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**Assessing the policy frame
in pastoral areas of Europe**

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European University Institute
Robert Schuman Centre for Advanced Studies
Global Governance Programme

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RSC Working Paper 2022/03

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Abstract

Unlike other regions of the world, the policy framework in Europe is in principle favourable to extensive livestock farming. EU policies recognise the multiple values of pastoralism and its contributions in terms of cultural heritage, environmental management and territorial cohesion. Recognising that these public goods are not sustainable without remuneration, the EU supports pastoralists with direct and indirect measures, including subsidies. These are considered as forms of compensation and reward for producers operating in Less Favoured Areas and High Nature Value settings.

However, over recent decades, the number of extensive livestock farms has declined sharply, generational renewal amongst pastoralists is scanty and mountainous, island, and inner territories all over Europe are undergoing processes of socio-economic and agro-ecological desertification. The outcomes of the CAP political and financial commitment in pastoral contexts are hence quite disappointing. Translating good intentions and societal appreciation into effective social facilities and economic returns appears to be a major challenge for policy makers and administrators across Europe.

On the one hand, the European Green Deal and its 'Farm to Fork' strategy show high levels of ambition in reorienting agriculture and enhancing the transition to more sustainable food systems in Europe. On the other hand, the long-awaited reform of the Common Agricultural Policy has not addressed its fundamental inconsistencies in technical, administrative and political terms. In a policy framework also influenced by broader trade and political agreements, CAP measures are more likely to support intensification of livestock production, than to favour extensive pastoral systems. The EU institutional architecture and policy domain represent important drivers of uncertainty for European pastoralists, who must continually navigate through multiple, fragmented and sometimes conflicting measures, rules and requirements that seem ill-suited to their operating principles, strategies and needs.

Keywords

Pastoralism, uncertainty, European policy, agriculture, Mediterranean.

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photo credit: M. Nori, PASTRES, 2021

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Sheep and goat farming in Europe: an homogeneous diversity¹

Europe has a wide and diversified set of extensive grazing livestock systems. About one-fifth of agricultural land in the EU is devoted to extensive livestock breeding; these are mostly concentrated in southern Mediterranean Europe, including the Balkans, but significant portions exist as well in the UK and Ireland, in the Carpathians, and in the sub-Arctic regions of the Scandinavian peninsula, where reindeer herding is practiced prominently by the Saami herders. Throughout Europe, the land under grazing management covers several tens of million hectares. In central and eastern Europe, nearly seven million hectares of the Carpathian Mountains are covered by open semi-natural grassland habitats; in the Iberian Peninsula, there are over three million hectares of wood pasture, whereas France alone counts about ten million ha of grazing lands (Oreka Mendian, 2021; FAO, 2021).

Across the continent, pastoralism shows a specific added-value and comparative advantage in harsh territories, mostly in mountainous areas, drylands, and islands where the alternative costs for land and labour make this a convenient option compared to other forms of land use (EC, 2018 – Figure 1). Sheep and goats are reared predominantly in these settings, particularly in southern EU countries, due to their capacity to adapt to harsher soil and climate conditions. With more than 250 breeds, the high genetic diversity that characterises European flocks embodies their embeddedness and adaptation to local territories. Without small ruminants, huge disadvantaged rural settings (defined as the Less-Favoured Areas, LFAs – Table 1) in Europe would be abandoned and become fallow, with significant ecological consequences. Cattle, pigs, and equines may also be reared in extensive ways, but their significance in pastoral terms is lower than that of small ruminants. Out of approximately 100 million sheep and goats in Europe, about a half are raised in pastoral systems (EU, 2018; EC, 2018); we will therefore use figures and trends for sheep and goats in this report to discuss European pastoral farming, with a specific focus on its southern, Mediterranean flank.

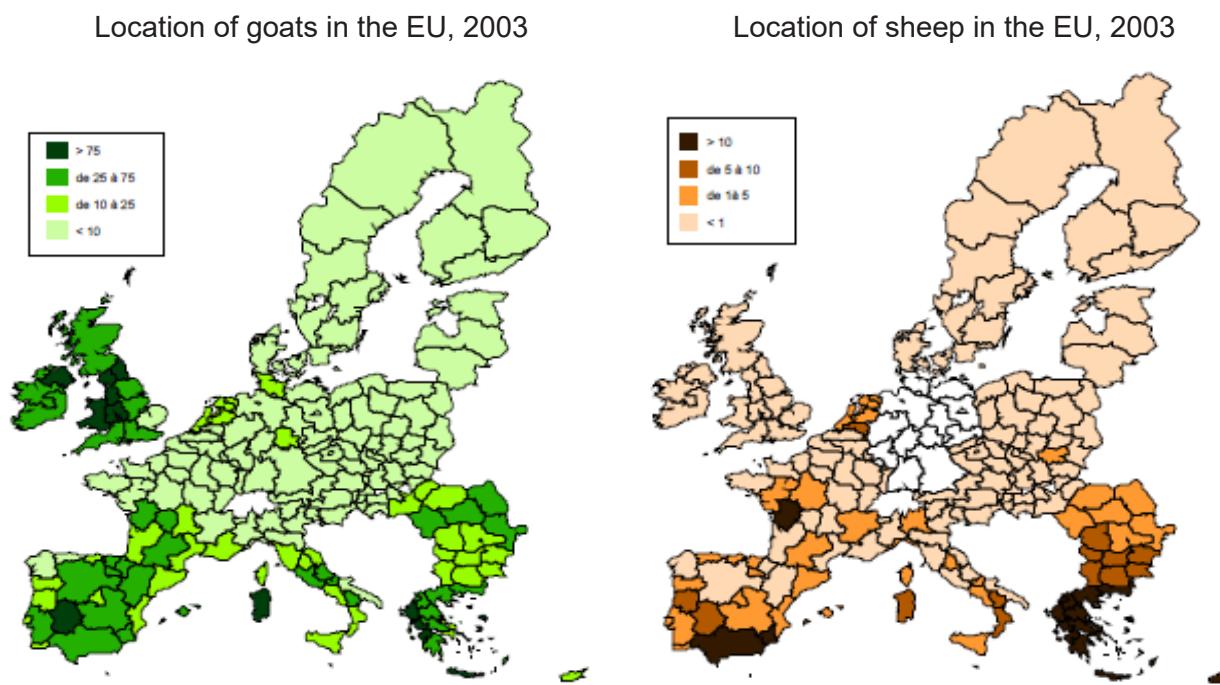
Overall, the EU sheep and goat sector accounts for a small share of total EU livestock production, employing around 900,000 farms and 1.5 million people on a regular basis - which corresponds to seven per cent of the 22 million people regularly working in agriculture. Several policy instruments exist at EU level to support small ruminants' breeders in their ability to provide both food and public goods. However, sheep and goat farming remains among the least supported and least profitable agricultural activities, encouraging neither investment nor the entry of new generations. The problems of farm abandonment, labour shortages and generational renewal are seriously affecting extensive small ruminant production across Europe, and result from a series on policy inconsistencies and the related uncertainty (EC, 2018; Nori and Farinella, 2019).

Table 1. Proportion of sheep raised in country LFAs in 2008 (EP 2008)

Country	Rate
Spain	82%
UK	69%
Italy	70%
Ireland	75%
Greece	78%
Portugal	90%
Spain	82%
France	84%

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**Figure 1. Presence of small ruminants in Less Favoured Areas in the EU
(EP, 2008:24)**



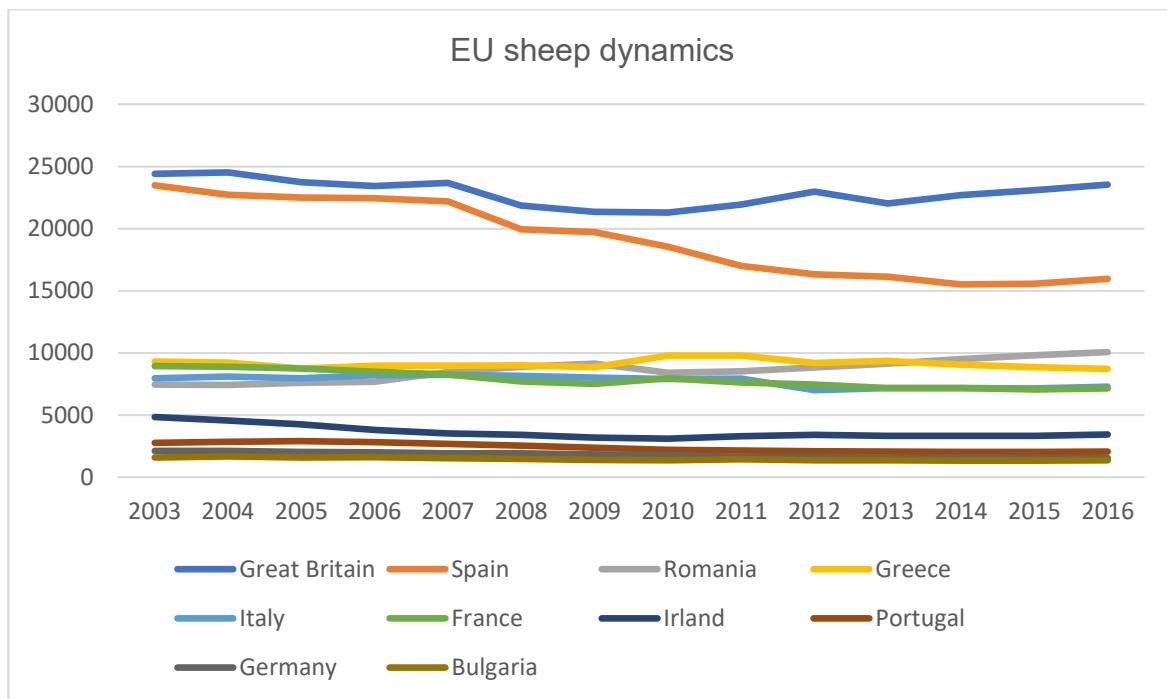
Spain, Italy, Greece, and southern France present a wide range of biophysical conditions covering the main types of pastoral systems in the Mediterranean EU region (EUMed). The typical pattern includes grazing systems based on the use of permanent pastures, especially in upland and mountain areas also through forms of sylvo-pastoralism. A wide variety of transhumant pastoral systems are practiced in many southern European countries, where flocks are moved according to seasonal cycles in highland-lowland systems. Transhumance routes and practices persist, particularly in the Alps, in southern France, in the Balkans, and the Carpathian regions and throughout Spain (Brisebarre et al., 2009; Nadal et al., 2010; RRN, 2011; Ragkos et al., 2014). These include cross-border moves among France, Italy, and Switzerland in the Alps as well as between France and Spain through the Pyrenees. Recently, transhumance has also been recognised by UNESCO as Intangible Cultural Heritage.

Agro-pastoral systems have also become increasingly popular through the use of mixed forage resources, especially in the plains and hilly areas, where portions of permanent crops (e.g. olive groves, vineyards, almonds, hazel and cork trees) and arable crops under traditional low-intensity farming systems (including arable stubbles, fallows, and permanent pastures) provide seasonal grazing resources (Caballero et al., 2009; Keenleyside et al., 2014; Beaufoy and Poux, 2014). There is evidence that animal products in Europe are increasingly provided through intensive systems, whereby animal feed production engages about two-thirds of all agricultural land in the EU (Greenpeace, 2020). The implications of this intensification drift on land use and ecological patterns are significant.

About 70 per cent of the European sheep flock is concentrated in EUMed countries, with the remaining mostly located in the United Kingdom and Romania. Dairy sheep are predominantly found in southern EU countries, whilst meat-oriented systems (i.e., suckler sheep) could be found also in northern regions. Further, due to Common Agriculture Policy (CAP) incentives, the European sheep population has grown quite steadily until the 1980s, and since the early 1990s has started declining but – a trend that intensified in recent decades, though at a different pace in each country

(see Fig. 2). Trends are though different for meat and milk supply chains: negative for the meat sector and positive for the milk one, as the case in France, where a significant drop in the number of suckler sheep has been paralleled by the continued growth of the dairy population (EP, 2008; Vagnoni and Franca, 2018).

Figure 2. Sheep flock dynamics in main EU countries, 2003-2016 (000s) (EU, 2021)



Animal health aspects have also been relevant in these dynamics; the UK flock saw a substantial drop in numbers during the 2001 foot-and-mouth crisis, while the Spanish flock continued to grow until 2000 and then went into sharp decline, notably because of the bluetongue outbreaks after 2003. In France a significant drop in the number of suckler sheep has been paralleled by the continued growth of the dairy population. Also for goat, the largest part is located in Mediterranean countries, with Greece and Spain holding respectively 31 and 20 per cent of the EU total. Goat figures have also grown recently in the Netherlands, though with basically intensive systems. Raising a relatively small goat flock might provide a good livelihood for a European family today, provided they are skilled in processing and marketing goat dairies. Different countries have seen figures and trends changing according to market demands and production costs (EP, 2008; EC, 2018).

Average small ruminants flock size, its management and produce marketing might change consistently from one region to another. In Europe there are still numerous small holdings, although they account for a relative portion of the overall livestock population. The rate and the trends of small versus large farms – that is, about 50 vs over 500 heads – change continuously, also as result of EU policy measures and incentives. Some are specialised systems, but many are mixed, with both sheep and goats, especially in Greece, Bulgaria, and Romania. Recent trends indicate a conversion to smaller flocks as a strategy to enhance efficiency and better survive the financial crisis, by regaining autonomy from market dynamics (Ragkos et al., 2016; Papadopoulou et al., 2021). However, the trajectory of Eastern European countries has followed a specific pattern.

BOX – Persistence and resilience of Romanian pastoralists

Although Romanian farming systems have quite consistently remoulded across periods and political regimes, mountain communities were marginally affected by the land collectivisation schemes as their lands use could not be mechanised and intensified – so it was mostly left under household control. While mountain communities ‘lost’ forest resources to the State, they could retain private plots, which enabled them to maintain gardening and livestock breeding activities on a small scale. As a result, few cows and sheep (five to ten) were the norm in communities inhabiting mountainous and piedmontainous areas. Their milk was mostly devoted to cheesemaking, an ever-traditional feature of rural Romanian diet and tradition. Accordingly, households owning large flocks often engaged in transhumance patterns, experiencing favourable times during the past regime since their products – wool, lambs, meat, cheese – were highly demanded by the State, and their price often inflated by subsidies. Many transhumant families were amongst those capable of purchasing important land allotments in the aftermath of the regime. This eventually also enabled them to stabilise their house and family in the lowlands, contributing to important shifts in the extensive livestock systems.

Setting the scene: CAP, its principles and reforms

The policy framework in Europe, quite distinctively from those of other regions, recognizes the multiple values of pastoralism, and its contributions in terms of cultural heritage, environmental management and territorial cohesion. And it has specifically issued a set of principles and policies to protect pastoral practices in Europe. The EU agricultural policy provides an interesting perspective on such endeavours, and the related intricacies and uncertainties these generate. The principles delineated in the CAP are implemented through the subsidiarity principle that characterizes EU governance. This implies that different institutional levels play diverse and complementary roles whereby the more immediate and local level (often the national or local one) is supposed to have better capacities to implement the principles dictated in the EU Directive (Caballero *et al.*, 2009; Nori and Gemini, 2011).

As one of the founding policies of the EU, the Common Agricultural Policy (CAP) was established in the Treaty of Rome of 1957 to increase productivity, enhance farmers’ income, stabilise markets, and ensure food supplies and reasonable prices for consumer. For the first two decades it mainly spurred agricultural production within a framework of agricultural modernisation and the development of the global agri-food chain, prompting serious concerns over market distortions and environmental implications. Subsequent CAP reforms have taken into increasingly account evolving societal concerns for a more sustainable and multifunctional perspective of EU agriculture. As will be assessed, CAP reforms need to be embedded in a broader policy framework that also includes trade agreements, changes in public attitudes and societal concerns, especially regarding environmental aspects. To date CAP remains a strategic pillar of the EU and the main overarching policy regulating rural development that engages a substantial share of the overall EU finances (about 40 per cent of the total budget in 2018).

Initial CAP support led to excess food supply and related market distortions and environmental implications, which eventually induced CAP reforms to better account for different aspects of agriculture within a more sustainable and multifunctional perspective, including specific requirements for environmental protection, food safety, and animal health and welfare. Thereafter, CAP support has increasingly been conditional on compliance with requirements associated to a different set of standardised measures, defined through time as eligibility rules, greening requirements, agro-environmental measures, good agricultural and environmental conditions, and – most recently – voluntary eco-schemes.

Table 2. Main steps in CAP Reforms

Year	Policy principles	Implications
Introduced in 1962	In the first two decades it mainly spurred agricultural production within a framework of modernisation and the development of the global agri-food chain; CAP concern is to ensure adequate income for producers while maintaining food accessible to consumers.	Excess food supply, market distortions, environmental problems, and consumer concerns about health and quality
1970s Mansholt reform	Incentives for the modernisation of agricultural holdings, towards less and larger farms. Subsidy systems to compensate producers operating under difficult circumstances; quota system in dairy production was then introduced in 1984.	First steps out of overproduction and towards environmental concerns
1992 Mac Sharry reform	More multifunctional perspective and concern for environmental protection, food safety, land health, and animal welfare.	Concepts of HNV and LFA; remuneration of environmental services
	Specific incentives for small-scale farmers and for those operating in inner, disadvantaged, remote or poorly connected areas, with a view to countering depopulation and abandonment.	Compliance with intensifying EU engagements in world trade organizations
2003 Fischler reform, part of the EU Agenda 2000	New focus on sustainability; cross-compliance with environmental objectives, support of multifunctionality and rural development; decoupling of direct payments from production through the single payment scheme.	From euro to livestock head to land hectare; important decline in flock consistency
2014 Çiolos reform	Introduced 'territorial' dimension, which specifically addresses the social dimension of the rural world and recognises that several challenges affecting rural livelihoods are driven by factors that are external to agriculture; important shift for pastoralists from livestock producers to environmental stewards.	Focus on three long-term CAP objectives: viable food production, sustainable management of natural resources, and balanced territorial development
2020 Reform European Green Deal	Voluntary eco-schemes, further evolution of the environmental and climate-related concerns; focus on farmers' organisation, participation, and capacity building.	2020 vision for a 'smart, sustainable and inclusive development'; 'Farm to Fork' approach

As from the 1980s the reform process has been challenging CAP's foundational pillars. The compensatory premium for sheep (CPS) was established with a view to offsetting any income loss sustained by producers operating under difficult circumstances and was calculated according to the prices recorded in EU markets. Since 1990 this has been complemented with the rural world premium (RWP) based on flock or herd size. The 2000 Reform, part of the broader EU Agenda 2000, pursued the aim of maintaining farmers' income levels within the evolving conditions set by the trade agreements undertaken by the EU. Forms of compensation for market losses were complemented with rewards for practices that were environmental-friendly; accordingly, the decoupling and cross-compliance modalities were introduced.

Decoupling is a mechanism whereby the main direct subsidy – a defined single payment entitlement (SPE) – is not tied to the volume or factors of production (i.e., yield or number of animals), but rather linked to certain factors and conditions, mostly land holding, type of production, and production process (cross-compliance). SPE is calculated in most EU countries on 'historical rights' and varies depending on the amount of aid received by a farm during a reference period (between 2000 and 2002). This system eventually provided extremely high levels of support to large farmers who produced irrigated and intensively-farmed crops such as tobacco, tomatoes, maize, and rice at those times.

As it attaches policy funding to land properties, this model penalises extensive livestock breeders, who typically graze and manage large public lands and own limited properties, often minimally irrigated, and have mainly forage as their main crop. Moreover, as the premium was decoupled from the number of animals held, many farmers decided to cut back on flock size, given that it was no longer a factor for receiving financial support. This has triggered the decline in small ruminant population, whose farmers rank the lowest amongst those receiving CAP support.

Moreover, in each country, national implementation has further reduced CAP support and benefits for pastoralists. In Spain the eligibility rules for permanent pastures inhibits grazing under trees and shrubs and in some cases also on cereal stubbles. Instead, it provides incentives to farmers who regularly plough their grasslands and remove trees and hedges to keep them in the 'arable' category, with negative environmental and climate-related consequences (WWF and TyN, 2018). In Italy SPE titles can be transferred from one land to another, even across regions; there is more room for mobility for CAP entitlements than for livestock, which actually serves the needs of large farmers rather than those of pastoralists (Appia, 2021). In certain regions, CAP subsidies have been utilised to convert large pasturelands into forest plantations – a land use change that impinges on pastoralists grazing areas, entailing a considerable loss of biodiversity, landscape, and socio-cultural values, and that increased the likelihood of fire events (Beaufoy and Poux, 2014).

BOX – Ghost herds on abandoned pastures

To gain access to CAP funding, title holders need to 'use the land'. Reports from Italian pastures in the Alps, as well as in the Apennines, indicate that large, speculative farmers take profit from this weak legislative measure by acquiring cheap titles on mountains pastures, where they then offload sheep, cattle and even donkeys so to justify the use of land. *Large companies from northern Italy are leasing large areas of mountains pasturelands with the aim of capitalising their land titles (acquired elsewhere). They do so without guaranteeing effective grazing, often through ghost herds or a few head of animals, in some cases sick, often left unattended. These are fake herds that only serve to legitimise the obtaining of European funds* (Calandra, 2017). These 'fake herds' eventually end up abandoned, weakened, and often preyed on by local carnivores.

BOX - Distortions due to a poor CAP design

The 2006 CAP reform was intended to encourage extensive farming more closely linked to quality products and environmental protection. Design limitations made this difficult to achieve, resulting in largely unintended consequences and impacts. Public funding began being calculated based on farmland size, rather than on the farm production processes, with direct payments as a form of income support granted to EU farmers on a per-hectare basis, independent of the production of a specific product.

On one hand this has generated lucrative appetites and speculative interests from wealthy farmers who have invested in leasing pasturelands to access and acquire public funding, by delegitimising and effectively chasing local pastoralists. On the other, pastoralists grazing on commonlands are often excluded from public funding support, and transhumance and seasonal rotational mobilities are only prized in certain regions. Nomadic, landless pastoralists also face important constraints to accessing CAP support, which is linked to rights-related land ownership (Fréve, 2015).

More recent subsidy schemes for ‘organic production’, ‘preservation of autochthonous breeds’, ‘animal welfare’, ‘grassland management’, and ‘landscape maintenance’ would be of specific interest and hold a relevant potential for pastoralists, but these are often poorly defined in that the distinction between intensive and extensive systems is quite difficult to discern.

Overall, despite its design inconsistencies, CAP plays a significant role for most European pastoralists; its financial support may represent about a half or more of their revenue, with trends and variations changing from one country to another depending on local measures and implementation (Nori, 2015; Fréve, 2015; Ragkos and Nori, 2016). The majority of farms would not be viable today without this public support, given that production costs are constantly rising, while prices of sheep and goat products remain mostly stagnant (EC, 2018). The incorporation of European herders into CAP modalities is though an ambiguous and controversial process: while pastoralists claim autonomy and independence, they also recognise that most farms would cease to exist without institutional support (“*sans les primes, c'est la mort du métier !*”, Fréve, 2015:7). The degree of dependency on CAP measures, mechanisms and funding is high and also implies that any change in the policy framework has a significant impact on the survival of the sector (EU, 2018; Nori, 2019; Bertolozzi et al., 2021).

BOX - Turning dairy sheep to cattle beef

The last two decades have witnessed a significant reduction of pastoral farms in EUMed mountainous areas and an important shift from small ruminant flocks to herds of beef cattle. This process has been reported in the Alps, the Pyrenees, the French Massif central, as well as in the Greek Epirus. Primary reasons for the shift include the reduced profitability of milk marketing following EU trade agreements; higher CAP subsidies for cattle compared to sheep and goats; the growing presence of carnivore predators, and the related labour intensification for tending to livestock. The overall reconfiguration of labour regimes includes the growing difficulty of recruiting a motivated and skilled workforce. These changes in herd composition indicate an entrepreneurial choice to boost farm profitability by increasing income levels, whilst lowering production risks and costs.

Putting flesh on the bones: CAP operational support

EU financial assistance in support of fair living standards for farmers, balanced territorial development, and sustainable management of natural resources is provided through two main channels, informed by the respective pillars of the CAP. In pastoral areas these mostly materialise through payments for agricultural production under natural constraints in Pillar 1 and support to rural livelihoods in disadvantaged areas in Pillar 2.

The main purpose of Pillar 1 is to provide income support to farmers. For those operating in difficult areas, this allows Member States to pursue a more equitable distribution of income throughout their agricultural areas by targeting a part of income support to producers whose farming activities are permanently limited by natural constraints. Specific support from Pillar 2 complements Pillar 1 income-related measures to support livelihoods in rural areas more broadly, through measures defined in the Rural Development Programs (RDPs). Pillar 2 also funds specific programmes targeting disadvantaged areas such as LEADER and GAL.

Two key concepts informing today's CAP and helping operationalise its principles in pastoral settings are those of Less-Favoured Areas (LFAs) and High Nature Value (HNV). LFA geographical settings and HNV farming systems and those most threatened with abandonment in Europe, and thus deserve specific policy concern and tailored support. **Less-Favoured Areas (LFAs)** indicate settings that present agro-ecological constraints to forms of food production, such as lack of water, unfavourable climate, soil, or terrain characteristics, short crop season, and tendencies of depopulation. Yet these areas often provide important, albeit little-appreciated, societal assets, such as high biodiversity, water retention, and carbon stocking.

Complementary to LFA, **High Nature Value (HNV)** are non-intensive farming systems, adapted to fragile environmental conditions where either intensification or under-utilisation are likely to be highly damaging. HNV farming systems also make a key contribution to climate change mitigation and adaptation as they require minimal inputs of fossil fuels. In many cases they act as large carbon sinks, especially the vast LFAs of semi-natural pastures that are maintained through grazing practices (Den Herder et al., 2017).

HNV systems are representative of European diverse territories and cultures; they require active farm management and provide a highly efficient use of land in LFAs. Large portions of Spain, Italy, Greece, and southern France (EUMed countries) fall in the LFA classification, and more than half of these territories are managed through HNV farming. Examples include grazing under forest canopy; mosaics of low-intensity permanent crops such as traditional vineyards, olives and fruit trees; the Iberian cereal steppes; traditional hay meadows; mountain grasslands and upland grazing systems. Sheep and goat farming have specific importance in several LFAs and the associated premium represents a significant portion of the farm revenue (Caballero R., 2011; Oreka Mendian, 2021; Pactores, 2021). Environment- and climate-related programmes and measures might also receive funding from other EU policies and instruments, such as the LIFE program. The situation, though, may vary from one country or region to another due to the degree of decentralised decision-making embedded in CAP funding.

BOX – HNV and LFAs in EUMed

Amongst current EU Members States, **France** seems to have made the most effort to use LFA payments, with specific support to 60 HNV farming systems. There are different stocking rates specified for each extensive system, with specific incentives for sheep and goat rearing and a higher payment rate for the first 25 hectares. Tailored measures prize transhumance practices, common grazing lands and non-herbaceous pastures are eligible, and milk produced by extensive dairy systems in the mountains receives an additional payment (Keenleyside et al., 2014).

In **Spain**, which has the largest LFA of all Member States, there is an upper limit on the payment per holding that greatly restricts the income available from this measure. Furthermore, a large proportion of LFA farmers (especially those smaller or part-time) are not eligible for most schemes. Recent RDP evaluations have concluded these forms of funding hold practically no effect on farmers' decisions or the maintenance of farming in LFA (Keenleyside et al., 2014).

BOX - HNV in Ireland

The Burren in the west of Ireland encompasses several Natura 2000 sites and a National Park. Hundreds of families live and farm in the Burren, producing excellent livestock while sustaining Ireland's greatest heritage landscape. The area has been a learning ground for HNV farming innovations for about 20 years, starting with the award-winning Burren LIFE project. It also led the way in the design and implementation of agri-environment schemes in partnership with farmers, based on the principle of paying farmers for biodiversity results. Key to the Burren success story has been collaborative working over the long term between farmers and a local team of dedicated advisors. The success of the Burren Programme is now being extended to other parts of Ireland, with the establishment of 'locally-led projects' set up by farmers' groups in selected HNV farming areas and supported by EU funding.

Local challenges today include the polarisation of agricultural activities into more intensively used areas on the one hand, and the abandonment of extensive grasslands and heathlands on the other. An ageing farming population and a shift to part-time farming threaten traditional labour-intensive practices (WWF and TyN, 2018).

In such an evolving context, pastoralists have hence been increasingly demanded to play their role in managing natural resources and maintaining landscapes in LFA and HNV habitats. Accordingly, the European policy frame now recognises that, through grazing, ruminants provide a broad set of environmental benefits, including soil stability, water cycle regulation, carbon stocking, and increased resilience to climate change dynamics (Caballero et al., 2009; Keenleyside et al., 2014; Pactores, 2021). Specific payments for ecosystem services (PES) also commonly occur under CAP through agri-environmental measures that reduce the intensity of agricultural practices to protect biodiversity as well as to maintain the landscape and associated cultural heritage. PES remunerations are normally calculated based on income foregone for the beneficiary to perform the actions needed, plus the additional costs incurred (Vakrou, 2010).

This concept has further evolved into **socio-ecosystem services** (SES), to account for the broader support to socio-economic development in and stabilising population disadvantaged areas (Nori and Gemini, 2011; Beaufoy and Ruiz-Mirazo, 2013; Nori and Farinella, 2019). Such forms of remuneration evolve from the acknowledgement that important societal threats originating in natural settings – such as landslides, wildfires, avalanches, erosional processes, and flooding – are mostly

due to the growing abandonment of marginal territories, driven largely by the decline in extensive farming systems. This is particularly the case for the Mediterranean EU countryside, a sophisticated mosaic of intertwined human-nature relationships, increasingly challenged by the evolving climate change scenarios (Essedra, 2014; EC, 2020a; 2020b).

BOX - Grazing VS fires

Extensive grazing systems such as goats and sheep in forests and grasslands, and provide an unquestionable public service in reducing the risk of massive wildfires by maintaining mountain landscapes open and clean, avoiding shrub encroachment, and consuming combustible vegetation. In some EU Mediterranean regions, local authorities have been able to capitalise on these opportunities by providing incentives to pastoralists to manage forest resources through grazing schemes with a view to reducing the risks related to fire events. Amongst others, these include the Perna and Bombino laws in Calabria Aspromonte, the Obeja Bombero schemes in Catalunya, and the Red De Areas Pasto-Cortafuegos in Andalucia. However, the recognition of wildfire prevention as an ecosystem service is questioned in several regions, and some countries have eliminated financial incentives for grazing in wooded lands.

Finding a balance between products and services

A fair analysis of the EU policy frame for agriculture and rural development should take into account the wider European policy context as well as national and international engagements and commitments. When it comes to pastoralism, two main influential policy domains that have impinged on their institutional setting are those relating to trade agreements and the related marketing of livestock inputs and products, and those concerning the environment and governing the natural resources used by pastoralists.

The Dillon Round of the General Agreement on Tariff and Trade (GATT) negotiations in 1962-1963 opened the way to tax-free imports of protein-rich feedstuff for animal feeding in Europe. The subsequent evolutions have seen soybeans as the main feed import, with relevant implications for animal production systems. Use of permanent grassland has since halved, while maize production, the complement to protein-rich feedstuff, has more than doubled throughout the Union (Peeters 2012; for data, see Eurostat, 2016 and FAOstat). Since the 1990s, the EU has further accelerated the process of integrating into global market dynamics through the engagements with the World Trade Organisation (WTO) and other international and bilateral policy trade frameworks.

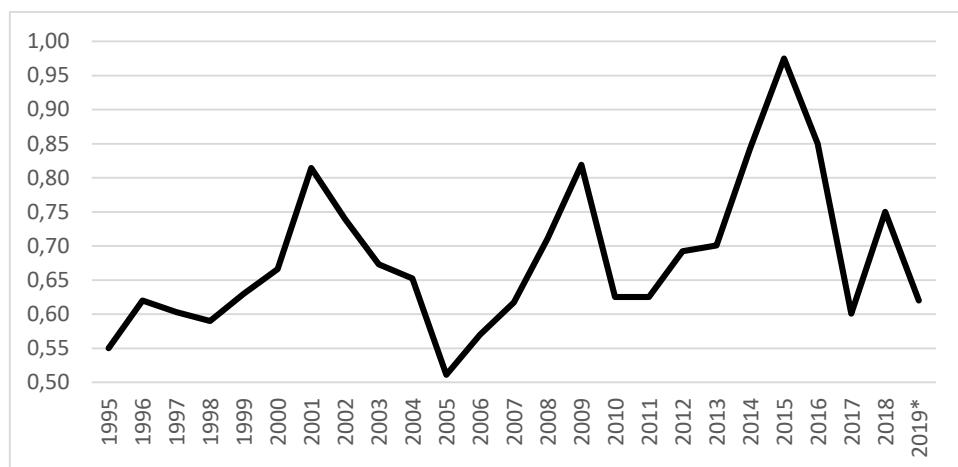
Together with the EU monetary union, WTO and regional agreements have largely facilitated the circulation of agricultural inputs and products. The Uruguay Round (1994) included the elimination of quotas on many animal products, opening the way to wider trade exchanges and market liberalisation. The Doha Round (2001) further integrated ruminants' products into important agricultural agreements, from those on the designations of origin and intellectual property rights (TRIPS) to the revised Sanitary and Phytosanitary measures (SPS) and the Technical Barriers to Trade (TBT) agreements. For pastoralists this has meant a further intensification in market competition, as, on top of the livestock products issued from European intensive systems which might feed their animals of cheap imported inputs - they also have to compete with those originating from other world regions, specifically New Zealand, Australia, and South America, where production conditions and costs differ widely.

The European **dairy industry** processing milk from small ruminants is mostly located in the EUMed countries plus Romania. Europe is the leading region for ewe milk production, accounting for about one-third of the world output, which is basically supplied by the EUMed countries plus Portugal and Romania (EC, 2018). It is all processed into cheese and dairy products, with meat from light lambs as a by-product. Some two-thirds of the whole EU sheep milk production is supplied to centralised

industrial processing, either through cooperative or private systems, with the remaining one-third processed at the farm level, either for local consumption or for marketing, as an entrepreneurial strategy to add value and create family/local employment. Goat milk too is mostly supplied by southern EU countries, notably Bulgaria, Cyprus, France, Spain, and Romania as well as the Netherlands – in forms that are evidently more or less extensive, and can also be marketed and consumed as fresh (Boyazoglu and Morand-Fehr, 2005; Simula, 2015).

In order to protect small ruminants' dairy products issued from local pastoral extensive systems and differentiate them from those produced intensively or imported, specific forms of labelling and quality certification have been established, such as protected designation of origin, or PDO; protected geographical indication, or PGI; and traditional speciality guaranteed, or TSG (Réquillart, 2007). About half of Europe's 164 cheeses with a PDO or a PGI label contain milk from extensive sheep or goat (EP, 2008). Some are produced in extremely large volumes (especially the Greek *Feta*, the French *Roquefort*, the Spanish *Manchego*, and the Italian *Pecorino Romano*) but many are produced only in small quantities. The relative weight of the PDO for all cheeses produced therefore varies from one type of production and from one region to another, and plays a critical role in expanding marketing outreach – which, on the one hand, provides significant economic opportunities to pastoralists while, on the other, exposes them to the volatility and fluctuation of global trade dynamics (Figure 3).

Figure 3. Volatility of the ewe milk price in Sardinia (€/liter)



Source: Nori and Farinella, 2019:124

For EUMed islands and mountainous areas, the relevance of these dairy products is quite strategic for both the economy and local culture and identity. Overall, though, the value paid to producers for these milks has increased very little over the past few years, and a common feature of most EU pastoral farms is the difficulty in meeting operating costs, which have constantly risen in the last three decades, particularly those related energy, animal feed and health (EC, 2018).

Legislation regulating processing and marketing of raw milk is quite strict, as it sprung from hygiene and health concerns mostly related to intensive systems, where animal conditions and density in closed barns are supposedly potential triggers of diseases and health threats (FACE, 2016). EU legislation makes local processing difficult, as compliance with required standards would require large investments that small farms in remote areas are unable to undertake. The case of raw milk is a good example in case, as its use in local processing allows for better quality and prices, but its use has been restricted for a long time due to food safety concerns. Such measures contribute hindering the expansion of informal marketing networks and affect the economic viability of small-scale pastoral farms. To keep up with these imbalances, several farms have enlarged their flock,

with relevant consequences on farm management, labour regimes and the relationships with the environment (Nori and Farinella, 2019).

While leading on small ruminants' milk, Europe ranks low amongst world producers of **sheep and goat meat**, and its market share has been recently declining (EP, 2008). Marketing problems for such products evolve from significant shifts in European consumption patterns and growing competition from non-European products, whose access to European markets has been facilitated by recent trade agreements and global market liberalisation (Rossi, 2017). On one hand, sheep and goat are mostly consumed during religious festivals – Catholic and Orthodox Easters, Christmas or Eid – and its overall consumption has decreased in recent decades (Matthews, 2018). Per-capita lamb meat consumption in Spain has halved over the last two decades (MAPA, 2019) and is projected to further decrease across the EU in coming years (EC, 2019). The growing immigrant communities provide instead an increasingly relevant alternative, including with options of the new halal market.

On the other hand, pastoral meat products face fierce competition from those originating outside the EU, where operating conditions are different and production costs much lower. The certification system for meat products is quite unclear as it carries three levels of indications: where the animal was raised, where it was culled, and where its meat was processed. This means that imported carcasses of animals raised elsewhere that are processed in the EU can be sold as a 'European' product. Intra-Community trade in live animals amongst EU countries exists as well, mostly depending on pricing and quality aspects, as well as on shifting consumption patterns. Ireland and the United Kingdom are major exporters of sheep to France, Romania exports to many south-western countries, and Italy and Spain move small ruminants in different directions. EU countries also export at an increasing rate to other neighbouring regions such as the Middle East and North Africa during specific seasonal festivities (EC, 2018).

Whatever the value chain – meat, milk, or dairy products – access to market represents a challenging aspect of pastoralists' economy because it requires several constraining conditions, including local processing sites, local abattoirs, milk collection points, and dairies able to connect with consumption basins (Pastomed, 2007). The alternative of undertaking on-farm processing and direct marketing is often fraught with difficulties for most pastoral producers due to inflexible implementation of hygiene regulations. The standards, certifications, and regulatory adjustments set by WTO agreements and imposed by EU policies are expensive barriers that affect market access and undermine the survival of small independent producers, especially those that operate in extreme conditions. Value chains governance often bows in favour of large industries, traders, retailers, and distribution corporations while farmers and rural producers have become the main shock absorbers (Esedra, 2014; Pastinnova, 2021).

BOX – An uneven playing ground

Pastoral products materialise in milk or meat of autochthonous breeds adapted to local conditions, which graze on extensive mountain pastures depending on climatic vagaries. Under current conditions, these products compete in markets with those issued from intensive livestock farming systems, located in well-endowed and connected areas, from animals resulting from targeted genetical engineering, fed with imported inputs (forage, concentrates), and producing much higher quantities of standardised products with negative environmental externalities (i.e., manure from soil-enriching becomes soil-polluting in high concentrations). It is rather obvious that the former loses out in the short term, but that society as a whole will suffer in the long run from growing forms of unsustainability.

BOX – Sector dialogue

The Civil Dialogue Group on Animal Products is a consultative body ensuring stakeholder connections with the European Commission. Its strategic agenda stresses the importance of the CAP – in both its first and second pillars – for the sheep and goat sector, considering its low profitability and the fact that production takes place predominantly in less favoured areas. In 2015 and 2016, the EU sheep meat Forum convened at the initiative of EU Commissioner for Agriculture and Rural Development, to explore current and future challenges of the EU sheep meat sector together with representatives of Member States as well as producers, processors, and traders.

The two key themes that emerged were the vital role sheep farming plays in enhancing the environment in extensive grassland systems, and the consequent need to provide strong support to primary producers through CAP direct payments. Against this background, the Forum recommended the Commission to consider two main strategic actions: 1) a new environmental payment that specifically prizes small ruminants' extensive breeders; and 2) a communication and promotion programme to better position the sector with respect to EU consumers' choices.

Another policy domain that significantly impinges on pastoral resource management and livelihood patterns is related to environmental care and biodiversity protection. Apart from the establishment of Natural Parks forged out of pastoral areas (Nori and de Marchi, 2015), a main issue of concern for European herders is the **coexistence with large carnivores**, whose population has been growing dramatically in most mountainous areas where there have been specific programs to reintroduce and protect them.

The status of carnivore predators in Europe is protected by the Convention for the Conservation of European Wildlife and Natural Habitats, also known as the Bern Convention, signed in the early 1980s, when many of these predators were under threat of extinction. To make this Convention operational and to equip it with adequate instruments to safeguard animal biodiversity in its territory, the European Union drew up in 1992 the Natura 2000 network, and legislated on the protection of wolves, bears, wolverines, and lynxes (Nori and de Marchi, 2015). The populations of these predating carnivores have since grown steadily, with relevant implications for herd security and management, and the broader restructuring of land and labour patterns at farm level. As cases in the Alps, Apennines, Pyrenees, Epirus, Carpathian and other mountainous settings attest, the expanding presence of predating wildlife leads to the over-exploitation of areas that are securitised through specific investments (i.e., night pens, electronic devices, guard dogs, and so on), and the under-utilisation or abandonment of those remote from basic infrastructure and closer to predators (Meuret, 2010; ECR, 2019).

BOX – Predators and prey: which biodiversity to preserve?

Large predators are dramatically changing the face of mountain pasturelands as pastoralists are frustrated and discouraged by the limited room for manoeuvre in countering predators' attacks. The situation is dramatic in most European mountainous settings, although there is a basic difference between areas historically populated by certain predators (e.g. wolves in the Italian Apennines), and those where large carnivores were recently reintroduced as a result of policy choices (e.g. bears in the Pyrenees and Alps). In the Var (a French department), 40 per cent of grazing land has been lost over the last decade years to the encroaching presence of wolves. Extensive flocks and herds are also shrinking significantly in the two regions where wolves and bears are emblematic, the Abruzzi in Italy and the Picos de Europa in Spain.

What is at stake is the abandonment of pasturelands, the militarisation of territories, mountain landscapes loss of economic attractiveness, the regression of biodiversity linked to open environments, and the increase in avalanche and wildfire risks. Also at stake are the survival of autochthonous local breeds, maintaining the supply of high-quality farm products demanded by the consumer, and the future of a mountain society where free ranging livestock is disappearing.

To defend their herds, farmers are introducing guard dogs, which are leading to growing tensions with visitors, forcing some communities to choose between tourism and livestock farming. The mountain with wolves will be a different mountain: less rural and more impoverished, on the one hand, less peaceful and more conflictual, on the other (Garde, 2018). The choice is evidently between which biodiversity to protect, as the implications of fading pastoral systems are a major loss in terms of animal, vegetal, and socio-cultural diversity.

Overall, the increasing and uncontrolled presence of carnivores is but one of the many ways in which pastoral territories have been encroached by competing interests and conflicting agendas. The fact that pastoralists are, on paper, recognised as managers of the landscape and custodians of biodiversity means that they have to carry the burden of social and environmental responsibilities, while often benefiting in a limited way from fulfilling such roles.

The fading of pastoralists, in Europe and beyond

The growing reliance on market mechanisms and the liberalisation of trade exchanges have generated profound uncertainties in production patterns. CAP has played a substantial and ambivalent role in agricultural modernization through the restructuring of the global agri-food chain, which has furthered territorial polarisation (Nori and Gemini, 2011; Nori and Scoones, 2018; Nori, 2019). In spite of a stated concern for LFA and HNV, CAP 'rural welfare' is widely criticised for the inability to offset the negative trends affecting the agrarian world, particularly in its less-favoured settings where producers are increasingly dependent on subsidy schemes, and rural populations continue to decline, remaining socially and politically marginalised.

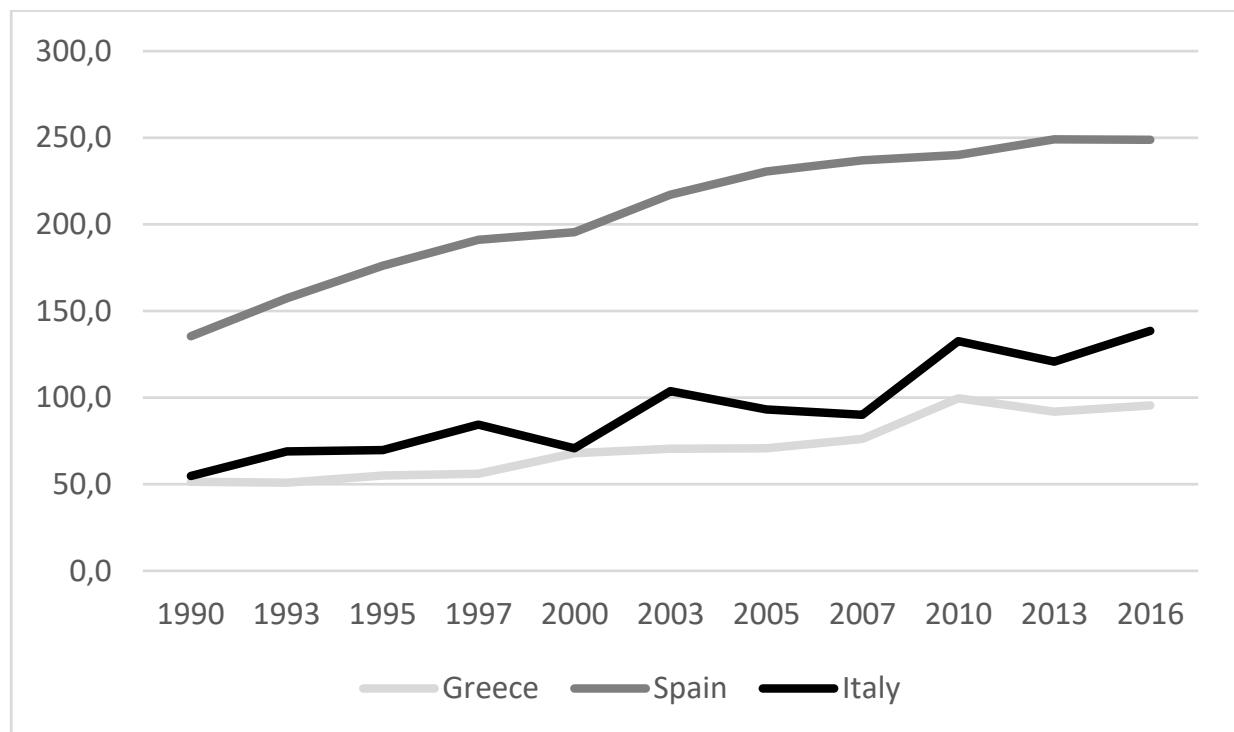
On the one hand, areas with higher potential for agriculture (i.e., low plains, valley bottoms, and coastal areas) have undergone intensification of production, while on the other, more marginal settings have witnessed a progressive abandonment (EP, 2008; Ragkos et al., 2017; Nori and Farinella, 2019). The living and working conditions in mountainous, island, or inner territories are today tougher, the quality of basic services and facilities limited, and opportunities for employment and income fewer. In these settings, family farming has become a decreasingly viable enterprise, and an unattractive option for local youth, as attested by the demographic ageing of rural communities and problems and generational renewal and socio-economic desertification. Trends and figures are

particularly dramatic in Mediterranean pastoral regions, which lose about 30 per cent of their pastoral farms every 10 years (FAO database; EuroStat, 2016; Nori and Farinella, 2019; EU, 2020).

At a localised level, pasturelands are also subject to diverse patterns and tensions. Territorial polarisation implies the intensification of land use in certain areas and related over-grazing and degradational phenomena, while other areas are under-grazed, which triggering as well degradation in terms of shrub encroachment and land conversion into closed, woody areas. Other pastoral areas are encroached by new economic interests and policy agendas, and thus converted into natural reserves, tourist and leisure areas, intensive crop farming, forestry plantations, energy suppliers (i.e., dams, windmills, biofuel farming), where pastoral producers are seldom part of the equation (MMA, 2020).

Policy choices, environmental changes and market dynamics contribute to reconfiguring pastoral production systems – with relevant implications for farm management of land, livestock, and labour, as well as for their economic performance and livelihood levels. **The decline of sheep and goats** in Europe since the early 2000s (Figure 2) reflects the impact of several factors, including the CAP decoupling scheme, animal health crises, and the broader and steady decrease of pastoral farms. Official data are, however, offset by the fact that most farms have increased their average flock size as a way to pursue some economic sustainability.

Figure 4. Trend in average sheep farm size in Greece, Spain, and Italy



Source: Nori and Farinella, 2019, elaboration on EuroStat data

BOX - Standardising livestock breeds

The Lacaune is a breed of domestic sheep originating near Lacaune, in southern France. The Lacaune is the most widely used dairying sheep breed in France, with a population of about 800,000 ewes, notably used in the production of Roquefort cheese. Originally bred for dual meat and milk purposes, the Lacaune has undergone an intense process of genetic reconfiguration to enhance its milk productivity, which almost quadrupled in terms of average yields from the 1960s to the 1990s as the result of a large-scale, rigorous selection programme organised by a French government agency. This programme included artificial insemination of several million ewes over the years, a vast array of government support for recording the performance of the progeny on many farms with respect to the milk yield and other outcomes, improved knowledge about animal management and nutrition for sheep milk production, and the willingness of many farmers to participate in the program and take advantage of what was being learned. The combination of these and other factors brought about an improvement of 6.3 per cent per year in milk yield per ewe in the breed over the 30-year period, up to about 280 l/t/year today, of milk with high butterfat and protein content (Wikipedia on 21/7/2021).

From Roquefort production system in southern France, this breed has eventually spread throughout southern Europe and beyond, as a response to various factors on Mediterranean pastoral systems. Together with the Assaf breed (which has also undergone intense genetic selection and improvement in Israel), the Lacaune is increasingly appreciated as it responds well to in-barn conditions, supplied feeding, and intensive management. Its productivity is much higher than any local breed, and this matches pastoralists' need to increase milk volume and standardise its content and quality. The Lacaune's limited exposure to grazing also fits with problems related to predators, and the related need for a skilled workforce which is decreasingly available.

Another challenging aspect for European pastoralists is the decreasing availability of a **skilled and motivated workforce**. Difficult living and working conditions and poor economic returns make shepherding a poorly appreciated profession. While the average age of agricultural entrepreneurs is normally higher than any other economic sector, the figures for pastoral farms are higher than any other agricultural sub-sector. One-third of pastoral farmers are over 65 in Spain and over 60 in France, while in Ireland and the United Kingdom half of sheep farmers are over 55. In both old and the new EU Member States the average age of farmers is rising, and the change of generations is a long way off (Pastomed, 2007; EP, 2008; Nori, 2017; Schuh, 2019).

In recent decades most pastoral farms in southern Europe have survived with the labour and services of foreign shepherds from neighbouring regions. The origin of the pastoral workforce has in fact changed from family members to salaried labourers, and lately from local to foreign workers, either from the EU eastern flanks (Romanian and Bulgarians have long fed the shepherding labour market in Italy, Greece and Spain), the Balkans (Albanians and North Macedonians especially in Greece and Italy), and Maghreb (especially from Morocco to Spain, France and Italy). Over time these flows are being replaced by migrant labour from southern African and eastern Asian regions (Nori, 2015). The growing presence of immigrants has come to offset the decline and ageing local rural population, providing European pastoral farms with a cheap and quite skilled labour force. While this phenomenon helps temporarily fill the vacuum, the immigrants' limited integration into the fabric of local communities threatens their scaling up as farm entrepreneurs, hence limiting options for a generational renewal (Kasimis, 2010; Nori and Farinella, 2019).

BOX - Shifting workforce in Sardinia

In the past being a salaried shepherd represented a common step in the socio-economic career of local youth before generating capacities and money to raise a herd in your own right. Today's conditions have made this job unattractive for young people who prefer emigrating elsewhere in search of employment.

It is up to young immigrants to locally perform the functions related to livestock management and breeding, but also collateral tasks such as clearing lands, building fences, collecting timber, farming animal feed, producing cheese, as well as building or mechanical activities on the farm. By triangulating data from different sources on resident and working populations, in 2016 an estimated 1,000 Romanians were employed in agro-pastoralism in Sardinia, engaged mostly in lowland medium-sized, semi-intensive sheep farms (Farinella and Mannia, 2017; 2018).

The decreasing availability of workforce does not only affect shepherding, milking, and other farm tasks. Rural abattoirs and businesses operating in the meat sector are also experiencing difficulties in finding skilled workers (EP, 2008; Mettler, 2018; ECR, 2019).

BOX – Addressing the challenges of generational renewal

New generations of shepherds and extensive livestock breeders are increasingly concerned about their working conditions. Redressing these inadequacies includes:

- investing in basic infrastructure and services in remote areas, and particularly in the facilities that provide decent living conditions and proper working conditions in harsh settings;
- restructuring the governance of the value chain of pastoral products in less asymmetric ways, so that producers get adequate benefit according to the costs and risks undertaken;
- establishing a better organised labour market and contractual arrangements, as well as improved rights and salary conditions, with public authorities playing their role as a mediator and guarantor;
- providing adequate vocational training tailored to present and evolving challenges, which shall also provide for a dialogue platform amongst the stakeholders and interests operating in pastoral areas;
- improving the attractivity, inclusion, and integration of potential newcomers, including students, seasonal workers, immigrant labour, and new rural citizens (Mettler, 2018; ERC, 2019; Nori and Farinella, 2019).

Greening the neighbours' grass

With its wealthy consumer market and the rural welfare of the CAP, the EU has played a non-negligible role in **restructuring the agrarian world in other regions and countries**, including neighbouring ones. The EU approach to the modernisation of the agricultural sector and rural world has extended its inconsistencies and contradictions throughout the globe. The implications for pastoral systems elsewhere have been significant in many ways, including:

- Desertification of pastoral areas through the emigration of the local shepherding workforce. The EU agricultural labour market, unappealing to local youth, represents a pull factor for experienced shepherds from non-EU regions, who have moved to fill that vacuum. These

regions, in turn, have been affected by forms of local socio-economic and ecological desertification (Nori, 2017).

- Difficulties in developing markets for local animal products, particularly milk and dairy, due to the surplus export (especially) from EU intense and intensively-subsidised farming systems, which until 2003, received a specific an export subsidy. The case of milk powder from intensive livestock schemes in northern Europe to African markets provides a good example in case (Duteurtre et al., 2020).
- Reconfiguration of the agrarian world and pastoral systems according to EU standards. The contradictions and inconsistencies of the policy framework informing the modernisation of agriculture in the EU, also characterise EU policies in neighbouring countries, including the Instrument for Pre-accession for Agriculture and Rural Development (IPARD) addressing eastern Europe, the Balkans, and Turkey as well as the European Neighbourhood Partnership for Agricultural Development (ENPARD) that informs EU relationships with most Maghreb and Mashreq countries.

Agricultural systems in these regions are characterised by small-scale and low-input producers, thus creating a composite, fragmented, and highly diversified set of practices, landscapes, and products. These forms of evident biodiversity, which are highly appreciated in principle in EU policies and UN Conventions, are in practice challenged and threatened to a large extent by the rules, regulations, and requirements characterising EU modernisation paradigms and practices in this domain.

The overall aim of IPARD and ENPARD programs is to steer the process of convergence and to harmonise local production standards with EU ones by '*adopting and implementing the political, institutional, legal, administrative, social and economic reforms necessary to comply with Union values and to progressively align to Union rules, standards, policies and practices with a view to Union membership*'. Unsurprisingly, a critical assessment of IPARD programmes reveals that it was mostly larger farms and businesses that benefitted from EU assistance and financing, as overall hygiene rules and quality standards enforced by the EU are hard to meet for small-scale producers, with significant increases in production costs as well as in administrative burdens (Essedra, 2014:4).

A specific focus in the report relates to the pastoral systems, whose traditional dairy products are somehow connected to ancient transhumance or mountain cheese-making practices. Today these practices are widely perceived as unappealing, thus threatening both mountain environments and traditional societies. A similar approach and related critiques are addressed to ENPARD. A comprehensive assessment of the impacts related to the extension of CAP principles in neighbouring and pre-accession countries can be found in [CIEAM Watch Letter 27](#) (2013).

From good principles to bad practices: the ghosts in the machine

The EU Common Agricultural Policy addresses the challenges of interfacing productivity with sustainability and multifunctionality, in an economic setting dominated by the market and framed by global trade agreements. EU policies must also respond to the changing and evolving demands of society, including the dimensions of consumption, ethics and the environment. Along these lines, CAP financial support aims to compensate those producers who operate in difficult conditions or incorporate social and environmental externalities in their farming systems, thus bearing higher production costs, and facing difficulties in competing under current market conditions. Experience shows that CAP contains several ambiguities, inconsistencies and flaws that make it quite highly ineffective vis-à-vis its stated objectives. We try hereafter to classify and analyse these major flaws, into five intertwined categories:

- a) **POLICY FLAW.** The operational space of the CAP is defined by a broader policy framework that includes trade agreements and global conventions. Its environmental mandate is financed

by agricultural money, thus posing a series of political and strategic ambiguities and conflicting interests. From the EU agriculture perspective, extensive pastoral systems fall at the margins of the core of productive agriculture located in the ‘high potential’ areas of the European lowlands, and in output terms their relevance is nearly negligible.

- b) DESIGN FLAW. Given its original mandate to sustain food production, CAP aims to support the integration of environmental practices into conventional farming, rather than appreciating extensive, environmental-friendly systems. The focus of standardised measures such as eligibility rules, cross-compliance, greening requirements, agro-environmental measures, and their related financial support are often on redressing and decreasing the ecological footprint of ‘intensive’ agricultural practices. Instead, public goods and socio-ecosystem services provided by extensive systems are much less appreciated and rewarded (WWF and TyN, 2018).
- c) TARGET FLAW. Despite its stated principle of supporting farm incomes, because of these distorted perspectives CAP payments bear no relation to the farmers’ effective economic situation and needs, nor to the public goods they provide. Although difficult to explain to European taxpayers, as a counter-intuitive outcome, large scale, wealthy and intense farmers are the first beneficiaries of CAP support, while small ruminants’ extensive farmers making use of mountainous pastures rank at the bottom.
- d) TECHNICAL FLAW. In order to assess and monitor producers’ compliance with the stated measures, agricultural officers need to venture through the immense and challenging endeavour of standardising a set of dynamic and complex practices performed by pastoralists. This is especially so if we consider the great variety and diversity of landscapes and agro-ecological settings that compose the EU pastoral areas, and the non-equilibrium ecosystem dynamics characterising them. An effective policy design able to keep pace with the heterogeneity and dynamism embedding pastoral practices would require an immense amount of data and a highly sophisticated elaborating system. These are not there, as even basic data on the extent of pasturelands under grazing use are extremely opaque in many countries, with different sources sometimes showing very different statistics.

This poses two operational problems. On the one hand, reference baselines and standard indicators are often inconsistent with the reality on the ground. On the other, the systems to monitor and evaluate such practices and the time scale of their impacts are often inappropriate for technical and administrative capacities at different levels. The existing Farm Accountancy Data Network (FADN) mostly accounts for economic data and physical indicators (i.e., tree density, size of shrub patches or hedge width, just to mention a few), with a limited capacity to provide insights into local social and environmental dynamics. A wide literature offers a comprehensive analysis of such inconsistencies at the national level for most European countries (Peeters, 2012; Oppermann et al., 2012).

- e) OPERATIONAL FLAW. The intent to translate complex and dynamics system into uniform and simplistic quantitative criteria and easily manageable indicators is a major burden for pastoral farmers. CAP-emanating rules, roles, and regulations are in fact operationalised through technical regimentation and bureaucratisation of pastoral tasks and duties. These affect herders’ flexible strategies and effective performances, by framing and boxing their practices into rigid matrixes in an effort to discipline their practices (Van Der Ploeg, 2008; Fréve, 2015). CAP technostucture has reconfigured farming so much that some farmers feel more conformable in scouting policy and pursuing subsidies, rather than quality grasslands (Eychenne, 2020). ‘*We spend more time today in the office than in the field*’ (Nori, 2017).

Apart from the huge costs of the bureaucracy involved in the ‘*technicisation de la gouvernance*’ (Eychenne, 2020), a counter-effect of this flaw is that CAP conditions on land eligibility and cross-compliance are unsuited to the complex landscapes managed, creating administrative constraints

that herders tend to escape by abandoning the most difficult land if not eligible for direct financial support, while intensifying the use of the most favourable plots, with negative impacts on biodiversity, landscape management, and carbon stocking. This implies that the EU society is investing huge amounts in measures than run against their stated objectives.

BOX – Counting the costs in Spain

Due to specific national implementation measures, following the latest CAP reform, grazing in forested areas, which characterises most Spanish extensive systems, such as the traditional dehesa system, no longer receives financial support (PGE, 2015). This represents but one of the several measures that have been working against extensive livestock breeders in Spain in recent decades.

According to the Spanish Federation of the Dehesa, the damages caused by an inconsistent policy framework in the last 35 years has led to the disappearance of 65 per cent of family livestock farms, the depopulation of 80 per cent of rural areas, and the endangerment of 84 per cent of Spanish native breeds. The demise of good resource management practices in almost 40 per cent of the national territory is also a major reason behind the raising wildfire events affecting that increasingly threatens the Spanish rural world (FEDEHESA, 2021). Whether the analysis might be debatable, the figures are not.

BOX – A French recipe

France represents a notable exception in the European context in terms of an enabling environment for extensive livestock farming, with labour conditions, rights, technical assistance, and wage levels significantly higher than those of other countries in the region. These are the results of years of political struggle as well as of social and economic investments.

An important process of generational renewal took place in the 1970s with the arrival of urban citizens who sought an alternative lifestyle in shepherding (Biber 2006). National political and local authorities saw in this phenomenon an opportunity to revitalise territories at risk of abandonment. As a result of intense negotiations between a politicised constituency and concerned authorities, a Pastoral Law was approved in 1972 (Decree 72-12) and later revised and improved through the Rural Territories Development Law in 2005.

The legislation is hinged on three main axes:

1. to encourage the organisation of livestock farmers for the joint exploitation of pastoral areas by reviving collective practices that are well rooted in the pastoral tradition. To this end, it is possible to create pastoral groups, approved by the State, which bring together, in various legal forms, stockbreeders who might use the grazing land units together;
2. to encourage the consolidation of grazing areas amongst public and private landowners who oftentimes have just inherited their plots and leave them idle. Landowners maintain their property rights and their associations receive State support for their consolidated management;
3. to provide landowners and breeders with a flexible but legally operational framework to facilitate the leasing of grazing lands on a multi-annual basis. This is the multi-annual grazing agreement, whose terms are defined locally (for grazing, but also for tourism and hunting purposes), with the State as ultimate controller.

Farm to Folk

The EU institutional architecture represents an important driver of uncertainty for European pastoralists who must continuously navigate multiple, fragmented, and at times contrasting, measures, rules and requirements. In such a policy-scape, the Common Agricultural Policy addresses the challenge of interfacing productivity with sustainability and multifunctionality in a societal setting dominated by growing environmental concerns and market dynamics framed by global trade agreements.

Unlike other regions in the world, the policy setting in Europe favours, in principle, extensive livestock-keeping by recognising its precious and irreplaceable role for several environmental, economic, and cultural benefits. EU policy efforts explicitly attempt to preserve pastoralism, as it reputedly contributes to ensuring the wider objective of territorial cohesion as well as maintaining an active population and a vibrant socio-economic fabric in difficult territories, beyond producing food sustainably and protecting biodiversity and the landscape.

In its policy framework the EU acknowledges the fact that the public goods provided by pastoralism are not sustainable without remuneration. It thus supports livestock farmers working in HNV and LFA settings through direct and indirect measures, including subsidies. These are considered as forms of compensation and reward for producers operating in disadvantaged conditions and are influenced by broader trade and political agreements. However, the situation on the ground tells a different, indeed opposite, story. Translating the growing societal appreciation and political recognition of pastoralism into effective social facilities and economic returns appears to be a major challenge for policy makers and administrators across Europe, as over the decades, the number of pastoral farms and herds have declined sharply, and the socio-economic desertification of Europe mountains and pasturelands is advancing at an ever-faster pace.

On the one hand, the *European Green Deal* shows high levels of ambition in reorienting agriculture and food production towards more environmentally and climate friendly practices. As part of this deal, the 2020 EU '*Farm to Fork*' strategy is specifically designed to enhance the transition to more sustainable food systems in Europe, through a comprehensive approach that touches on many aspects along the entire food chain, with specific concerns for environmental, climate, and animal welfare. In such perspective extensive livestock farming represents a most effective option, as most of the negative climate and environmental impacts of livestock systems come from their intensive management and feed production and transport (EC, 2020b).

On the other hand, the long-awaited CAP reform is not addressing its inconsistencies in technical, administrative, and policy terms. In an economic context centred on trade liberalisation and free markets, the CAP efforts to reward producers who operate under difficult conditions or to compensate those who incorporate social and environmental externalities into their farming systems appear, not surprisingly, to be rather ineffective.

Despite presumed good intentions, there is today enough evidence to suggest that CAP is supporting the intensification of livestock production systems rather than protecting and favouring the extensive ones (EP, 2017; EC, 2020b). Problems related to the generational renewal amongst pastoralists provide an evident indicator of the policy failure in translating the supply of quality products, environmental services and public goods into fair societal appreciation and economic returns for pastoralists. And the decline of extensive livestock farming is reportedly the greatest threat to specific landscapes, HNV habitats, and local products across Europe.

A pure technocratic approach, centred on eligibility rules, cross-compliance, greening requirements, and agro-environmental measures tends to generate more trouble than support to pastoralists' livelihoods and practices. A purely technocratic approach, focusing on eligibility rules, cross-compliance, greening requirements and agri-environmental measures, tends to generate more problems than support for pastoral strategies and livelihoods. These standardised measures, in fact, seem to discipline herding practices in ways that are poorly suited to the effective variability

management that pastoralism is about. Furthermore, the ways market agents and policymakers value and appreciate pastoral products and services do not seem to provide for a viable economic perimeter for extensive farms to continue.

However, the problem may not only be technical or administrative, as major changes require brave and radical political choices. Pastoralists are the best allies for tackling most of the challenges society faces today – and increasingly so in a climate change scenario. More consistent policy efforts should centre on a greater recognition of the professional profile of pastoral livestock farmers as multi-functional economic agents, who deserve adequate social recognition as well as fair remuneration for the quality products (through the market) and the public goods they supply (through rewards from public funding). Accordingly, a more effective and enabling institutional environment requires a comprehensive, integrated policy framework that demands consistency amongst the many spheres affecting pastoralism – including trade agreements, labour market, environment- and climate-related policies, public health, and territorial cohesion. As well as a fair societal dialogue that includes pastoralists in the policy arena as well as in the value chain governance. Failing to recognise and integrate these diverse dimensions into the management of pastoral territories holds significant social as well as environmental consequences for European society.

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