes arriving from other markets is influencing prices, as well as the pandemic which **has led to their increase** (2018).<sup>92</sup>



Figure 24 Potatoes. Source: online copyright-free photo CC BY-SA-NC

**Regarding governance**, "[Cooperativa de Prades](#)" currently gathers 68 members, 13 of whom produce the PGI product. This cooperative collects the potatoes and other local products (hazelnuts, hops, apples, honey, and chestnuts) and then helps the producers market them. As a matter of fact, producers cannot rely exclusively on potatoes and have to diversify the production.

Being a small production, the governance of the value chain is not sufficiently structured because of the lack of workforce to be destined for this task. Furthermore, some potato producers decided to remain outside the cooperative.

**Regarding the product's distribution**, *Patatas de Prades* PGI is marketed by the cooperative and a producer who markets his product. Once the producers have selected the product, it is sent to the cooperative for marketing in smaller 1 to 5 kg bags. **The *Patates de Prades* PGI is mainly sold at local markets**. On the other hand, the two wholesale markets are mainly the "*Mercat del Camp*" in Tarragona and the "*Mercabarna*" in Barcelona.

Another difficulty faced by this PGI stems from a distinctive feature of its production method: **a hand-harvesting process**. It allows a peculiar selection of the product, but being a labour-intensive process, it requires a specific workforce that family-run farms cannot provide. Thus, the average age of producers is increasingly old, and manual harvesting makes this production sector unattractive to younger **generations**.

Therefore, *Patates de Prades* PGI has to cope with a remarkable **lack of generational change**. Additionally, older producers struggle to understand and deal with bureaucracy. As a result, producers believe that a strong communication on the potential of the PGI and that receiving proper training might be helpful tools to attract young producers to the sector and help those already in the production system.

From the point of view of environmental sustainability, **climate change is affecting production**. Temperatures and humidity levels have changed, forcing farmers to prevent potential cultivation hazards and product defects. However, the greatest risks to the product occur in the storage phase.

Consequently, producers have to bear costs for plant protection products, which are also used to maintain the land.

Nevertheless, with the future measures at the EU level concerning the reduction of plant protection products, producers fear a more rapid deterioration of potatoes, which will start to germinate earlier, reducing their shelf life. To conclude, producers of *Patates de Prades* PGI rely on the support provided by the Region of Catalunya for activities of advertising and promotion, otherwise, the economic return from the selling of the product would not be enough to cover these costs. Moreover, the region not only subsidises promotional activities but also the cost of certification.

The support of local Institutions, i.e., the municipality and the local tourist centres, covers the organisation as well of **the Potato Festival, thus attracting consumers through a touristic event**. This festival kicks off the harvesting campaign for the product, and it is crucial for the marketing of the certified product and its publicity. The festival is sponsored by the local tourist centres and the municipality.

#### 4.2.5 PINE MAROMELO/ PEFKOTHYMAROMELO KRITIS PDO

Greece has a thousand-year-old tradition of honey production. In fact, since ancient times, there have been sources that speak of Greece as a land with a great tradition of beekeeping. The richness of the natural environment combined with the historical tradition of beekeeping has led to an elite production in the sector. **Honey is so deeply rooted in Greek culture and tradition that it has been declared a national product.**

In Greece, about 15,000 beekeepers manage 1,200,000 hives. There are about 3,000 professional producers with more than 150 hives who earn more than 50% of their annual income.

The most significant quantities of honey come from pine, fir, and thyme. **The annual production is between 14,000 and 16,000 tons per year**, although with a low export level due to market dynamics, price, and competition.

Specifically, **the region of Crete**, where *Pefkothymaromelo Kritis* PDO is from, produces **between 2,500 and 3,000 tonnes of honey, 20% of which is PDO-labelled**.



Figure 25 PEFKOTHYMAROMELO KRITIS PDO logo.  
Source: specification, see reference 93

**Pefkothymaromelo Kritis PDO** is a unique variety of thyme and pine honey produced in Crete, an area with the highest density of bees in the world. The sediment of this honeydew, or forest honey, contains pollen grains from up to 20 different plants in each honey sample.<sup>93</sup>

**Cretan honey is a natural mixture of thyme honey with pine honey**, produced in Crete and results from the special management of the beehives or the coexistence of late-blooming thyme trees with the honey secretions from the insect *Marchalina hellenica* L. which is mainly parasitic on *Pinus brutia* Ten and *Pinus halepensis* Mill.

*Pefkothymaromelo* does not have the striking colour, clarity and brightness of thyme honey, nor the 'the haze' that distinguishes pine nuts.

Thus, *Pefkothymaromelo* has been produced on Crete Island since ancient times. Its special production technique, namely unhindered nectar harvesting by the bees and selective honeycomb harvesting in the thyme, shrinking brood in the pine trees, and renewing the population in autumn, has been passed down from generation to generation of beekeepers as a time-honoured technique to the present day.



Figure 26 Pefkothymaromelo Kritis PDO. Reference: regional authority

**This certified honey (*Pefkothymaromelo Kritis* PDO) has a majority composition of thyme and pine pollen**, but what makes the aromatic bouquet so varied is the presence of other pollen from olive, sea urchin, vine, schooner, oak etc.

From an organoleptic point of view, the PDO honey is characterised by a **balanced and not too aggressive intensity**. The very viscous texture is also due to the binary origin of the plants: pine and thyme.

**It is produced on the whole island**, covering the prefectures of Heraklion, Lassithi, Rethymnon and Chania.

There are two beekeepers' cooperatives and three associations in the region, which bring together most professional beekeepers.

**The protection of the PDO *Pefkothymaromelo* of Crete is ensured by the strict system of traceability and control applied by the beekeeping groups of producers on the island and certified by AGROCERT.**

The record shall include, for each beekeeper, the number of honeycombs, the number of bees, the movements of bees each year, the areas where the bees are moved, the approximate annual production, the beekeeping treatments applied, the supply of sugar to the bees (season and quantity) and the application of therapeutic substances (type of preparation and time of intervention). In addition to tests on traceability, the specification also provides chemical tests to certify the composition and ascertain the presence of residues of sanitary treatments. Following the tradition of "nomadic" production, the hives are moved according to the plants' areas. Specifically, in June-August, most of the bees in Crete are transferred **to zones suitable for thyme** production that cover most areas of Crete.

In a second step, the hives are moved to **areas with a high presence of pine trees**. The first harvest will then be a mixture of these. The natural blending of the pinecone with thyme creates a particular honey category. **The blend is made of about 65% of pine honey and 15% of thyme honey**, and the rest is classified as flower honey.<sup>94</sup>

When extracting honey, beekeepers drill the honeycombs with the least possible smoking of the bees. **The honey is extracted by centrifugation with a manual or electric honey extractor, then the honey is clarified in settling tanks**. After clarification, the foam is carefully removed, and the packing containers are filled to the top so that no air is left in the intermediate space. The honey is not heated at any stage of extraction or processing to temperatures above 45 °C. The beekeeping brush, scaling knife, honey extractor, filters, honey transport and storage containers, and utensils used to harvest and preserve the product are cleaned with hot water and suitable food-grade detergents.



Figure 27 Source: online copyright-free photo CC BY-SA-NC

Bees' foraging is only done for the survival of the bees and stops at least one month before the flowering of the thyme and the duration of the nectar harvest period by the bees. This is also done during the winter season when the beekeepers have completed the honey harvest and it is considered essential for the survival of the bees.

Prevention and treatment of diseases are done by strengthening the bees and hygiene measures. The honey produced is free of detectable concentrations of chemicals. However, the residual content in the finished product must meet very high standards, which ensure that no synthetic products are ever-present.

The requirement that packaging takes place within the defined geographical area is intended to reduce the risk of the honey being mixed with other honey or of its name being misused in the sale of other kinds of honey.<sup>95</sup>

#### SUSTAINABILITY AND CRITICAL POINTS

The production volume of honey on the island is 2,500-3,000 tonnes, out of **PDO covers 500-600 tonnes**.

Honey produced in the same area of *pefkothymaromelo* has an average selling price between 4 and 5 euros per kilo. *Pefkothymaromelo Kritis* PDO has a price **added value of 1.5 to 2.5 euros per kilo**.

As far as the price to the consumer is concerned, the PDO product can be found on the shelf at around 10 euros. The same price to consumers also applies to the honey produced outside the PDO scheme given the same characteristics. This is possible because, in the local dimension, the trust mechanisms created between consumer and producer are robust, bypassing the need for certification. Nevertheless, this complicates consumers' recognition of the difference between PDO honey and non-certified honey at the local level.

With regards to **export**, there is no precise data. **The quality scheme is still very young, having obtained protection in 2017**. However, it can be said that most of the PDO honey is sold on Greek territory, with a low percentage of exports till now.





Figure 28 Voluntary sign of origin "Crete". Source: region of Crete

Concerning production costs, the handling of hives and special equipment, as well as packaging, represent a significant cost item.

From the point of view of the impact on the costs that producers have to bear, it has to be considered that several producers follow a traditional production methodology, still using the "nomadic" method. This method is more expensive in terms of both monetary costs and the amount of work and time involved in production.

The total economic return does not match costs incurred by producers, **it is not possible to invest heavily in promotion and distribution activities**. Producers, therefore, need funds and subsidies for packaging lines, material, and promotion

activities.

Compared to the other case studies object of this research, producers did not report bureaucratic burdens as an issue. In fact, as a product that has been recently registered, almost all producers are trained and receive support from authorities and Institutions throughout the procedure. Support comes specifically from the regional Ministry of Agriculture.

**Furthermore, the regional Ministry of Agriculture provides financial support** in two ways: replacing hives and dealing with transport. No funds are envisaged for promotion, but participation in local, national, and European events is encouraged, and the product is often present at local and national food fairs.

In some cases, producers are not organised in cooperatives and other recognised groups of producers, which leads to problems in accessing funds. In order to access national and international funds, producers must be organised in recognised producer organisations and be eligible to participate in calls for proposals.

Among other forms of support to this production, the research activity conducted by **local universities must be taken into account. Additionally, universities cooperate with the Ministry of Greece to provide specific training for producers to develop specific knowledge and skills and increase awareness of quality labels**. If producers do not understand the need for the quality scheme, this cannot be properly communicated to consumers.

In terms **of environmental sustainability**, climate change has made production more complex. **Forest fires cause the main problem**. Rising temperatures have also damaged production as bees need an adequate temperature range to produce honey.

Last, the **intense competition between the beekeeping, animal husbandry and plant production sectors** is threatening production because of a divergence in the use of pesticides and health products. As a matter of fact, honey producers complain about the use of pesticides because their traces could be found in the PDO honey produced, making it hard to comply with the product specification.



Figure 30 Crete Island. Source: online copyright-free photo CC BY-SA-NC

#### 4.2.6 VALENÇAY PDO

**INAO** - The French National Institute of Origin and Quality has recognised *Valençay* PDO, from the **Centre-Val de Loire region**, since 1998 as an **AOC (Appellation d'Origine Contrôlée)**<sup>96</sup> and as a **PDO since 2004**.

The production of *Valençay* represents, together with other cheeses from the region, the excellence of goat's milk cheese making, especially regarding raw milk processing. Below is a table comparing data on the evolution of volumes of PDO goat's milk cheeses marketed in the region.

**Table 28 Evolution of production volumes (in tonnes) of PDO goat cheeses in the Centre-Val de Loire region. Source: data processed by the author, INAO-CNAOL**

PDO goat's milk cheeses	2010	2018	2019	2020	2020/2019	2020/2010
Crottin de Chavignol	908	859	868	897	3%	-1%
<i>dont fermier</i>	270	227	234	212	-10%	-22%
Pouligny-Saint-Pierre	268	287	277	235	-15%	-12%
<i>dont fermier</i>	85	77	84	68	-19%	-20%
Sainte-Maure de Touraine	1 320	1 847	1 867	1 825	-2%	38%
<i>dont fermier</i>	377	418	417	372	-11%	-1%
Selles-sur-Cher	982	996	1 007	1 066	6%	9%
<i>dont fermier</i>	161	179	175	157	-10%	-2%
<b>Valençay</b>	<b>367</b>	<b>335</b>	<b>319</b>	<b>298</b>	<b>-6%</b>	<b>-19%</b>
<i>dont fermier</i>	<b>112</b>	<b>104</b>	<b>97</b>	<b>85</b>	<b>12%</b>	<b>-24%</b>

The *Valençay* PDO is considered a small-sized production sector, which has declined sharply over the years.

**Its production area is limited to the Indre and certain communes of Indre-et-Loire, Cher and Loir-et-Cher.** Produced in the Berry, *Valençay* is a farmhouse cheese made from raw, whole goat's milk, with a natural rind and a light grey to bluish-grey colour.

It has a slender pyramid shape, with a square base measuring 6-7 cm per side and 7-8 cm in height, and it weighs about 220 g. In addition, there is a small *Valençay* weighing 110 grams with the same ripening period.

The method of making *Valençay* has always remained the same. The cheesemakers add a small amount of rennet to curdle the milk. The curdling process usually takes between 24 and 36 hours.

Then the curd is traditionally shaped manually. Since pre-draining (separating the whey from the curd) is not allowed, it is put directly into the moulds, where it drains for at least 24 hours. This is followed by the removal of the mould, salting and incineration with a sprinkling of salt on the surface. The latter process involves adding vegetable charcoal to preserve the product.

The addition of salt and charcoal prolongs the draining process for at least 24 hours. This takes place in a drying room or a production room.

Finally, they are transported to a drying room that maintains a temperature above 10 °C, where they are matured for at least 11 days. During this period, the bluish-grey colour of the cheese is formed. In addition, lactic or goat/vegetal aromas will develop depending on the maturation time of each cheese. The cheese is marketed after the maturing period.

The product has deep historical roots that link it to the geographical area in which it is produced. Goats have been present in the Berry area since the 16th century (the period for which there is the first written record) and the history is also intertwined with historical events and personalities. What makes it inimitable is that the producers have preserved the "savoir-faire", carrying on the tradition of processing a raw goat's milk product. The rearing methods used in the production of milk for *Valençay* are based on feed from the geographical area, whose rich fodder composition allows the production of raw milk that benefits from the

natural flora that favours the development of goat's milk, the preservation of the undergrowth, the production of mushrooms and the floral nuances of the cheese.<sup>97</sup>

The production chain includes 47 milk producers, 24 artisanal producers from farms, 5 production workshops and 4 maturing workshops.

The [Comité interprofessionnel du Valençay](#) (Valençay Interprofessional Committee) brings together all stakeholders in the sector, from producers to refiners, in a spirit of good cooperation that has led the sector to grow.

The role of the syndicate is to preserve the territory, traditions and know-how of the region's producers, to protect the products, and to support producers when it comes to bureaucracy, legal protection and promotion.

As regards production level, in 2018, 334.82 tonnes were marketed (+1.89% compared to 2017) by 31 operators (22 agricultural producers selling directly, 5 processors and 4 ripeners). 29% of total production was artisanal production (97.75 tonnes), while about 5.5% of total production (18.38 tonnes) was **Petit Valençay PDO**.

In terms of sales volumes, more than 1.4 million *Valençay* PDO cheeses and 160,000 *Petit Valençay* PDO cheeses are sold each year.<sup>98 99 100</sup>

#### SUSTAINABILITY AND CRITICAL POINTS

Despite climate change, producers do not perceive that it has had a negative impact on their production. As a matter of fact, they are observing a slight improvement in the production quality **tures and increased rainfall resulted in greener pastures leading to a surplus of hay in the summer period that can be stored for winter**. Hence, producers have succeeded in adapting to these changes.

From the point of view of economic sustainability, the product's price is mainly set by market trends of the cheese-making chain and the producers, according to the geographical area.



Figure 32 Valençay PDO. This photo by Author Unknown is licensed under CC BY-SA

The cheese is **sold by the piece**, mainly in the domestic market, and in most cases, it is destined for direct sale. It is also sold outside the region Centre-Val de Loire and France, especially in Belgium, Germany, Italy, and Switzerland. However, export to third countries and outside the EU is limited, particularly due to technical limitations, being raw milk cheese with a short shelf life.

In fact, the cheese is made from raw goat's milk, which can lead to a food safety problem that affects marketing. Raw milk processing requires specific production protocols to prevent diseases because freshly milked raw milk cannot be defined as sterile food.

In the case of non-compliance with sanitary protocols, a period of administrative closure of the farm follows, therefore causing a loss of production.

As a consequence, some producers may be deterred from production. The Committee is therefore working with the relevant bodies to achieve a less onerous and more effective control system. The producer group is working to have controls, eventually leading to sanctions with limited impact on production and it is investing in research to find solutions.



Figure 34 Raw milk. This photo by Author Unknown is licensed under CC BY-SA

Overall, the **PDO label gives good added value by guaranteeing the sustainability and livelihood of the farms, but** no companies live on Valençay production alone, integrating it with other agricultural activities. The bargaining power lies with the producers, and there is a strong cohesion within the system.

Labour is the highest cost for producers. The breeding and care of animals is a labour-intensive activity spread over all days of the year. **The farms are mainly small-to-medium family-run** and have between 100-200 goats each. The number of animals raised is estimated at 40 per worker.

The economic return from cheese production is sufficient to guarantee the livelihood of the farm, but **there is not enough margin for investment to further develop the potential of this value chain.**

**For example, return is not sufficient to finance promotion strategies**, and producers have to rely on collective funds made available by the Region. The Centre-Val de Loire region supports the producers' association through the instrument "*Filière locale*", guaranteeing funds for promotion and communication activities (see Box 4).

At the territorial level, promotion and communication strategies include collaborations with local and regional tourism offices. The tourism authorities promote the product outside the territory by sponsoring existing fairs, landscape potential and history.

The Valençay PDO value chain is also weakened by **abuse of reputation, leading to a loss in sales**. Historically, the product is shaped like a pyramid with a truncated tip, and consumers associate the shape with the Valençay PDO product. However, **this particular shape is not protected**. As a result, in the same geographical area, other cheeses are produced with the same pyramid shape, misleading consumers and abusing the reputation of Valençay PDO.

As concerns **social sustainability, the reality of Valençay PDO shows the strong involvement of young people**. The fact that the product is well recognised by consumers, especially in the local area, encourages



young producers to take over the production. Additionally, the *Comité*, as well as the regional agricultural chamber, provide **training programmes and help young producers enter the market**. However, the impact of this initiative on generational turnover is limited by a shortage of space, especially in lowland areas and farms.

#### **BOX 4 – THE INTERVENTION FRAMEWORK FOR LOCAL SUPPLY CHAINS**

Concerning the protection of local supply chains, a virtuous system is highlighted in the Centre-Val de Loire region.

The system is called "**Cadre d'intervention des Filières locales**" - **Intervention framework for local supply chains**. The system has been integrated into the agricultural policy of the Regional Council since 2018. It was established in 1984 in the framework of the "*Contrats d'Objectifs Locaux (CLO)*" Local Objective Contracts. The Regional Strategy for Economic Development, Innovation and Internationalisation has put forward the sector contracts to prioritise action.

**The region has set the following objectives for local branches:**

- Accompany the agri-ecological transition.
- Encourage the development of organic farming and the development of other official signs of identification of quality and origin through different aid rates and enable the reinforcement of product quality.
- Encourage the creation of greater added value in the region and each farm through collaborative collective projects.
- Maintain the conditions for dynamic experimentation and effective transfer, necessary for development and innovation.
- Enable the best possible adaptation to different markets, particularly local markets, by implementing "regionalised food systems".
- Accompanying relevant promotion and communication actions on local products or the supply chain.

The protocol thus identified **19 local supply** chains comprising diversified products, including wine. **Most of the supply chains belong to the PDO system.**

The "*Filière locale*" scheme is based on the regional agricultural priorities and presented in the common framework of the "*CAP Filières*" while allowing the agricultural actors of a targeted production to formalise a collective strategy for sustainable development and meet their expectations.

The protocol operates in several areas by providing economic resources to achieve pre-established objectives based on regional priorities and identified problems. These are the animation of local supply chains, physical investments in agricultural holdings (non-EAFRD), advice to farmers and foresters, experimentation and transfer (excluding EAFRD), Studies and promotion actions.

For more information, please [visit the Centre-Val de Loire regional website](#).

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## ENDNOTES PART 4

<sup>70</sup>On average from 2015/16 to 2017/18. [https://ec.europa.eu/info/news/producing-69-worlds-production-eu-largest-producer-olive-oil-2020-feb-04\\_en](https://ec.europa.eu/info/news/producing-69-worlds-production-eu-largest-producer-olive-oil-2020-feb-04_en)

<sup>71</sup> D'Adamo, Idiano & Falcone, Pasquale Marcello & Gastaldi, Massimo & Morone, Piergiuseppe. (2019). A Social Analysis of the Olive Oil Sector: The Role of Family Business. Resources. 8. 151. 10.3390/resources8030151. <http://dx.doi.org/10.3390/resources8030151>

<sup>72</sup> *Verticillium* wilt is a cryptogamic disease that can cause the dieback of many vegetables, ornamental plants and fruit trees. *Verticillium* is a genus of fungi in the division Ascomycota, and are an anamorphic form of the family Plectosphaerellaceae.

<sup>73</sup> Serrated ridge mountain range, typical of Spain and Latin America.

<sup>74</sup> Manual collection system.

<sup>75</sup> [https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52005XC1215\(01\)&from=EN](https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52005XC1215(01)&from=EN)

<sup>76</sup> <http://dopgatahurdas.com/>

<sup>77</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52013XC1009%2803%29&qid=1535646848792>

<sup>78</sup> <https://www.fondazioneSlowFood.com/en/ark-of-taste-slow-food/hori-peninsula-onion/>

<sup>79</sup> Wirsig, A., Heisrath, W., Lenz, R. (2021): Preservation of autochthonous species and traditional knowledge by using intellectual property rights. A case study from the state of Baden-Württemberg. In: Rozman, V. & Z. Antunović (eds.): Proceedings of the 56th Croatian & 16th International Symposium on Agriculture. September 5.-10, Vodice, Croatia. Josip Juraj Strossmayer University of Osijek, Croatia. 2459-5543. ISSN 2459-5543. pp. 327-331. <https://sa.agr.hr/download-publication/2/56th+Croatian+%26+16th+International+Symposium+on+Agriculture+eProceedings.Full+text>

<sup>80</sup> The data is obtained from the interview and refers to 2021.

<sup>81</sup> The data refers to sales to a German large-scale retailer, EDEKA.

<sup>82</sup> <https://www.tridge.com/intelligences/onion/DE>

<sup>83</sup> [www.hori-bulle360.de](http://www.hori-bulle360.de), [www.bw360.de](http://www.bw360.de), [www.hori-bulle.de](http://www.hori-bulle.de)

<sup>84</sup> <https://www.vetrina.toscana.it/focus/i-prodotti-dop-e-igp-della-toscana/>

<sup>85</sup> <https://www.politicheagricole.it/flex/cm/pages/ServeAttachment.php/L/IT/D/5%252Fe%252F3%252FD.adfed3a076b7ad2032ce/P/BLOB%3AID%3D3343/E/pdf>

<sup>86</sup> [http://prodtrad.regione.toscana.it/LIB\\_DOPIGP/Prodotto.php?ID=25&LANG=ita&RIC=1](http://prodtrad.regione.toscana.it/LIB_DOPIGP/Prodotto.php?ID=25&LANG=ita&RIC=1)

<sup>87</sup> <https://www.mapa.gob.es/es/agricultura/temas/default.aspx>

<sup>88</sup> <https://www.cooperativaprades.cat/patates-de-prades/>

<sup>89</sup> [http://agricultura.gencat.cat/web/.content/al\\_alimentacio/al02\\_qualitat\\_alimentaria/normativa-dop-igp/plecs-vigor/pliego\\_condiciones\\_ue\\_igp\\_patates\\_prades.pdf](http://agricultura.gencat.cat/web/.content/al_alimentacio/al02_qualitat_alimentaria/normativa-dop-igp/plecs-vigor/pliego_condiciones_ue_igp_patates_prades.pdf)

<sup>90</sup> Orden AAR/416/2009, de 22 de septiembre, por la cual se aprueba el Reglamento de la Indicación Geográfica Protegida Patatas de Prades (DOGC núm. 5473, de 29.09.2009), del cual se publicó un anuncio en el BOE "Anuncio del

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Departamento de Agricultura, Alimentación y Acción Rural de la Generalidad de Cataluña por el que se da publicidad a la aprobación del Reglamento de la Indicación Geográfica Protegida Patatas de Prades." (BOE núm. 79, de 1.04.2010).

<sup>91</sup> « Règlement (CE) 148/2007 de la Commission du 15 février 2007 » [archive], Journal officiel de l'Union européenne L. 46/14 16.02.2007 (consulté le 29 octobre 2010)

<sup>92</sup> Information taken from a 2018 article. [https://www.viaempresa.cat/economia/patata-francesa-preu-produccio-autoctona\\_203637\\_102.html](https://www.viaempresa.cat/economia/patata-francesa-preu-produccio-autoctona_203637_102.html)

<sup>93</sup> [https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1505484164071&uri=CELEX:52017XC0406\(05\)](https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1505484164071&uri=CELEX:52017XC0406(05))

<sup>94</sup> M. Dimou, A. Thrasyvoulou & V. Tsirakoglou (2006) Efficient use of pollen traps to determine the pollen flora used by honeybees, Journal of Apicultural Research, 45:1, 42-46, DOI: 10.1080/00218839.2006.11101312

<sup>95</sup> <https://www.qualigeo.eu/prodotto-qualigeo/pefkothymaromelo-kritis-dop/>

<sup>96</sup> The "AOC" is an official label for agri-food products of origin in the French national system.

<sup>97</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52013XC1012%2801%29&qid=1647527788378>

<sup>98</sup> <https://www.inao.gouv.fr/fichier/CDCValencay.pdf>

<sup>99</sup> [https://www.inao.gouv.fr/eng/content/download/3919/34426/version/1/file/Cnaol%20Chiffres%20Cles%202020 BD%20%28002%29.pdf](https://www.inao.gouv.fr/eng/content/download/3919/34426/version/1/file/Cnaol%20Chiffres%20Cles%202020%20BD%20%28002%29.pdf)

<sup>100</sup> <https://presse.filiere-laitiere.fr/assets/chiffres-cles-2020-produits-laitiers-aop-et-igp-48e4-ef05e.html?lang=fr>

## PART FIVE. GUIDELINES AND RECOMMENDATIONS

## 5.1 CONCLUSION AND SUGGESTIONS

The last chapter of the study draws conclusions from the analysis and aims to develop policy recommendations to contribute to greater sustainability and support for small and medium-sized GIs.

**As described in the previous chapters**, the sustainability of small and medium-sized geographical indications is a complex issue, mainly because many factors come into play. According to the literature and the meanings attributed to it by bodies and organisations, the term **sustainability** takes on different nuances and meanings.

The most common and widely shared definitions see sustainability as the intersection of three related dimensions: **economic, environmental, and social sustainability**.

AREPO considers it necessary to stress that the non-economic production dimension is essential for the whole system. The GI system is often oriented toward economic sustainability, ensuring product quality in exchange for an adequate return in the short term. From a long-term perspective, sustainability and resilience, the social and environmental fields positively affect conscious and efficient rural development. To assess sustainability, it is also necessary to evaluate other aspects and factors influencing the system, such as **nutritional** and **governance** sustainability.

In the sphere of geographical indications, quality is intrinsic to certification. **Certification brings added value** in economic terms by bringing **higher profits**, a **premium price**, and a **high marketing potential**, especially in international markets.

From a social perspective, the strengthening of the GI system leads producers **to network, connect, and have an impact on the consumer**. The GI impact on the consumer relates to the benefits that the scheme can bring in terms of **communicating accurate information** to guarantee the quality of the production process and **respect for the territory**. **GIs reduce asymmetry of information** and allow consumers to gather additional information about the quality and characteristics of the products, which may eventually allow them to make more informed purchasing decisions. By informing the consumer about the origin of the raw ingredient and the practices that go into the manufacture of products, GIs can also offer important information on GI products' safety and nutritional aspects. This transfer of information allows consumers to **diversify their diets** while also paying **more attention to cultural and traditional aspects**. Furthermore, the link and its information can reward producers who adopt environmental, health, and labour-friendly policies.<sup>101</sup>

At an environmental level, sustainability is a **process** that encourages **respect for the production area**, the **conservation of landscapes** and the **conservation of foodscape**.

The conclusion of AREPO study aligns with the [Evaluation support study on Geographical Indications and Traditional Specialties Guaranteed protected in the EU](#) and the [Final Report on the Study on the economic value of EU quality schemes, geographical indications \(GIs\) and traditional specialties guaranteed \(TSGs\)](#).

However, the analysis carried out **has outlined the need for specific support for small and medium GIs**.

**The term “small” and medium GI refers to the economic size and production area. Considering exclusively the agri-food sector**, small scale GIs/TSGs cover the value chains with less than EUR 1 million in sales value. In 2017, they accounted for 48% of the total number of EU GIs (about 1,600), only 0.5% of total sales value

under GI (for an economic value of 418 million euros).<sup>102</sup> As analysed in the previous chapters, it can be deduced from these data that the current system is very effective for GIs that involve a large number of producers and have a high rate of chain coordination but has shortcomings where GI chains are "small". **The disparities between the various GI sectors then lead to difficulties in evaluation.**

First of all, it is becoming increasingly complex for the Member States to have schemes that can be compared. The lack of harmonisation on this front makes it **difficult to make comparisons to assess the points that make a supply chain successful or unsuccessful**. The difficulty lies in having an appropriate comparison between supply chains that are **part of the same sector** (an example can be the difficulty of assessing GI supply chains in the dairy sector in France: there are GIs in the dairy sector that have very different economic and production numbers and surface areas. This is true for almost all the cases analysed). The difficulty lies in having an appropriate comparison between supply chains **from the same region** and between supply chains **from the same country**.

Moreover, it is complex to assess supply chains **belonging to different Member States** since the declinations of GI systems at the national organisational level are different. The disparity does not only lie in economic-productive quantities (which are easier to detect since numerical indices characterise them) and in the difference between the regional/national organisational level, but also **in the number of GI systems** that are present in the various MS (e.g., the number of GIs present in Italy compared to the number of GIs present in Belgium). This would make it difficult to understand the actual value of the supply chain before and during registration and its potential compared to other production chains. Furthermore, to avoid this gap, it is pointed out that it is **not easy to assess the sustainability of the supply chain *a priori***, as there are many factors to evaluate.<sup>103</sup> Indeed, it is not denied that GIs/TSGs generate a clear EU added value. Without the EU framework, the GI and TSG schemes might not exist in every Member State and might not be consistent across those in which they do exist.

Secondly, the limitations on sustainability stressed throughout the study showed that further efforts are needed by legislators to prevent the disappearance of small and medium-sized GIs. As highlighted by the analysis in the previous chapters, some **GIs have great difficulties after the registration due to economic, social, environmental and governance sustainability and find themselves dealing with these issues without support**. In some cases, support is lacking for individual producers where supply chain governance is not robust enough, and in others, support is lacking for the supply chain from the relevant bodies. There is a risk that producers will be **discouraged from producing**, that **consumers will not be bound to the product and the territory** (in terms of the GI context), and that **the territory will lose a product and its certification** through unfair practices (such as the creation of a secondary market for non-certified products) or even the loss of production. **This mechanism leads to the loss of all positive externalities** such as cultural and territorial links, social connections, positive effects on the landscape, etc.

In the second part of the study, questionnaires and interviews were used to investigate possible problems and solutions. AREPO member regions responding to the questionnaire emphasised **the lack of a common strategy at the level of governance/producer organisations, the lack of adequate economic sustainability and the impact of certification costs**.

According to the results of both the questionnaire and interviews and the existing literature, **the governance and organisation of producers are truly central to develop a healthy supply chain. Development depends on the interplay between bottom-up and top-down dynamics**, hence on the interaction between local/territorial actions and **institutional interventions**.

On one side, with regard to the **horizontal dynamics between the various actors in the chain**, there is an interaction between the individual company producing GI products, the GI chain as a whole, the producer organisation and other actors such as the packaging and distribution systems. When looking at the chain in a deeper way, input producers are also part of the chain (e.g., if the product is agricultural, interactions with fertiliser producers are also considered in the chain. Still, as an example, in animal product chains, feed producers etc., are also considered chain actors).

**Governance, interpreted as producer management systems** (associations, consortia, protection and promotion bodies, producer organisations, processor organisations, distributor organisations, etc.), is crucial to develop a GI product and a GI system and to coordinate interactions amongst the production level.

On the other side, when a GI system is adopted, an additional "public" level of governance is added along the supply chain. In a multi-level perspective involving management by public bodies, starting with European and national ones and continuing with regional and local authorities, **support for businesses is crucial**.

The relevant points concern **financial, promotional, bureaucratic and information support**. These, if carefully managed, lead supply chains and companies to **joint development**. If the coordination along the chain is effective, producers develop individually, leading to the common development of the GI production chain. If the process occurs for different supply chains within the same territory or region, it can play an important role in communicating a territory through **regional marketing and community communication**, providing a solid image of a territory/area. These changes occur because the private and public levels of governance complement one another. In addition, the institutional supply chain participant (i.e., the GI governance body) performs quality controls (standardisation and controlling) to improve supply chain coordination.

In the light of the results delivered by this research, **AREPO would like to propose the following recommendations in order to contribute to the current process of revision of EU quality policy, also addressing the issues identified for small and medium GIs. AREPO reminds that these recommendations will be effective if tailored to the territory/area in question**. The adaptation of the suggestions is fundamental to be able to meet each reality, even if many GIs chains share the same problems. In line with the main objectives that the European Commission has set to achieve with the reform of the EU GI system, AREPO would like to recommend the following:

- **Strengthening producers' groups.** The results of the study show a low level of coordination among producers. Strengthening producer organisations is a crucial step in creating a strategy for action among producers to strengthen GI chains.  
Strategies that reduce the polarisation of bargaining power within the supply chain by favouring a greater distribution of the value added by GI certification are recommended. In many cases, a strong and united group is a winning element for the success of a GI supply chain.  
In addition, it is suggested to strengthen the sense of trust within the supply chain, both among the different producers that are part of the organisation and between the producer's organisation and the institutions.  
In many cases, in small GI systems, producers do not have sufficient training to understand the size of the supply chain, its problems and how to deal with them. Therefore, it is advisable to put in place policies that can provide more information support to producer organisations and management governances.

Implementing policies to incentivise producers to join organisations and strategies to encourage information transition along the supply chain is advisable. Cooperation and links between producers can create larger groups that are better positioned within the market. Furthermore, it is suggested to encourage collective marketing to strengthen product image and territorial unity.

Strengthening producer organisations also means encouraging their grouping. As the study shows, in some cases, producers are grouped informally or formally in legal forms that do not allow them to access public funds for support, protection and promotion.

With strong and organised management, the supply chain can afford to apply for funding, improving the environmental system and the social net.

- **Streamlining of bureaucratic procedures.** According to feedback from producers and regions, the bureaucratic system needs to be streamlined: this concerns both registration procedures and the modification of product specifications.
- **Implement a definition of sustainability to be referred to in EU legislation.** As the topic is of great importance, it is emphasised that for a successful sustainable transition, the actors need specific training and must be accompanied over time. Moreover, to facilitate the transition, the implementation of sustainability criteria must be voluntary.
- **Increase the availability of administrative and statistical data on the PDO/PGI scheme at the EU and the Member States levels.** As some regions pointed out, a centralised data collection system must be developed at the European and the regional level, where it does not exist. It is advisable to group economic, social, production, management, export and environmental data for completing and constantly monitoring the supply chains. It is also advisable to allow producers to have access to data related to the GIs schemes to understand which strategic points to leverage and invest in, exchanging good practices with other supply chains at local, regional, national and international levels through reports and suggestions. Data sharing and the construction of a network for data exchange should be designed respecting the terms of privacy and the exchange of data considered confidential. The crucial point concerns access to this data. It is suggested to give institutions, producers and researchers access to GI supply chain data in order to enable them to carry out analyses, studies and market orientation. Access to this data should also be given to foster traceability and transparency, respecting the privacy of sensitive economic data.
- **Investing in research.** It is recommended to promote research and consumer studies to better understand the impact of GIs on sustainability issues. Research is also needed to identify the success factors of supply chains and reduce consumers' information asymmetry on the system and logos, counting the great support it can give to small and medium-sized GIs to be more incisive in their sectors and voluntarily integrate sustainability aspects.
- **Support the potential of GIs in other sectors.** GIs have great potential that can be exploited in other areas for rural development and growth. As pointed out in [AREPO's position for a long-term vision for rural areas](#), GIs are the expression of localized agri-food systems and have the possibility to bring benefits to the rural economy. The added value is redistributed along the GI chain and can lead to a diversification of the rural economy. An example of this could be encouraging the creation of tourism linked to the certified product, strengthening existing tourism management structures, and



implementing dedicated actions through promotion policy. Tourist attractiveness leads to an enhancement of rural identities, such as cultural and gastronomic heritage. The GI scheme also acts as a barrier to intensive cultivation and the consequent reduction of biodiversity. In addition, it has a positive impact on maintaining the characteristic landscapes of the territory. A second example also concerns the incentive to give space to quality products (which intrinsically carry the values of sustainability) within public food procurement systems. The incentive to introduce GIs into the policies of other sectors ensures that the system's potential is fully developed and encourages small and medium-sized GIs to diversify their potential.

- **Continue to support the promotion policy for GI products.** As pointed out in the study, some GIs have difficulties having an adequate return to invest in promotion. AREPO suggests strengthening the role of GI products within EU promotion policy and in trade with third countries. We call upon the European Commission to:

- **Restore a sizeable budget dedicated to promotion of EU quality schemes.**
- **Encourage and fund the implementation of small projects in order to reach more producers,** especially small GI producer groups. Despite the selection process often seems to favour big projects with high budgets and big partnerships, it should be noted that the majority of stakeholders actually involved in promotion of products under EU quality schemes are small associations who can't access such complex instruments.
- **Increase the EU co-financing rate to reach more than 70% of grant for GIs campaigns in the internal market.** Limited resources for self-financing often hold back the participation of small GIs producers' groups to promotion programmes. Increasing the EU co-financing rate will contribute to assure equitable access to promotion programmes.
- **To simplify the participation with a streamlined bureaucratic process,** easy to access and manage, in particular for small GIs groups.

Besides the changes on the policy level, AREPO would like to also recommend the following to actors operating at local level (regional government, governance systems/organisations and producers). Particularly:

- **Regions should create a forum of exchange on GIs,** gathering multiple experts and practitioners (researchers, professors, representatives of producers, representatives of certification systems, etc.). It could be envisaged the format of a round table monitoring the development of GI supply chains in the territory, providing support on all fronts. This will provide an up-to-date picture of the sector's situation, encouraging the production chain and giving concrete help to small and medium-sized GIs in difficulty. A four-monthly meeting frequency is suggested. The aim is to implement sustainability with its declinations in the GI production chains in order to ensure producer resilience. The tasks of these round tables are to monitor the situation on crucial issues, give support to producer organisations and producers in carrying out bureaucratic procedures (also guide for procedures to access public funds), and **support the transition to sustainability and digitalisation.** In addition, it is suggested to give specific support to newly established GIs and small and medium-sized GIs in difficulty, bringing a solution-oriented analysis of the problems encountered.
- **Adequate support for digitalisation should be guaranteed.** The study results identify a lack of e-skills to approach the [digital transition](#). Where the average age of producers is high, it is challenging for them to use digital tools. Training to develop digital skills should be encouraged and provided to support producers and producer organisations. Training would also streamline the digitisation of data which, if analysed, can serve as a basis for understanding the difficulties and strengths of the GI

supply chain and monitoring the chain. Moreover, digitisation speeds up bureaucratic procedures, favouring traceability and communication. In conclusion, it is highlighted that the aspect of digital training will be increasingly relevant considering that the future guidelines and objectives of EU policies are aimed at greater digitalisation of registration and dossier management procedures.

- **The inclusion of GIs in Public Food Procurement (PFP) should be encouraged.** The authorities responsible for writing PFP are suggested to award points for GI products in public food procurements. This would incentivise local production, bringing the product to consumers' tables and developing a focus on the education, culture, and tradition of a territory. Furthermore, products under EU quality schemes could contribute to supporting local biodiversity and guaranteeing dietary diversity, encompassing different categories of food, tastes, seasonality, freshness, culture and skills. In order to promote the inclusion of quality products into the public sector, B2B meetings should be organised between producer organisations and companies that potentially participate in tenders to raise awareness of the issue and encourage the entry of small and medium-sized GIs into the sector.
- **Education and awareness about the GI system.** In order to achieve this objective and raise awareness among producers and producers' organizations, training sessions should be organized. It is recommended to organise these sessions/seminars by training on the bureaucratic steps for amending specifications, how to access public funds, promotion strategies and governance coordination. In addition, these meetings could be supported by experts in the sector to strengthen the weaknesses that are recognised within each supply chain, supporting producers in the different transitions. An example of this could be empowerment and training sessions on topics such as sustainability, digital transition, and the size and impact of GI systems. AREPO reminds that training should include cooperation between producer groups and regions/public bodies.
- **Regions should publish tailor-made regional and local guides as supportive material to train different actors in the supply chain.** Specifically, it is suggested to publish guides explaining the bureaucratic procedure to follow step by step, guides describing best practices to strengthen the organisation of producers or guides on the GI system as a whole and on benefits to strengthen producers' confidence in the system, guides on the integration of sustainable traits, guides for market diversification and all the other critical issues the territory needs. In the training processes and in the creation of guides, there is also a need for specific training for producer groups on how and where to access public funds. In addition, this step would facilitate the generational turnover by strengthening the producers' confidence in the GI system and allowing them to properly inform both the actors of the chain and the consumers.
- **Strengthen the exchange of good practice and information between the different actors in the system.** It is advisable to organise multi-level B2B meetings between the actors in the supply chain, also involving the hospitality sector, such as cafes, restaurants, hotels, catering, agritourism etc. This strengthens coordination and the “image” of the GI product, encouraging cohesion and promoting the communication of quality products to the consumer.
- **GIs and Tourism.** Public bodies and GI management systems are advised to promote tourism and agri-tourism linked to the product. This boosts consumer recognition of the GI system, producers and public authorities. It also encourages quality product marketing developing consumer awareness, not to mention the positive externalities on the territory.

- **Effective communication campaigns.** An active communication campaign is suggested to increase consumer awareness of the PDO/PGI scheme and the PDO/PGI symbols. Campaigns can be activated either at the local or regional level. The objective is to educate the consumer by providing the tools to make informed choices, trace the product and increase awareness of the guarantee of GIs as quality systems, creating a greater awareness of certification.
- **Strengthening of governance at all levels.** Producers are advised to strengthen governance systems, as coordination has excellent potential for business development. The suggestions relate to the coordination of the production chain with a bottom-up and top-down approach. This must be strengthened by clearer communication with public authorities and control bodies. Development must also occur horizontally, with producer organisations, processors and packagers relating better to commercial channels through appropriate distribution and a clear information transaction, where not yet in place.
- **Involvement of producers in the EU GI system.** Producer organisations and other GI governance systems should increase producers' involvement in the management of governance and producers' organisations and encourage the production of GI products. Governance should specialise in standardising, monitoring and enforcing the geographical attributes that define the GI. Inclusiveness develops responsibility and behavioural change for all actors in the system. In this process, transparency is fundamental for policymakers, producers and consumers alike, ensuring practices that strengthen trust in GIs. For greater transparency, it is recommended that the registers of GI producers and processors be made public.  
Greater involvement of local producers in the GI chain can provide a helpful framework for cooperation among participants to protect the GI from potential infringements and structure a cohesive organisation with good development potential. In some cases, the success of a GI is due to the presence of many actors within the governance and oriented towards achieving common goals.
- **Integration of measures concerning environmental sustainability.** The EU agri-food legislation is increasingly turning towards environmental sustainability, also in the perspective of the [Green Deal](#) and the [Farm to Fork Strategy](#). With respect to environmental sustainability, AREPO would like to recall the importance of introducing sustainability standards and criteria on a voluntary basis, on one hand accompanying producers lagging behind in this transition and on the other hand encouraging producers already committed to sustainability to do more. Combining GI certification with other quality certifications or production systems is advisable to protect the environment (for example, it is suggested that GI quality certifications be complemented by other schemes such as mountain products, products from the EU's outermost regions, organic certification and other voluntary certification schemes at the national level). In addition, it is also suggested to implement a system of carbon farming, an EU strategy that will have a strong development in achieving objectives for environmental protection and the sequestration of CO<sub>2</sub> in the environment. More funds should be made available to implement measures on environmental sustainability. In fact, due to climate change, producers are faced with imbalances that damage production and undermine the system's resilience.

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## ENDNOTES: CONCLUSION

<sup>101</sup> Calboli, I. Geographical Indications of Origin at the Crossroads of Local Development, Consumer Protection and Marketing Strategies. *IIC* **46**, 760–780 (2015). <https://doi.org/10.1007/s40319-015-0394-0>

<sup>102</sup> European Commission. (2019, October). Study on economic value of EU quality schemes, geographical indications (GI) and traditional specialities guaranteed (TSG). Tratto da [https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy/cmef/products-and-markets/study-economic-value-eu-quality-schemes-geographical-indications-gi-and-traditional-specialities-guaranteed-tsg\\_en](https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy/cmef/products-and-markets/study-economic-value-eu-quality-schemes-geographical-indications-gi-and-traditional-specialities-guaranteed-tsg_en)

<sup>103</sup> In order to understand how to apply an assessment for the development and improvement of geographical indications, it is advisable to read the FAO guide: Belletti, G. and Marescotti, A. 2021. Evaluating geographical indications – Guide to tailor evaluations for the development and improvement of geographical indications. Rome, FAO. <https://doi.org/10.4060/cb6511en>

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