



Women and wool in Dehesas: Gender overview of the wool supply chain in Spain

Cultural landscapes and biodiversity in the Mediterranean Basin

Marta Torres Herrero



CULTURAL LANDSCAPES AND BIODIVERSITY IN THE MEDITERRANEAN BASIN

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Abstract

The Dehesas are an area of interest because of their environmental, social and economic value. Historically, wool from Merino sheep of the Dehesas was one of Spain's most prominent export products and a sign of local cultural identity. The Dehesa landscape is characterized by extensive grazing, mostly by sheep and goats, and transhumance (the seasonal movement of herds to different pastures). These practices are the main driving force behind the Dehesa's unique ecosystem and biodiversity.

While the Dehesas have been studied at length, one area that has received less attention is the role of gender inequality and entrenched social and labour marginalization of women. For centuries, women have actively contributed to the "Culture of the Dehesa." Men typically worked outside the home, taking care of livestock and other farming activities, while women were mainly confined to domestic and care duties. Women contribute to the prosperity of the household and the local economy, but this contribution has gone unrecognized. In particular, women play an important role in producing wool and wool products, maintaining traditions and preserving ancestral knowledge, but this work has stayed invisible and undervalued.

Today, there are several women's initiatives aimed at restoring and maintaining the traditional cultural practices of the region. One new phenomenon is the increasing number of women pastoralists, who have taken it upon themselves to bring back the traditional practice of extensive grazing of the Dehesas. Women from Extremadura, including artisans and entrepreneurs, are working together to revitalize the market for Merino wool and to produce new high-quality wool products.

Women involved in pastoralist and wool production activities are committed to their communities and landscapes, and they play an important role in building and strengthening regional identity. Women's roles and contributions to market chains and rural economies must be better understood and made visible, so that their work can be adequately valued and reflected in policies and planning. Our work highlights how women of Extremadura can be agents of change in moving towards sustainable and ecologically sound agriculture and reviving or maintaining cultural practices that benefit biodiversity, regional identity and the local economy.

Executive summary

Overview

The Dehesa is an agro-silvo-pastoral ecosystem with a unique history and culture. The region has one of the most conservative socioeconomic structures of the Iberian Peninsula, marked by strict gender roles. The “Culture of the Dehesa” has historically been explored from a male point of view that reflects patriarchal societal patterns, including:

- women’s invisibility
- gender violence and isolation
- division of work by gender
- women’s underrepresentation in governance structures
- land rights discrimination
- unequal access to needed resources and services
- lack of job opportunities in traditional economic sectors of the Dehesas, such as livestock raising, agriculture, or hunting
- performance of unpaid work, mainly in the domestic sphere.

One of the main research gaps we identified is the lack of information on gender-differentiated roles and responsibilities in the wool industry, the agricultural sector and the Dehesas as a whole. Although less visible, women have been an active part of the Dehesas for centuries and are key for achieving and maintaining the region’s sustainable development.

Women in the Dehesas

Past

Historically, agricultural holdings were a space for both working and living. Although women were confined to domestic tasks, with limited access to public spaces or decision-making, they were responsible for social and family cohesion and were guardians of traditions, culture and sustainable resource management. In the past 50 years, due to a lack of job opportunities and isolation in the Dehesas, women have increasingly moved to urban areas in search of better opportunities.

Present

Dehesas are experiencing depopulation, masculinization of the economy and women’s migration. The men who remain lack traditional knowledge around environmental management, which is threatening the region’s ecological sustainability.

However, a few but symbolic number of educated rural and neo-rural women have begun to return to Dehesas to live and work as livestock managers, shepherdesses and farmers. They are transforming the patriarchal system of the Dehesas, implementing a new “female way of management” based on agroecology and ecofeminism; cooperation and sustainability; connection with nature and animals; and respect for landscapes, culture, traditions and the environment. Women are also diversifying the local economy using retro-innovation (adapting traditional knowledge to meet the current challenges of the Dehesas). New sectors include eco-rural tourism, agri-food, organic cosmetic products, jewellery, crafts, fabrics and textile products, among others.

Future

If public administrations, stakeholders and general society support and promote these new women's initiatives and voices, the Dehesas can be transformed into a more equitable system with opportunities for both women and men. These structural changes can further encourage young people to come and live in the Dehesas, assuring the economic and social sustainability of its landscapes. Women's presence and activities can help fight depopulation, encourage environmental protection and promote biodiversity conservation.

The supply chain of wool

Although Merino wool has been a fundamental product of Spain for centuries, it carries less value for livestock producers today. From a gender perspective, wool and women are intimately linked in the Dehesa, connected by a common history of gender discrimination and invisibility.

The first steps of the wool supply chain are managed by men: wool growing and shearing. Women then work on grading, carding, combing, spinning, weaving, or garment making. Typically, women do not hold management roles, and men lead efforts around large production and distribution, including export and import activities.

Women are more visible in small productions, but these are less profitable. Small producers are threatened by high processing costs, and so female wool producers face double discrimination: to be a woman and to be a small producer.

Past

For centuries, women have transmitted their knowledge about wool to their daughters and granddaughters. Historically, women wove together in public spaces or private houses, creating a feeling of community, collectivity and sharing. This "female approach to wool" favoured sustainable practices, social cohesion and intergenerational exchange.

Present

Women continue to lack visibility in the wool supply chain, but are also key to the rejuvenation of the wool sector. Female "laneras" (women in the wool industry) work to highlight the added-value of wool produced locally. Laneras promote and strengthen the wool industry by establishing new artisanal production patterns for niche markets, such as short-circuitⁱ and eco-markets. They support research on wool quality and sustainable processing techniques; promote responsible consumption; provide support for other women; and diversify markets (including sustainable fashion, furniture, decoration, art and construction).

Faced with the traditional male-dominated supply chain model, women are presenting a new, more collaborative "female approach" based on communication, cooperation, exchange and mutual support. Women's empowerment is linked to such "collective solutions." Small women producers have formed "wool banks" to share costs and processing facilities, which facilitate access to opportunities for education and broaden their networks to include designers, transformers, weavers and livestock managers.

ⁱ Short-circuit markets are local markets and/or local supply chains, where the majority of the supply chain is close to people who produce the wool, and products are created in shorter periods of time.

Women are also promoting a new, less bureaucratic governance framework that is more inclusive and participative. They are proposing legislation; building the capacity of women to lobby; advocating for gender quotas in government bodies; and developing comprehensive plans to promote women's work and entrepreneurship in the supply chain.

Future

The challenge facing women in the wool industry is to achieve gender equality, visibility and equal participation and representation in the supply chain. In the future, the efforts of women and Laneras communities can open up more opportunities in the wool sector.

Glossary

Agro-silvo-pastoral ecosystem: Landscapes that combine natural, woody component (like trees or shrubs) with the human activity of raising cattle.ⁱⁱ

Androcentric: From the point of view of men, as opposed to women.

Dehesa: A rural region found in Spain and Portugal (called montados in Portugal) characterised by its environmental features and biodiversity, as well as its local culture and traditions. The region is specifically marked by its agro-silvo-pastoral landscapes.

Excessive livestock / extensive farming: An agricultural system where each animal and amount of land has a low productivity, and the land is treated more gently than in intensive farming.

Extremadura: A region in Spain bordering Portugal, when the majority of the Spanish Dehesa is located.

Laneras: A new term used by women in the small-scale, sustainable wool industry in Spain's Dehesa region. These women advocate for recognition of their traditional, cultural and sustainable work methods. Laneras is also the title of one of the projects described in this paper.

MAVA Foundation: MAVA "Fondation pour la nature" is a foundation whose mission is to "conserve biodiversity for the benefit of people and nature by funding, mobilising and strengthening our partners and the conservation community."ⁱⁱⁱ MAVA is implementing the project that this paper is a part of.

Neo-rural: "Neo-rural" describes people who are newly rural, who have moved to rural areas intentionally to adopt a lifestyle distinct from city life.

Retro-innovation: Adapting traditional knowledge to meet current challenges.

Transhumance: An agricultural practice where livestock graze in different fields in different seasons, in order to preserve the environmental productivity of each field.

ⁱⁱ Definition adapted from: <https://www.ruvival.de/agro-silvopastoral-system/>.

ⁱⁱⁱ From <https://mava-foundation.org/about-us/mission/>.

1. Introduction

1.1 Study overview

The MAVA foundation is implementing a project to support the sustainability of cultural practices in the Mediterranean Basin. These practices, which carry ecological and cultural importance, are seen in the Dehesas and Montados, lowland agro-silvo-pastoral landscape characteristic of Spain's Extremadura and Portugal's Alentejo region. The project includes this gender study on women pastoralists and women working with wool in the Spanish Dehesa, conducted by IUCN in collaboration with the Association Trashumancia y Naturaleza (T&N).

The Dehesas and Montados cultural landscapes, marked by a unique, highly biodiverse ecosystem, have been conserved by traditional land-use practices related to the primary sector (all activities with an end purpose of using natural resources, such as agriculture, fishing, or mining). However, various drivers are eroding these landscapes and threatening local cultural practices. The overall goal of the MAVA-funded M6 Consortium^{iv} is to halt the loss of biodiversity that results from the abandonment of cultural practices. Any effort focused on reconstructing and revitalizing local landscapes and cultural practices requires an understanding of the different forces that are driving changing conditions. Such an understanding will ensure that these forces are addressed in land-use plans and policies.

Previous studies have explored the ecological, social, cultural and economic dimensions of the Dehesas. However, one aspect that lacks attention is the structural inequality between men and women, the gender dimensions of cultural practices and the entrenched gender marginalization of women. Women's and men's roles, knowledge and experience associated with cultural practices can greatly differ due to traditional and social norms regarding labour division and socio-economic opportunities for women and men. IUCN commissioned a gender study in Extremadura in Spain to explore these dimensions, specifically looking at the roles, responsibilities, constraints and opportunities for women pastoralists and wool producers in the Spanish Dehesas.

The starting point for our study was the "One Square Meter Project," organized in the Mediterranean Area^v by T&N and extended to other countries in collaboration with Divers Earth.¹ One Square Meter aims to raise awareness about:

- The benefits of transhumance and pastoral systems for nature and biodiversity of the Dehesas
- Women as guardians of this ecological-socio-economic system, specifically as preservers of biodiversity, traditions and culture
- Women as key actors for economic revitalization, regional identity and social cohesion.

This project directly contributes to Sustainable Development Goal (SDG) 5, "Reaching gender equality and empower women and girls," by giving visibility to women in the wool industry and promoting networks of female wool producers all over the world.

1.2 Objectives

The general objective of this research is to explore the gender dimensions of cultural practice in the Dehesa region of Spain. The research specifically examines the roles, responsibilities, constraints and opportunities

^{iv} See the MAVA website for more information: <http://mava-foundation.org/oaps/promoting-sustainable-land-use-practices-2/>.

^v See Annex 1 for detailed information about the One Square Meter Project (TyN)

for women pastoralists, wool workers and wool producers. This paper further recommends solutions that can help sustain important cultural practices for environmental, economic and social gains at both the local and national levels.

The specific objectives are to:

- Identify the gender-differentiated division of labour and the roles and responsibilities for women and men pastoralists, wool workers and producers in the landscapes of the Dehesa and, specifically, in the supply chain of wool.
- Identify main gender gaps and areas of discrimination against women, including personal, professional, domestic, educational, cultural, labour, social and economic factors.
- Shed light on the role of rural women for revitalizing communities, including maintaining and updating cultural and craft traditions (which have the potential to become economic drivers).²
- Highlight the historical gender discrimination of women in the Dehesa by giving them a voice and making visible their productive, social, cultural and environmental presence and functions in rural areas.³
- Analyse women's participation and integration (horizontal or vertical) in the supply chain of wool, including economic activity; division of labour, roles and responsibilities; and benefits, obstacles and challenges.
- Increase awareness among the general public about the discrimination women pastoralists, wool workers and wool producers face in the Dehesa.

1.3 Methodology

This research is focused mainly on Extremadura, the Spanish region containing the highest percentage of the Dehesa. Although literature exists around the economic, socio-demographic, social and anthropological characteristics of the Spanish Dehesa, gender relations are not frequently explored. Very little sex-disaggregated data exists around economic activities, employment, uses of the time, distribution of domestic tasks, etc.

The study used interviews^{vi} with key informants as critical sources of information. A theoretical and empirical methodology was then used to combine a literature review with gender analyses of the interviews. The methodology included the following steps:

- Literature review and gender analysis of data: books, texts, documents, reports, articles, websites and official statistics.
- Identification of main actors and social agents: women, men, companies, agriculture cooperatives, women's movements, policy makers/local government, researchers, etc.
- Interviews with women, the main target population. Our goal was to interview women representing a wide array of economic sectors and activities (including livestock, agriculture, craft, design, textiles, etc.), in order to provide a comprehensive and multidisciplinary perspective.^{vii} Through open and semi-structured interviews,^{viii} these women shared their experiences of living and/or working in the wool supply chain.

^{vi} Annex 2 provides an overview of the persons and dates of all interviews

^{vii} Women of different ages, backgrounds, and education were interviewed. They explained their vision and mission, constraints, needs, opinions, challenges, and expectations. These women are landowners, farmers, shepherds, pastoralists, farm workers, active or retired, entrepreneurs, housewives, women in the wool industry, knitters, weavers, designers, producers, and feminist writers. Female representatives of public authorities and representatives from rural women's associations and movements were also interviewed.

^{viii} The interviews focused on the economic value of women's production activities, both paid and unpaid; social recognition; presence in public spaces and decision-making bodies; and visibility of all other activities, mainly social, cultural, and environmental.

- Interviews with other informed stakeholders. This allowed a comprehensive understanding of the region. We spoke with academics, biologists, veterinarians, male pastoralists, men in the wool industry, producers, cooperative members, distributors, artisans, civil servants, etc.
- Two workshops with eight to 12 women who work with livestock and who work in the wool industry. During these workshops, women discussed our interview findings and elaborated practical proposals for future action.
- Drafting of the Guidelines document which includes qualitative and quantitative gender analysis, as well as final conclusions and proposals.

2. Overview of women in rural Spain

2.1 Policy and legal framework

International bodies

The Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), adopted in 1979, outlines a key framework for promoting gender equality and women's empowerment. The convention encourages state parties to eliminate discrimination against women in rural areas, enabling women to participate in and benefit from rural development. This includes access to agricultural technology and financial services and equal treatment in land schemes, among other strategies.⁴

The Geneva Declaration for Rural Women, adopted in 1992, further recognizes the importance and key role of rural women in the socio-economic development of the agricultural sector. The declaration proposes a series of strategies to improve women's access to natural resources, thus improving women's economic status and overall well-being.⁵ This declaration is echoed by the 1995 Beijing Declaration and Platform for Action (BDPFA), which emphasizes the importance of rural women for sustainable development and the need to integrate women's traditional knowledge of sustainable resource use and management into environmental planning.⁶

The key role of women in environmental conservation is also recognized in the Rio Declaration in 1992. Since then, the three Rio Conventions—the Convention on Biological Diversity (CBD), the UN Convention to Combat Desertification (UNCCD) and the UN Framework Convention on Climate Change (UNFCCC)—have adopted Gender Action Plans to support gender equality and women's empowerment within the environmental sphere.⁷

European Union

Gender equality is a fundamental value of the European Union, especially noted in the Treaty on the European Union,^{ix} the Treaty on the Functioning of the European Union, TFEU,^x and the Charter of Fundamental Rights of European Union, CFR.^{xi} Through the years, many directives and resolutions have been adopted to achieve goals around equal treatment and pay for women and men. The 1698/2005 Council Regulation on Support for Rural Development, updated in 2013, stresses the importance of promoting rural women in the agricultural sector and the obligation of the EU to eliminate gender inequalities. The European Parliament resolution of 5 April 2011 on the role of women in agriculture and rural areas^{xii} further underlines the important role of women in the development and sustainability of rural areas.

The need to empower rural women is further supported by the European Parliament, which has published three reports on the situation of women in rural areas. The most recent, the European Parliament Report on Women and Their Roles in Rural Areas,⁸ shows that in 2014, European women were responsible for 35 percent of working hours in the agricultural sector and managed 30 percent of farm holdings. However, the invaluable work carried out by female spouses and other family members on farms is often not included

^{ix} Articles 2 and 3

^x Articles 8, 153, and 157

^{xi} Articles 21 and 23

^{xii} 2010/2054 (INI)

in official statistics. Thus, the EU encourages member countries to promote women's ownership and co-ownership of land and to enhance information on the role of women in rural areas.

Spain

Spain, as a member of the European Union, must comply with EU legislation and directives on women's equality. Spain has implemented gender equality laws and policies beginning with the adoption of the 1978 Constitution and the Recognition of Equality of the Sexes,⁹ which promotes a work-life balance. The 30/2003 Law of October 13 further considers the gender impacts of all laws and legislation adopted by the government.

The Organic Law 3/2007 of 22 March for Effective Equality Between Men and Women¹⁰ has been particularly impactful for incorporating gender mainstreaming in all policies. Article 30 provides specific education, training, labour and work-life balance measures to support rural women, and also mandates the adoption of a Law on Shared Ownership. To accomplish this mandate, in 2011 the 35/2011 Law on Shared Ownership of Agricultural Holdings¹¹ was adopted. This law makes visible the unpaid work carried out by women in the agriculture sector, which is not included in official statistics. It also allows women to access social security services, EU benefits, national and local agricultural aid schemes, and development programs.

In order to bridge the gender gap in rural areas, the Spanish government adopted a Plan for the Promotion of Women in Rural Areas¹² to support women's economic empowerment, entrepreneurship and participation in decision-making. Under this Plan, several programs have been implemented to support gender equality in the rural sector, such as the Challenge Rural Women Program.¹³

These laws have helped advance gender equality in rural areas, but the real challenge is determining their effectiveness. According to the FAO, women's de facto discrimination and the lack of effective implementation of gender equality legislation is prevalent. This discrimination includes land redistribution benefiting men, lack of effective enforcement of laws mandating farm co-ownership, violation of labour laws regarding equal opportunities and exclusion of women from rural cooperatives (2007).¹⁴

Gender discrimination is still present in the social, political and economic framework of Spanish rural women. Achieving full gender equality is a matter of justice, fundamental rights and ethical responsibility. It is also an important component of economic development and an essential aspect of society in rural areas.¹⁵

2.2 Socio-demographic framework

Spanish society, like European society, is characterized by life in cities. In 2017, only 16.5 percent of the Spanish population lived in the country's 6,678 rural municipalities. The highest percentage of the rural population, 50 percent, live in Extremadura. Within Extremadura, 72 percent of people live in municipalities with fewer than 5,000 inhabitants.¹⁶

Women play a fundamental role in the sustainable development of the rural environment in Extremadura, representing 49.15 percent of the rural population.¹⁷ While rural women have benefitted somewhat from increasingly progressive labour practices and opportunities outside the home in recent years, they continue to suffer discrimination in their personal, family and professional lives. This discrimination stems from a pervasive gender gap impacting land, livestock, labour, education, financial services and technology. Gender inequality has negative impacts on the agricultural sector, economy, society and women themselves.¹⁸

In 2011, the Spanish government conducted a gender equality analysis in rural areas¹⁹ that highlighted women's economic contributions and identified a scarcity of sex-disaggregated data. This study stresses that rural areas in Spain are going through a process of depopulation, masculinization and ageing, as young people, particularly educated women, are moving to cities in search of better economic opportunities.

According to data from the 2017 National Institute of Statistics (INE), women are increasingly moving to cities, resulting in a greater proportion of men in rural areas. Such a "masculinization" is a symptom of the lack of equal opportunities for women in rural areas, where young, educated women are increasingly concentrated in a small number of sectors.²⁰ This process of "masculinization of the rural environment" partly explains low birth rates in rural municipalities and the ageing of the rural population.²¹

According to the 2018 report "The rural environment and its social and territorial structure,"²² depopulation is the main threat to ensuring a sustainable future for rural Spanish communities. Movements such as the "Revolt of empty Spain"²³ begun by farmers, ecologists and feminist groups are gaining strength in Spain to fight rural depopulation. Women are key for sustainable development of the rural environment, for natural resource management, societal cohesion and economic diversification.²⁴ As the Decalogue against Depopulation of the Empty Spain states, "the social sustainability of the rural environment needs the feminine roots."²⁵

2.3 Economic contribution of rural women in the agriculture sector

Gender inequalities persist in rural areas.²⁶ While women are increasingly participating in the labour market, unemployment rates in rural areas are higher than average. A lack of job opportunities and difficulties in accessing support services are at the root of the problems that rural women face.²⁷ The modernization of agriculture has further relegated women to domestic and care work. Because of developments in the agriculture sector, women in rural areas have fewer economic opportunities outside the home, influencing their exodus to urban areas where they can find better jobs.²⁸

Gender inequalities in rural communities manifest in the distribution of domestic tasks.²⁹ The main activity for rural men is economically productive work outside the home,³⁰ while rural women are involved in multiple activities including both agricultural activities and managing home life. The lack of visibility given to rural women's contribution to the agricultural sector is reflected in Carolyn E. Sachs's 1983 book, *The Invisible Farmers: Women in Agriculture Production*.

Research and statistics

The previously discussed government study showed that in the past, rural women faced wage discrimination and insecurity, as they were often employed in temporal, non-qualified, or administrative positions in the service sector. Meanwhile, men were in management positions as entrepreneurs and employers. Temporary and part-time work was reported in official statistics, especially when it was part of a family business. As a result, women's participation in agricultural holdings was not reflected in official statistics, and they did not have access to economic benefits or social protections.³¹

This analysis is still relevant today, as illustrated by the results of the 2018 Economically Active Population Survey. Specific gender studies for each autonomous region in Spain do not currently exist, but some statistical information is compiled by the National Statistical Institute (INE).³² Women in agriculture represent 2.4 percent of employed women in Spain, and 6.8 percent of employed women in Extremadura.

Table 1: General employment rates (2018)

Employment Rates			Gender Gap, Women / Men
Spain	Women	Men	
Active Population (Age 16 +)	53%	64%	-11%
Employed	44%	56%	-12%
Unemployed	9%	8%	+ 1%
Extremadura			
Active Population (Age 16 +)	49%	62%	-13%
Employed	35%	51%	-16%
Unemployed	14%	11%	+3%

Our work, based on statistical data from T4 2018 (INE)

Table 2: Sectors of activity / employment rates (2018)

Employment by sector			GENDER GAP, % Women - % Men
Spain	Women	Men	
Agriculture	2.4%	6.1%	-3.7%
Industry	7.15%	17.4%	-10.25%
Services	80.6%	60.1%	+20.5%
Construction	1.1%	10.5%	-9.4%
Unemployed, searching for a job, or without a job for at least a year	8.8%	5.9%	+2.9%
Extremadura			
Agriculture	6.8%	18,8%	-12%
Industry	4.1%	11.5%	-7.4%
Services	75.2%	53%	+22.2%
Construction	0.6%	8.9%	-8.3%
Unemployed, searching for a job, or without a job for at least a year	13.4%	7.8%	+5.6%

Our work, based on statistical data from T4 2018 (INE)

Table 3: Agriculture sector / employment rates (2018), Extremadura

Extremadura	Women	Men
Employed	85%	75%
Self - Employed	15%	25%

Our work, based on statistical data from T4 2018 (INE)

Rural economies benefit from family agricultural enterprises. When multiple members of the family participate, their work helps sustain the family structure and the family business.³³ While women farm owners enjoy the same rights as men, they do not always manage farming activities. Men (husbands or companions) typically take the management role, and women combine farm work with domestic duties.³⁴

Women only represent 32.42 percent of agricultural owners in Spain.³⁵ Most women working in family farms are not officially recognized as farm holders; at best they are known as “holders’ spouse” or as “other relatives.”³⁶ As a result, “invisible women” are linked to farms without having a legal or administrative status.³⁷ Since there is no sex-disaggregated data about landownership in the Dehesa, we use the information provided by the 2016 Farm Structure Survey in Spain to understand gender gaps in rural areas.

The survey highlights an important finding: nearly 68 percent of holdings were owned by men, and only 25.78 percent by women. In Extremadura in 2009 (the date of the last Official Agricultural Census), this gender gap persists, with 27.72 percent of holdings owned by women. There are also important gender gaps related to the type of management:

Table 4: Holders and holder-managers of farms on Spain (2016)

Spain	Holders	%	Holders Managers	%
1. Men	595,170	67.58%	530,083	74,22 %%
2. Women	285,467	32.42%	184,165	25,78 %
Total 1 + 2	880.637	100 %	714,248	100 %

Our work, based on statistic data from The Farm Structure Survey (2016 INE.)

Table 5: Holders and managers in Spain and Extremadura (2009)

SPAIN	SEX	HOLDERS - Number of holdings which legal and economic responsibility is assumed by a natural person	%	MANAGERS Number of holdings	%
	1 Male	646,403	69.53%	775,421	78.34 %
	2 Female	283,291	30.47%	214,375	21.66 %
	TOTAL 1 + 2	929,694			
	N/A	60,102			
	TOTAL	989,796		989,796	
	GENDER GAP 2-1		- 39,06		- 56,68
Extremadura	Sex	Number of holdings which legal and economic responsibility is assumed by a natural person	%	MANAGER	%
	1 Male	44,651	72.28%	52,464	80.43 %
	2 Female	17,124	27.72%	12,766	19.57 %
	TOTAL 1 + 2	61,775			
	Not applicable	3,455			
	TOTAL:	65,230		65,230	
	GENDER GAP 2-1		- 44.56		-60,86

Our work, based from data of INE Base. Agricultural Census 2009.

Table 6: Type of management of holdings, dis-aggregated by sex

Holding Type	Gender Gap % Women - % Men				
	MALE	%	FEMALE	%	
Holder	590,813	59.69%	190,692	19.27%	- 40.42%
Family Person	99,683	10.07%	15,666	1.58%	- 8.49%
Another Person	84,925	8.58%	8,017	0.81%	- 7.77%
Total	775.421	78,34%	214.375	21.66%	- 56.68%
Total of Holdings: 989.796					

Legislation

Historic gender inequality is a large focus of the region's Feminist Movement, particularly FADEMUR (Federation of Associations of Rural Women).³⁸ Their many years' effort reaped rewards in 2011, with the passing of Law 35/2011 on Shared Ownership of Agricultural Holdings³⁹ and Directive AAA/1408/2012.^{xiii} This Directive permits married couples, or people with an equivalent relationship, to not only manage their holding together, but to share rights, shares and subsidies.

The Shared Ownership Law aims to improve women's participation in agricultural organizations, make women's farm work more visible, promote gender equality, improve the lives of rural women and promote rural settlement.⁴⁰ However, the law has not produced the expected results. The law includes a goal for 100,000 women to join agricultural collectives, but only 550 holdings with shared ownership have registered (and just 25 are in Extremadura⁴¹). One explanation for the law's slow implementation is that some women do not have enough information about the new regulation. In addition, the law's procedures are slow, complicated and excessively bureaucratic. Furthermore, regional governments have not sufficiently promoted the law.⁴²

Women in management

Additional research confirms the low presence of women in cooperatives, decision-making bodies and hiring positions. In Spain, 78 percent of agri-food cooperatives include only men, including 87.4 percent of those in Extremadura.⁴³ The 2011 study "Women participation in Agriculture Cooperatives"⁴⁴ reveals that only 6.33 percent of cooperatives have a woman on the Board of Directors and only 1.75 percent have female presidents. Similarly, only 15.84 percent of director-level positions in Agriculture Cooperatives are held by women.

Agri-food cooperatives of Extremadura represent 8.67 percent of the total in Spain. According 2017 statistics from the Socio-Economic Observatory of Spanish Agri-Food Cooperatives,⁴⁵ only 32 percent of Extremadura's cooperatives had women on their Board of Directors and only 0.82 percent were led by women.⁴⁶ Some studies confirm that there is a positive relationship between increased women's participation in decision-making bodies⁴⁷ and the profitability and competitiveness of the cooperatives and the rural areas where they're located.⁴⁸

^{xiii} This regulates the Register of Shared Ownership of Agricultural Exploitations

2.4 Feminisation of roles

Women farmers tend to spend more time in unpaid family work than women employed in other sectors,⁴⁹ because their agricultural and family roles are located in the same space (this is not the case for men⁵⁰).

The 2011 Spanish Gender Study identifies feminization of specific activities in rural areas, mainly domestic work and family care. The imbalance of time spent on domestic care between men and women has important consequences, including fewer men present in the domestic sphere and more difficulties for women entering the labour market.⁵¹ Labour markets in rural areas are often non-local, requiring greater mobility, which presents challenges for women seeking to balance family and work life.⁵²

Fernández Aguirre⁵³ describes how women play an important social function in rural areas, maintaining family cohesion and caring for elderly and sick relatives. Frequently, due to a lack of resources, women's roles as care-givers permits them from performing other activities outside the home.⁵⁴ Aguirre also highlights women's important contribution to culture and the environment:

- Cultural function: Women are central for the transmission of culture and heritage in rural areas. They are central for the social life of communities, maintaining cultural traditions that present opportunities for tourism and economic development.⁵⁵
- Environmental function: Women are recognized as users and custodians of biological diversity by ensuring the long-term availability of resources for subsistence, cultural and spiritual use.⁵⁶ Recognition the role women play in resource management is central to the success of biodiversity policy.⁵⁷

Women are vital to conservation, and gender equality is intrinsically linked to achieving sustainable development goals. Yet gender inequalities and gaps persist. Women's unique and crucial role in natural resource use and management is often overlooked. While they are increasingly managing small-scale agricultural operations, they are underrepresented, or even restricted from, decision-making spheres at all levels. Women also commonly face obstacles in accessing resources, markets and services.

In the international sphere, despite early recognition of women's vital role in biodiversity conservation and increased resilience to climate change at the international policy level, only the Conference of the Parties (2016) to the Convention on Biodiversity has started to take concrete steps to mainstream gender in different biodiversity policies.

Gender equality and women's empowerment lead to more successful, efficient and equitable environment and conservations outcomes. Persistent gender inequality results in lost opportunities for environmental initiatives to achieve multiple benefits, amplify results and increase effectiveness.⁵⁸

3. The Dehesas: A non-androcentric perspective

3.1 Ecological system

The Dehesas (Montados in Portugal) is a unique agro-silvo-pastoral ecosystem found only in Spain (about three million hectares) and Portugal (about 700,000 hectares). It is a semi-natural woodland that has developed over centuries, characterized by a combination of traditional forestry, pastoral and farming practices – including transhumance – that produce food and other products and services. These traditional practices have contributed to the management and conservation of the region's biodiversity for thousands of years.⁵⁹

Dehesa benefits

The Dehesa landscape exemplifies optimal coexistence between people and the environment.⁶⁰ The Dehesa's contribution to conserving biodiversity and regional ecosystems is widely recognized by the scientific community. The landscape is also valued at the policy level, with protection under the European Union's Habitat Directive.⁶¹ The Dehesa is an example of a "High Nature Value" (HNV) farming system in Europe and in the Mediterranean. The 2010 Senate's Study on the Dehesas further recognizes the region as unique in Europe for its diversity and environmental, cultural and aesthetic value.

The benefits of the Dehesa as an HNV transcend the environmental sphere by providing important social and economic advantages.⁶² The region provides a model of best practices in natural resource management by generating income and employment and helping to fight depopulation. The Dehesa also preserves land for raising indigenous livestock, which are used to produce high-quality products, and also provides unique opportunities for recreation and ecotourism.⁶³

Threats to the Dehesa

The Dehesa has experienced deteriorating conditions in recent years. Problems include decreasing profitability of local industries and increasing environmental degradation (such lack of tree regeneration, severe soil degradation, risk of erosion and plant diseases). The Dehesa also faces social and economic challenges including the implementation of unfavourable national and EU policies.⁶⁴ As the Spanish Senate recognized in 2010, the gravity of this situation not only affects landowners and public authorities, but has broader implications for all people who could lose access to this valuable ecosystem.⁶⁵ To protect the Dehesa, it is necessary to develop public instruments to support local communities, favouring not only economic output but also environmental, social and cultural value. Such efforts can generate well-being for both the region and society as a whole.⁶⁶

3.2 Transhumance and women

The transhumant pastoral culture of the Dehesas has contributed to the creation and cohesion of Iberian Peninsula landscapes.⁶⁷ Women have traditionally held crucial but invisible roles in developing and maintaining this culture.

History and cultural importance

Spain is a unique example of a western nation whose history, landscape and culture have been deeply

influenced by pastoral and transhumant heritage. Historical events are integrated with agriculture. For instance, the 'Reconquista' following the expulsion of the Moors, included the use of livestock farming and grazing as a means of cultivating the territory. Transhumance traditionally involved Merino sheep, a native Spanish breed, which was the main source of income for the Kingdom of Castile during its centuries-long dominance of the global wool market.

A historic legacy of Merino sheep raising are 'Drovers' Roads' (Vías Pecuarias), the routes followed by sheep herds. These routes were first given legal recognition in the 13th century, and their status was confirmed as in 1995 through the creation of the National Network of Drovers' Roads. Unique in the world, this network stretches over 12,000 kilometres and comprises over 400,000 hectares of land. The Drovers Roads are biodiversity 'warehouses' and ecological corridors – a single sheep can unintentionally transport an average of 4,500 plant seeds in their wool per day, spreading the seeds throughout the ecological corridor.⁶⁸

Transhumance is an efficient livestock farming system for natural resource use and land management. The list of associated environmental benefits is long, and has been tried and tested for at least 10,000 years. Transhumant grazing relies on natural pastures, consuming biomass which could otherwise fuel wildfires. It also creates habitats for many animal species and increases botanical diversity to a surprising degree, with as many as 40 different plant species present in just one square meter of pasture.^{xiv}

The historical heritage of transhumance is alive today. As the 2012 White Book of Transhumance says, transhumance, far from being a historical relic, is currently an active and powerful heritage for all people.⁶⁹ Grazing and transhumance can constitute a key driving force for creating economic vibrancy in rural areas.

Role of women

Despite its benefits, transhumance today faces challenges, including a diminishing workforce and loss of profitability. The White Book of Transhumance⁷⁰ highlights the active and direct role of women to help meet these challenges and ensure the sustainability of this traditional agricultural practice. Recognizing women's work and ownership rights, as well as providing sufficient economic remuneration, is fundamental.

Women's participation differs depending on a farm's characteristics and family size. Hernandez García⁷¹ notes that in some cases women have a large role in economic production, especially when they do not have children or their children are older. Women can work in the field, drive a support car, prepare food, or travel to villages or cities for food or medicines. Their household role is equally important, as women also manage the family, care for children and can oversee financial and administrative aspects of the family business.

The Association Trashumancia y Naturaleza (TyN) which, supports transhumant and extensive pastoral systems, works actively to make the role of women in transhumance more visible. In October 2018, during the Transhumance Festival^{xv} in Madrid, for the first time a woman played the integral role of providing the payment needed to symbolically pass a herd of sheep through the streets of the capital. Jesús Garzón, President of TyN, said, "Women represent everything in livestock. Surely they always have been responsible for the animals. In present days, we have found different popular culture mentions that take us back to the Paleolithic, when women began to manage the animals. The future of transhumance depends on them. If women come, men will come too."⁷²

In Extremadura, we interviewed students at the School of Shepherds^{xvi} and young women who work as

^{xiv} This is the scientific data that inspired the One Square Meter art work made by TyN and Laneras.

^{xv} This Festival is described in more detail later in this paper.

^{xvi} This School is described in more detail later in this paper.

transhumant shepherdesses. One interviewee said,

Some young women are leaving the cities and starting a new life as shepherdesses. We are trained and educated, some of us speak foreign languages, but we have to combine our work with other economic activities. It is not feasible to live like this. I am a feminist and promote a new coexistence model, based on equality between men and women. We are still few, invisible and we have to fight hard to keep going. I desire a future as a shepherdess, and as a future mother, I want to educate my children about the landscape. Women can revitalize rural areas, recuperate traditional management of livestock and strengthen local economies with our work, effort and presence. Public authorities should encourage and promote these kinds of initiatives.⁷³

Interviewees stressed the need for women's visibility and to implement public policies that support revitalizing rural economies and fighting depopulation. Training programs (like the School of Shepherds) and public aids granted by local, regional and national administrations can be practical measures to help women in the Dehesa.

3.3 A social, family, and economic system

The Dehesa represents 27 percent^{xvii} of the total forest surface of Spain.⁷⁴ Spain has around 25,000 Dehesa farms, of which 75 percent are private⁷⁵ and 25 percent are public or managed by municipalities, communal properties, or neighbour groups.

The concept of the Dehesa as a social and family system is not explored at length in existing literature, and even fewer analyses exist that focus on the role of women. One important source of information is Acosta Naranjo's 2002 book, "The framework of diversity: Social anthropology of Dehesa."⁷⁶ This book presents an anthropological study of the cultural practices and traditions in the Dehesa of Extremadura in the 1950s.

Although the Dehesa is generally perceived as a landscape, it is also a social-ecological system that contains a specific social and economic structure of landowners, workers and families, often from many generations.⁷⁷ Pulido and Picardo⁷⁸ talk about a "Culture of the Dehesa" defined by unique traditions, work, family, culture, gastronomy and popular costumes. People are increasingly interested in the Dehesa for its high natural value, the beauty of its landscapes and the richness of species that live in the region.

Historically, families in the Dehesa lived and worked in the same location, and children were educated in farming estates. The bigger farms had their own services, schools and chapels, and professions were passed on from parents to children. The Dehesa's social structure has radically transformed in recent years, becoming more a workplace than a family place. There is little to no generational replacement; women and men that we interviewed agreed that their children are no longer interested in working in the Dehesa. Wages are low, work conditions are tough and "what they hear from their mothers and fathers does not correspond with their professional and life expectations."⁷⁹

Larger farms, between 1,000 and 5,000 hectares, may still be home to several families, but usually just one family resides on a medium sized farm. Many landowners, both men and women, live outside the Dehesa and delegate on-the-ground management to a local administrator. More and more, the

administrator lives in a nearby village with access to schools and services, and commutes to the farm every day.⁸⁰

Sixty percent of existing holdings are operated by one employee,⁸¹ frequently a man who coordinates farm

^{xvii} Extremadura (35%), Andalucía (35%), Castilla-la Mancha (21%), Castilla y León (13%) and Madrid (3%).

activities. At larger farms, several employees may be present, mainly men, for handling livestock and surveilling hunting grounds. These workers are not specialized, as they have been historically. There are few job opportunities for women in the productive sectors of the Dehesa. According to one person we interviewed, the Dehesa appears to be “kicking out women.”⁸²

3.4 Historical non-visibility of women in the Dehesa

We can presume that the Dehesa, like other Spanish rural regions, historically operated under a patriarchal structure; however, there is little data to prove this statement. In fact, one of the gaps identified in the National Plan for the Promotion of Women in Rural Areas (2015-2018)⁸³ is the lack of information on gender differentiated roles in these territories.

Historic details

Acosta's 2002 book^{xviii} provides insights into women's and men's roles in rural areas in Extremadura in the 1950s. He describes how the Dehesa was characterized by large agricultural holdings where entire families worked for a landlord under poor conditions. When landlords needed additional help, they often recruited the wives of their male employees. Women dedicated most of their time to reproductive work, including household chores and taking care of children, elderly and ill people. In some cases, women were also responsible for breeding small animals.

Some women also had paid jobs in the estates as household servants, reaping hay, or collecting charcoal, acorns, olives and legumes. They were sometimes preferred for this work because they worked faster and were paid less than men. In poor households, women were responsible for collecting wild plants for self-consumption and for sale to other households. Women also sold the game meat hunted by men, and often helped their husbands with other work when needed, without receiving additional income. For example, in households where the husband was a shepherd, women were responsible for cheese production.

Study interviews and research

Our main source of information for this section was testimonies from women, 80-90 years old, who are former agricultural workers. We also interviewed academics and researchers who study the Dehesa. One interviewee said,

“Women in the Dehesa tell a story of inequality. All the usual problems of women related to work and social inequality in urban areas are even more pronounced in the landscape, because it is one of the most conservative and traditional areas of rural Spain.”⁸⁴

Historic conditions

Our research determined that public and private spheres and gender roles were well-defined when these women were working in the agricultural sector. Women were confined to their house, care duties and/or working for the “amos”^{xix} (landowners, masters) by cleaning, knitting and taking care of children, domestic animals and vegetable gardens. Women were also responsible for preserving traditional customs and practices.^{xx} Meanwhile, men worked on the farms, performing agricultural and livestock

^{xviii} “The framework of diversity: Social anthropology of Dehesa”

^{xix} Women use this term “Amos”, which means kind of property. It is, in a figurative sense, as if women were the property of the landowners. In the XIX and a good part of XX century, it was very common to use this term. It is the traditional distinction master – servant.

^{xx} Thanks to folklore popular songs, today's people can learn about women's long journeys to wash clothes in cold water

tasks.⁸⁵

Gender stereotypes were also very much rooted in the “culture of the Dehesa.” Interviewed women recount a life of work and effort, entirely dedicated to their families, with most work unpaid. Women were barely educated and most were illiterate. Some women learned to write and read at an older age thanks to special education programs from Junta de Extremadura (Regional Government of Extremadura). Most women began contributing to household activities at a very young age on the farms where they grew up. Even leisure activities were reserved for men. “Men could go drink a glass of wine and being with their friends. It was not well seen for women to go out of the house or to the bars.”⁸⁶

The “Amos” (landowners) lent houses to the working families. Interviewed women explained how masters’ and servants’ children could play together, sharing spaces. Working women also spent time with the master’s families as they worked. The interviewed women stated that generally, “the amos behaved well, because they provided us with work, a house, clothes and food.” They expressed gratitude, not criticism or pessimism, towards the Amos. From their words, we can presume some “familiar or paternalist” relationships established between masters and servants, but “the roles and hierarchy were always clear as well the tasks and duties.”⁸⁷

Men had an employment contract and were entitled to social security benefits. However, because women were not considered formal workers, they were not paid, did not have formal schedules and had to be available in case the “amos” needed them. In exchange for their daily work, women could get non-monetized compensation, such as clothes, furniture, food, etc. A typical and traditional practice within the farming estates, until recently, has been to pay in-kind to women and men, mainly through *senaras* and *excusas*.^{xxi}

Present conditions

Women are leaving the Dehesas, and Spanish women are less present in farming estates as foreign women take their place.^{xxii} Those who still live in the estates lack job opportunities: either they accompany their husbands to the farms, or they perform domestic and care work. Their presence is scarce in main production activities including livestock, agriculture, forest and hunting, which continue to be predominantly masculine.

We were unable to locate information about the relationships between men and women in the Dehesa today. Quantitative and qualitative research is needed to shed light on contemporary conditions and relationships.

While the trend in recent years has been declining opportunities for women, this may be changing. As the National Plan of Rural Women recognizes, female entrepreneurs demonstrate innovation and creativity in rural areas. In the Dehesas, women entrepreneurs are becoming more and more active. These women market original products of the Dehesa and conduct new business projects in different sectors, such as rural tourism, agri-food, organic food, organic cosmetic products, jewellery, artisan, fabrics or textile products and wool.

during the summer and winter, picking up acorns or knitting wool clothing items. (Personal interview with Fernando Pulido. December 2018.)

^{xxi} The “*Senaras*” were portions of land that the owners lent to the employees to cultivate by themselves as a compliment to their salary. The “*Excusas*” were livestock that owners gave to their employees to breed by themselves.

^{xxii} This research has not found statistic data on women’s nationalities, ages and/or educational level working in the farming estates of the Dehesas.

3.5 Female land-owners and family farm workers

Today, women are not buying land in the Dehesas, but instead retain the family holdings from generation to generation. Women can contribute to farm work or have professions that are unrelated to their lands and family business. In fact, women have proven to be a flexible and adaptive labour force, sometimes working simultaneously in the family farm and in another sector. Their continued presence in farm work facilitates the continuity of the family-based agriculture.⁸⁸

Some who own medium or large herds are educated and live all their lives in the region. They have inherited the farms from their families or share the farming estate with their husbands. Other women who own herds must rent or share communal grazing lands. As shown in Chapter 2, there are not many women landowners who directly manage their businesses in Extremadura.

Study research

For this study, we interviewed four women who work with livestock and sheep in Extremadura. We also held a workshop with 12 women in Andalucía. Two of the women practice transhumance, and all are mothers and have family responsibilities. All women involved work in extensive livestock and/or in the family business. Only one has changed her initial profession and now works as a shepherd and entrepreneur. When she made this change, she was a young, pregnant French language profession. She decided to train herself as a shepherd, move to Extremadura with her partner and manage a small herd of 56 sheep. She is an example of a neo-rural woman who decided to make a radical change in her life, working in the agriculture and livestock sector.

“I want to live here with my partner, to educate my children about the landscape, in contact with nature and animals. It is a new way of life. However, we are not sure if we are going to be able to do it. We do not have public aid, our family and friends have helped us to start, we have debts and we have to work in other jobs to make our project possible.”⁸⁹

The women share a love for nature. They expressed a strong connection with the landscape and their herds, respect nature and the environment, and value traditions and culture. They are working to innovate and adapt traditional knowledge to meet current challenges (retro-innovation) by mixing past and present, tradition and innovation. They agree that women manage livestock and herds in a different way than men do, and with added-value: “it’s kind of maternal, more intuitive and quieter, because we connect with nature and animals in a different way.”⁹⁰

The women were generally aware of gender issues and denounce their invisibility in the rural world. They declare themselves to be feminists and aim to break with the traditional macho roles in the Dehesa. Their objective is to fight societal resistance, lack of economic opportunities and invisibility. They believe in what they do, “because the profession requires sacrifice and a lot of effort,”⁹¹ but moments of doubt exist because “it is a difficult business to be a farmer or shepherd woman in Spain, and we are not always understood by the rest of society.”

Workshop

Women in the workshop are committed to the land and their communities. Without having a declared feminist position, they agree with interviewed women on important points including the challenges and obstacles they face as women, mothers and caregivers; the difficulty of their work; loneliness; a lack of shared domestic work, etc. They feel a sentimental attachment to the family business, but also recognize the obstacles they face and express fears about the future of the landscape and family business.

“Our children do not want, in general, to continue our activity. They go outside the community to study

and do not want to come back to work with the livestock. It is not challenging for them. We do not know what it is going to happen for the next generations.”⁹²

Women land owners, shepherds and farm managers are few in number, but important. They represent a new future and perspective for traditional management of the land. “We, extensive famers and shepherd women, live in a men’s world, but we have a lot to say and contribute. We have our own voice.”⁹³

3.6 Challenges for women in the agriculture sector

The following section is based on our interviews. It includes interview quotes and details about the challenges women face in the agriculture sector.

Economic, social and legal difficulties

Low profitability of holdings. The women interviewed agreed that passion for their work and its “sentimental value” is not enough, and they must perform other jobs in order to sustain their businesses.

- “The size of the farms in Extremadura is too large and does not correspond to the profitability that these could have.”⁹⁴
- “The price for a lamb is the same or even less than 30 years ago.”⁹⁵
- “Raising livestock requires expensive resources to produce high-quality and healthy products. The product is derived from sheep that are raised in open pastures in the Dehesa, drink clean water and have natural access to medicinal plants. However, these quality values are not differentiated by the market and neither rewarded. Meat from extensive livestock has the same price as from intensive livestock, where costs and quality are much lower and produce negative environmental impacts.”⁹⁶

Lack of human resources. Landowners have difficulty finding qualified employees for their farming estates: “There are no professional shepherds or people willing to work with herds.”⁹⁷ However, the recent emergence of shepherd schools is helping to revitalize the sector and guarantee generational change. Young women are involved in such initiatives, including the School of Shepherds of Catalonia.⁹⁸ Established in 2009, this school is chiefly attended and run by women, including its president. The School of Shepherds in Casar da Cáceres is another example of this type of school, where 40 percent of students were women in the last course.

Lack of training in economic and marketing studies. Women are not typically trained in economics, businesses planning, or commercial strategies. Lack of access to education presents a serious obstacle to the viability and sustainability of women’s businesses.

- “The non-entrepreneur mentality in Extremadura is also a general problem.”⁹⁹
- “There are no annual accounts, nor any analysis of financial risks. Salaries from livestock women are not included in the annual accounts. Women have to be trained. It’s impossible to manage these kinds of exploitations without any business management.”¹⁰⁰

Inadequate European Legislation, which does not correspond to realities in the Spanish Dehesa. EU legislation tends to simplify production patterns and does not recognize the Dehesa as a multifunctional system involving important interactions between agriculture, forestry and grazing practices. The EU’s Common Agriculture Policy (CAP) privileges “historical rights” of some landowners to the detriment of others, including young people and women that want to work in the livestock sector.¹⁰¹ In fact, CAP ignores gender equality, failing to include a gender perspective in its policies. Women like Teresa López, executive

Director of FADEMUR, have denounced this fact for years.¹⁰² The European initiative "Por Otra PAC" (For Another CAP), led in Spain by women like Celsa Peiteado (WWF Spain) and Ines Jordana (Seo Birdlife), aims to influence the new CAP post-2021 to be "fair and equitable" for farmers, "healthy" for consumers, "environmentally sustainable," and "responsible" globally. A new CAP that meets these conditions would support sustainable agrarian practices that promote biodiversity and protect against the effects of climate change.¹⁰³

Lack of legislation on Dehesas. Despite the 2010 Senate report on the Protection of the Ecosystem of the Dehesa, which describes crucial problems facing the landscape, there is no national legislation centred on the Dehesa. Only one reference to the "Adehesados lands" can be found in article 2.2 of Spanish Forestry Law.¹⁰⁴ In terms of regional legislation, our study found only two regional laws, one in Extremadura (1986) and one in Andalusia (2010). Interviewed people agree on the urgent need to strengthen public policies in order to preserve the region's ecologic, social and economic systems.

Bureaucratic administrative procedures and scarce public aid. Excessive livestock health controls, complex administrative procedures and scarce and slow subsidies are also problems that interviewed women denounce as obstacles to reaching their economic goals.

Personal and family difficulties

Isolation and solitude. Women spend time alone with their sheep herds, working in farming estates, or far away from their families during transhumance periods. Inadequate transport infrastructure in Extremadura contributes to this isolation. Interviewed women agree that loneliness and isolation counters their ability to sustain good land management practices. Networking with other women in similar circumstances is vital.

Lack of self-esteem and feelings of guilt. It is not easy to be an extensive farmer. Some women carry feelings of guilt and helplessness. A lack of recognition and training, feelings of loneliness, and the indifference of society can generate insecurities regarding women's future and their sense of purpose.¹⁰⁵

- "It's even worse if you are a woman. It is a world of men where women have to make their way very slowly, breaking the rules and looking for their own space."¹⁰⁶

Imbalance between work and family life. Farmers and shepherd women have domestic responsibilities, including caring for children, the elderly and other dependent family members. In some occasions, if women do not find alternative solutions, "they can be forced to choose between work and family."¹⁰⁷ Co-responsibility and equal distribution of domestic tasks are necessary for women to succeed in the agriculture industry.

- "Livestock requires a lot of dedication, there are no time schedules (births, care of the herds, etc), and this kind of work is hardly compatible with a family life, without support from our partners."¹⁰⁸

Structural problems in the sector

Individualism. A common management system for raising livestock does not exist in the culture of the Dehesa. Women agree that the system is individualistic and lacks cooperation and a common strategic vision.

- "There is no union^{xxiii} between farmers and pastoralists."¹⁰⁹
- In this sense, women make a difference because "we know how to team up; we manage in a different way. We are not individualistic, we support each other and our employees."¹¹⁰

^{xxiii} Farmers produce crops generally, while pastoralists specifically raise sheep and/or cattle.

There is no strong lobby to defend the Dehesa or its extensive grazing systems. Such a lobby could support the push for more favourable CAP measures and interface with the Spanish government on behalf of farmers. The local community also lacks a united effort to jointly defend the Dehesa. This weak governance structure contributes to instability and vulnerability. However, some women are making efforts to promote important legislative, economic and social changes. Ganaderas en Red (Livestock Women Network), a pastoralist and livestock women’s movement, has helped spread a feminist and sustainable perspective over the past three years. For the first time, women’s voices are being heard.

Table 7: Ganaderas en Red (GER)

Description	Professional association of women in livestock, pastoralism and shepherding.
Origin	Created by five women in 2016, with the goal of starting a small movement to defend women in extensive livestock and mobile pastoralism. ^{xxiv}
Participants	Over 200 women across Spain are now members of the association.
Structure	Informal, non-hierarchical and democratic.
Main Principles	Empower and unite pastoralist women. Increase women’s independence and respect for diversity.
Main Objectives	<ul style="list-style-type: none"> - Defend traditional extensive livestock and mobile pastoralism systems from a gender perspective - Increase visibility of rural women and listen to their voices - Increase presence of women in public spaces and decision-making bodies - Break the structural patriarchy of the livestock world - Exchange and share knowledge and experiences - Create an online platform of extensive farmers and shepherd women - Provide mutual support, solidarity and sorority between pastoralist women - Lobby and advocate to improve pastoralist women’s conditions and gender equality in rural areas - Fight against gender discrimination of rural women, including gender-based violence and women’s rights violations
Outputs	<ul style="list-style-type: none"> - Publication of information and awareness campaigns - Their version of the song “Despacito” that reached over 350,000 views¹¹¹
Social Impact	<ul style="list-style-type: none"> - Participation in meetings, seminars and different local, national and regional forums - Active presence in the media, including social media - Received Prize of Excellency of Rural Women and Innovation^{xxv} in 2017, granted by the Ministry of Agriculture, Fisheries and Food.

^{xxiv} Mobile pastoralism involves farmers moving around with their herds to different areas, rather than grazing in the same area at all times.

^{xxv} This Prize is granted every year by the government. Ganaderas in Red won in 2017, in the category “Premio Extraordinario de innovación a las mujeres rurales” – Extraordinary Innovation of Rural Women.

4. Wool: A gender perspective

4.1 History of wool in Spain

This section analyses the role of women in the wool supply chain. This analysis highlights how the “culture of Dehesa” and the “culture of wool” are intimately linked.

Wool has been a fundamental product throughout the history of Spain, especially since the end of the Middle Ages when Spain became one of the first wool producers in the world. The Mesta Council,^{xxvi} a powerful industry association composed of all the sheep raisers of the Crown of Castile, evolved during the 13th and 14th centuries into a central institution that controlled and promoted sheep raising. The Council's leaders had both administrative and legal powers and controlled the largest and most profitable industry in medieval Spain. It reached the height of its power in the 16th century before declining and ultimately dissolved in 1836.¹¹²

At its height, Merino wool was exported across Europe. Its economic relevance was so important that protectionist laws were used for its commercialization. These laws gave privileges to pastoralists, favouring transhumance for a better utilization of pastures. The sale of a single Spanish sheep outside Spain was considered a severe and serious crime that could carry the death penalty – only the King was exempt from this law.

Wool represented the collective culture of small villages. The industry was a lifestyle and provided a group activity for women in the Extremadura Dehesas, helping to create female community.

“Women never wove alone. In the evenings, they joined together to weave in the streets. Mothers, daughters, sisters, grandmothers and granddaughters, women always, wove together as a common action and a sign of identity. It was a tradition that passed from generation to generation; now it is almost lost.”¹¹³

The wool industry spread beyond Spain. Spanish sheep were brought to America in 1492 by Christopher Columbus. Hernán Cortés further spread sheep to Mexico and the Western United States. The sheep that Columbus introduced to the Americas are considered the ancestors of today's Churras breed.¹¹⁴ Australia also began producing wool in 1789 with 29 Merino sheep from Spain. By 1810, the country boasted over 30,000 sheep and was one of the world's main Merino wool trading centres. By 1840 Australia was one of the most important Merino sheep growers, along with South Africa and New Zealand,¹¹⁵ and today, with over 180 million sheep,¹¹⁶ Australia is the primary world producer of wool. Adaptation of sheep to the landscape, along with selection of sheep and wool management, have resulted in different genetic varieties and quality improvements.

In the 1960s, the livestock sector began to lose interest in wool production. Instead, sheep raising began to focus on meat production, and the quality of wool declined. Competition with other textile products like synthetic fibres and cotton worsened the situation. One of the main products of the Dehesa is now considered a by-product of other farming activities.

“We need to improve its quality to be present in the industry, but also work for the promotion of our local wool as an added value and a sign of our local identity. Diversification of the production, combination of tradition and innovation, new audiences and markets, and the support of public authorities are fundamental.”¹¹⁷

^{xxvi} In full: *Honrado Consejo de la Mesta, Honorable Council of the Mesta*

4.2 The wool industry today

According to the UN Food and Agriculture Organization (FAO), sheep have the highest number of recorded breeds among mammals. The Spanish Agricultural Census¹¹⁸ reports over eight million sheep in the Dehesa region.¹¹⁹ The Official Breeds Catalogue¹²⁰ shows that in 2019, the Dehesa was home to over 40 indigenous sheep breeds, including 34 endangered breeds such as Black Merino, Montes Universales Merino and Merino from Grazalema.¹²¹ Indigenous breeds can be found in 70 percent of the Spanish Dehesa landscape, mainly in Andalusia and Extremadura. These are suitable for wool production, as well as for milk and meat—the two most valued products today.¹²² Merino sheep are reared in the natural environment of the Dehesa, grazing in total freedom. Ideal animal welfare conditions benefit the health of the herd and the ecosystem, although this added-benefit is not currently reflected in market prices.

In 2017, Extremadura had the most wool production of any region in Spain, followed by Castilla - León and Castilla - la Mancha.¹²³ In 2018, Extremadura had over 3.7 million sheep (22.1 percent of the national total), and 16,642 sheep livestock farms out of a total of 114,826 sheep farms in Spain.

Wool downturn

According to the European Man-Made Fibres Association (CIRFS),¹²⁴ the average annual growth of global wool production between 2006 and 2016 was only 1 percent. In Spain, the most recent MAPA census (2018)¹²⁵ shows a decrease of 6.5 million sheep (28.9 percent) between December 2006 and November 2017.

Table 8: Sheared sheep and tons of wool production

Sheared Sheep (2017)		
Extremadura	2,824,720	22.02%
Castilla - León	2,405,343	18.76%
Castilla - La Mancha	2,097,258	16.35%
Spain	12,825,033	100%
Tons of Wool Production (2017)		
Extremadura	5,377	23.59%
Castilla - León	4,567	20.04%
Castilla - La Mancha	3,516	15.43%
Spain	22,789	100%

Our work, from MAPA database on Statistics on Wool for Human Consumption¹²⁶

Official statistics provide data on sheared sheep and tons of wool production in Spain. However, to analyse the supply chain and accurately trace Spanish wool, it would be helpful to generate data on the tons of wool that are washed or processed in Spain, as well as information about additional supply chain stakeholders.

In Spain, the wool textile industry is gradually disappearing and today represents less than three percent of the total fibres on the market.¹²⁷ The majority of textile factories in Spain have closed in the past 25 years, with one industrial wool washing plant remaining in Béjar (Salamanca). Spain lacks small washing plants to process small quantities of wool,¹²⁸ failing to meet the needs of small entrepreneurs. A few textile operations still exist in some areas of Catalonia, (Sabadell and Terrassa), the interior of the Levante and Val de San Lorenzo (León) and Ezcaray (La Rioja).

Wool resurgence

Despite these setbacks, the declining trend in Spain's wool industry may be changing. Spanish national wool production increased by 0.74 percent in 2017 compared to 2016.¹²⁹ Over the last ten years, China developed an interest in Spanish wool, leading to a progressive price increase. In 2000, farmers were losing money because shearing costs were higher than the market price of wool, around 40 cents/kilo. However, in 2018, some Merino wool was worth over 2 €/kilo. Some Spanish organizations, such as The National Merino Wool Breeders Association, have begun implementing quality control measures, like the logo "100% Merino Indigenous Breed." This helps market Merino wool as a high-quality product. As the International Wool Textile Organization (IWTO) states, wool is an all-natural, renewable, environmentally friendly fibre grown on sheep.¹³⁰

"Comercial Ovinos: cooperative

Increases in the market value of Merino wool are partly due to private initiatives in Extremadura. One such initiative is "Comercial Ovinos," a cooperative of cooperatives created in 2002 in Villanueva de la Serena (Badajoz). The organization was established to respond to a market that marginalized livestock owners and pastoralists. These farmers did not have the capacity individually to negotiate wool prices, which were traditionally fixed by middlemen before the sale of the raw material. For many small or medium livestock operations, the shearing and storage of wool was an economic burden – "shearing their sheep, cost them money."¹³¹ Furthermore, no single livestock cooperative had the capacity to commercialize products. A cooperative of cooperatives was needed.

Comercial Ovinos has over 4,000 members, exclusively livestock owners from Extremadura, Andalucía and Portugal. In 2002, they commercialized 1,100,000 kilos of non-washed wool. Later, they started washing, combing and carding the wool in the "maquilas" (factories) of Barcelona, Portugal, Italy and the Czech Republic. The cooperative also acquired a third of the shares of the washing plant Manufacturas SA (Béjar, Salamanca) to avoid its closure. In 2018, the cooperative reached 5,000,000 kilos and a business volume of € 13,000,000, based in wool commercialization of two million sheep, mostly black and white Merino.

Comercial Ovinos works from the first to the last link in the supply chain, negotiating directly with livestock owners and the textile industry. Women represent more than 50 percent of the employees, working chiefly in grading.¹³² This cooperative has also helped women's small wool projects in Extremadura, such as the "Laneras Project" and "La Merina Wool," with the aim of promoting and revitalizing the sector and recovering traditional avenues for wool commercialization.

4.3 Values, benefits and obstacles

The tables below describe the values, benefits and obstacles of the wool industry. Table 9 (page 31) is based on our analysis of the Sustainability/IWTO document. Tables 10 (page 31) and 11 (page 32) are based on our study activities: interviews with key informants and the Laneras Workshop.

Table 9: Wool values

Sheep are part of the natural carbon cycle	50% of the weight of wool is pure organic carbon, and at the end of its lifespan biodegrades readily
Wool products have a long lifespan	Longer than other textile fibre products
Wool products tend to be washed less frequently at lower temperatures	Lower impact on the environment
Wool is one of the most recycled fibres	With a market share of 1.3% of all textile fibres, it claims 5% of the recycled fibres market

Table 10: Wool benefits

Social	<ul style="list-style-type: none"> - Tool of social cohesion and local identity - Communication and social tool: In rural Extremadura, grandmothers, mothers and daughters meet day after day to weave and speak together. "It was our way of understanding life and our mark of identity, as women, collective and society" - Tool against depopulation and settlement of the landscape
Patrimonial and cultural	<ul style="list-style-type: none"> - "Guardian" of culture, traditions and biodiversity - Wool manufacturing techniques as part of the cultural heritage of Extremadura - Link between art, environment and women (One Square Meter Project)
Economic	<ul style="list-style-type: none"> - Generates wealth and prosperity - Tool of revitalization for rural economies - Engine for economic growth - Tool of "retro-innovation," where practices from the past can respond to current climate, social and economic challenges
Wellness and health	<ul style="list-style-type: none"> - Improves of quality of live and lifespan - Health properties: thermoregulation and insulates heat and cold - Water repellent, smooth, long-lasting, natural and lightweight - Breathable and suitable for children and people allergic to chemical substances - "Lanaterapia" or Wool therapy: educational Programs for elderly and people with disabilities.¹³³ "The lanaterapia has proved to have neurological positive effects in people, is relaxing, stimulating and challenging. Working with wool keeps people active and minds awake"¹³⁴
Intergenerational and intercultural	<ul style="list-style-type: none"> - Link between people of different ages, origins and cultures - All "Laneras" regardless of age, origin, or provenance speak a common language and understand each other
Education and training	<ul style="list-style-type: none"> - Wool as science and knowledge - Specialized training programs, (schools for textiles, design and weaving) - Special educational programs to educate children and young people about wool (felt and art workshops, spinning and weaving courses, etc.)
Feminist	<ul style="list-style-type: none"> - Instrument to unite between women all over the world - Tool for gender equality: weavers' movements, rural women rights movements, etc. - Caring tool that links land management, nature, animals and people

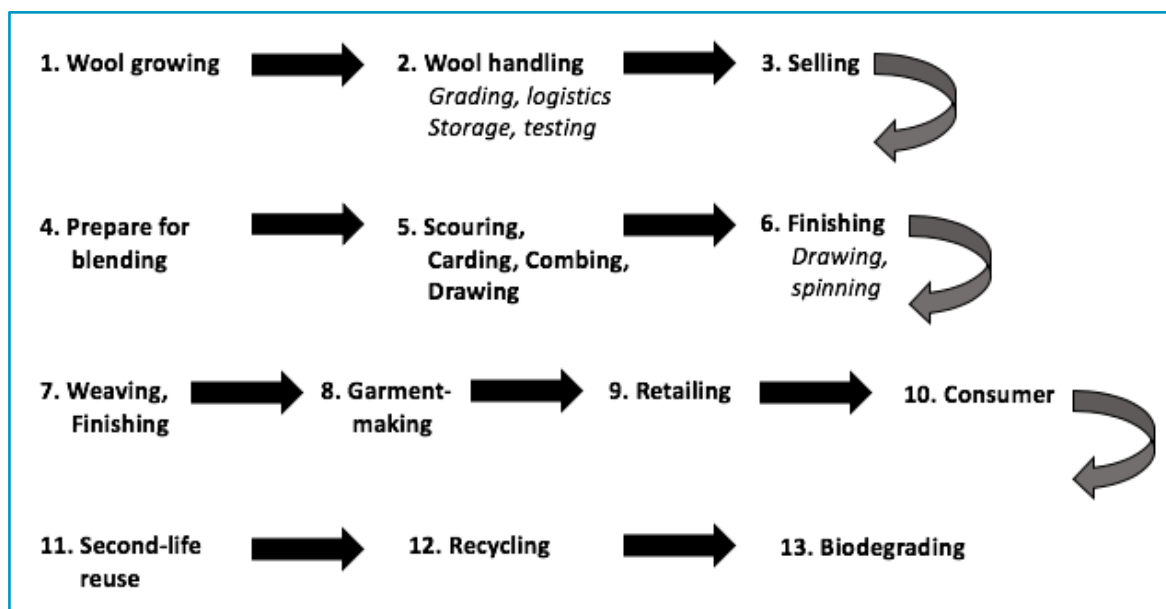
Table 11: Wool obstacles

Social and traditional myths and prejudices about wool	<ul style="list-style-type: none"> - It is uncomfortable, itchy and produces balls - It is expensive, old-fashioned and in disuse - It cannot be washed, shrinks and is heavy - It is for rural people, craft markets, the elderly, or infants
It is a forgotten, non-valued and unknown product	<ul style="list-style-type: none"> - Livestock holders from Dehesa have lost interest in wool, focusing all their efforts on meat - The large-scale textile sector has lost interest in wool and so have consumers - The production of artificial fibres has led to the decline of wool - Traditional wool clothing items such as slitting coats, scarves and wool jackets are out of date - Consumers opt for new clothing made of modern, machine-washable and lightweight fabric - New tailoring and designing techniques are too expensive for traditional small producers
Big production: textile industry and markets	<ul style="list-style-type: none"> - The textile sector is mainly interested in processing industrial wool quantities - Economic criteria of profitability and profit maximization prevails over social, ethical, or environmental values - The textile world is dominated by big brands
Small production: craft and manufacturing industry and market	<ul style="list-style-type: none"> - Small textile production, crafts and manufacturing markets are mainly occupied by women - Small production is not profitable : buying and transforming wool in small quantities becomes expensive and difficult for small producer - An artisan can use an average of 500 kilos of wool per year at most, whereas in a sheep cooperative they sell 25 tons of wool per day - For the washing part of production, a minimum wool weight is required (over 1,500 kilos), which is generally too much for small entrepreneurs - Industrial wool processing factories are not interested in small businesses. "Craft does not consume enough kilos."¹³⁵
Lack of adequate infrastructure	<ul style="list-style-type: none"> - Extremadura lacks small processing wool centres that are closer to small producers and /or landscapes of the Dehesa - Women small producers from Extremadura have to go to Portugal to wash their wool or pay expensive fees to wash small quantities in Béjar - Logistics, storage and transportation are expensive for small producers
Commercialization: low profitability	<ul style="list-style-type: none"> - 75% of Spanish raw wool material is exported to Asian countries, mainly China, to be transformed - Spain must then import the transformed wool which significantly increases economic and environmental costs
Quality: poor quality	<ul style="list-style-type: none"> - The quality of wool can vary significantly depending on the area and indigenous breeds - The product is not valued at its origin, in farms - Sheep are not managed for improving wool quality - Lack of investments from livestock sector in genetic and food research in the last 50 years to improve the quality of the raw material

Profitability: low price	<ul style="list-style-type: none"> - The price varies according to the areas and breeds - Some breeds, such as “Lacha,” have very low value - Spanish Merino has a lower price compared to Australia, where the price per kilo can be 4 or 5 times higher
Traceability: from farm to shop	<ul style="list-style-type: none"> - At each step of the supply chain, at the industrial level, wool can get mixed with other types from different farms and origins, impeding its traceability and labelling - Difficult to guarantee because 75% of non-washed wool is exported to the Asian market to be transformed - Lack of transparency in the composition of wool - The final consumer is not well informed
Governance: wool as a by-product and lack of public policies	<ul style="list-style-type: none"> - Wool is considered by regulation as “Animal By-Product Not for Human Consumption (APHA)”¹³⁶ - Spanish organizations such as INTEROVIC¹³⁷ (Inter-Professional Sheep and Goat Agro-alimentary Organization) promote sheep milk and lamb meat, not on wool - Lack of public policies to promote the wool market - Scarce public aid for small wool producers and inadequate infrastructure to meet needs of small wool producers - Lack of public awareness about the social and economic benefits of wool in terms of job opportunities, entrepreneurship and local economic development

4.4 Women and the wool supply chain

The wool industry supply chain



Based on IWTO document: “The World Industry Supply Chain”

Wool textile manufacturing requires a long supply chain, which becomes even more complex when recycling and biodegrading are included.¹³⁸ In a conventional wool supply chain, wool changes hands and ownership many times. The wool goes from the grower to the broker who prepares the wool for sale. Once the wool is sold, a merchant exports the wool from the grower country to a wool processing country in

Europe, India, China, Malaysia, or elsewhere. At this point, the wool is either washed and combed on behalf of the merchant, or sold directly to a processor who scours the wool and produces wool top (it's pre-spinning stage). When the wool reaches this stage, it is then sold to a spinner who creates yarn to sell to a weaver or knitter for making fabric. Fabrics are sold to manufacturing companies, including brands and retailers, to create products. Throughout its journey, wool can change ownership many times, making it difficult to track. Increasingly, consumers want to know where products come from, but brands and retailers quickly learn how complex and long the wool supply chain is. Tracing a product from farm to shop is a real challenge.¹³⁹

Women and the supply chain

The next table shows the results of a conversation between women wool workers during our workshop. Due to scarcity of other information and data, their participation has been key for this part of the study.

Table 12: Wool Supply Chain in Extremadura - A Gender Perspective

1. Wool growing	<ul style="list-style-type: none"> - Fewer women holders and managers of livestock farms - Most women do not have decision-making capacity in economic areas, such as infrastructure purchases or animal management - Decisions made by men have bigger impact on the agricultural sector - In the farming estates of the Dehesas, women support men from home, taking care of children and doing domestic work
2. Wool handling (shearing and grading)	<ul style="list-style-type: none"> - Women do not shear - it is a traditionally male activity - Women grade the wool, a traditionally female activity - Women do not have decision-making capacity - Most graders are employees, not owners
3. Selling (logistics + transportation)	<ul style="list-style-type: none"> - Wool is sold or exported to be processed, mainly by men - Women lack decision-making capacity
4. Washing	<ul style="list-style-type: none"> - Activity traditionally done by men - At the industrial level, more men as technical workers - At the manufacturing level, we find women have a presence - No visibility and no decision-making capacity of women - Most women are employees, not owners
5. Selling (carding and combing)	<ul style="list-style-type: none"> - Traditionally done by women - In current days, more men than women - Women have little visibility or decision-making capacity - The sales at this stage are led by men - Most women are employees, not owners
6. Selling (spinning)	<ul style="list-style-type: none"> - Traditionally and in present days activity done by women - Women do not have visibility or decision-making capacity - The sales at this stage are led by men - Just a few women, for example Laneras, work at this stage as free-lance workers or members of wool cooperatives, like ACTYVA - Most women are employees, not owners
7. Selling (weaving and finishing)	<ul style="list-style-type: none"> - Traditionally and in present days, activity done by women - We find more entrepreneur women at this stage - Gender gaps in decision-making capacity and visibility
8. Design and garment-making	<ul style="list-style-type: none"> - Women are more present at this stage, but not as visible as men - Women are traditionally weavers, but men are more visible in the textile sector and world of fashion - Gender gaps exist in decision-making

	<ul style="list-style-type: none"> - Big production is mainly managed by men
9-10. Selling (retailer and final consumer)	<ul style="list-style-type: none"> - Industrial commercialization is mainly conducted by men - Women are more present in local and craft markets, not at the industrial level - Scarce visibility or decision-making capacity of women

This table shows gender gaps in the supply chain of wool in Extremadura. The first links of the chain are dominated by men, including growing and shearing. In traditionally female activities like grading, women lack visibility or decision-making capacity because they are workers, not managers. “We have been working in different wool processing centres, and I have never negotiated with any women, always with men. Women are not in management positions.”¹⁴⁰

Women have a stronger presence in the second part of the supply chain, mainly at the weaving, designing and garment-making stages. Even at this stage of the supply chain, men occupy the main management positions. Men also control sales and purchases, exports and imports, big production, and the distribution chain.

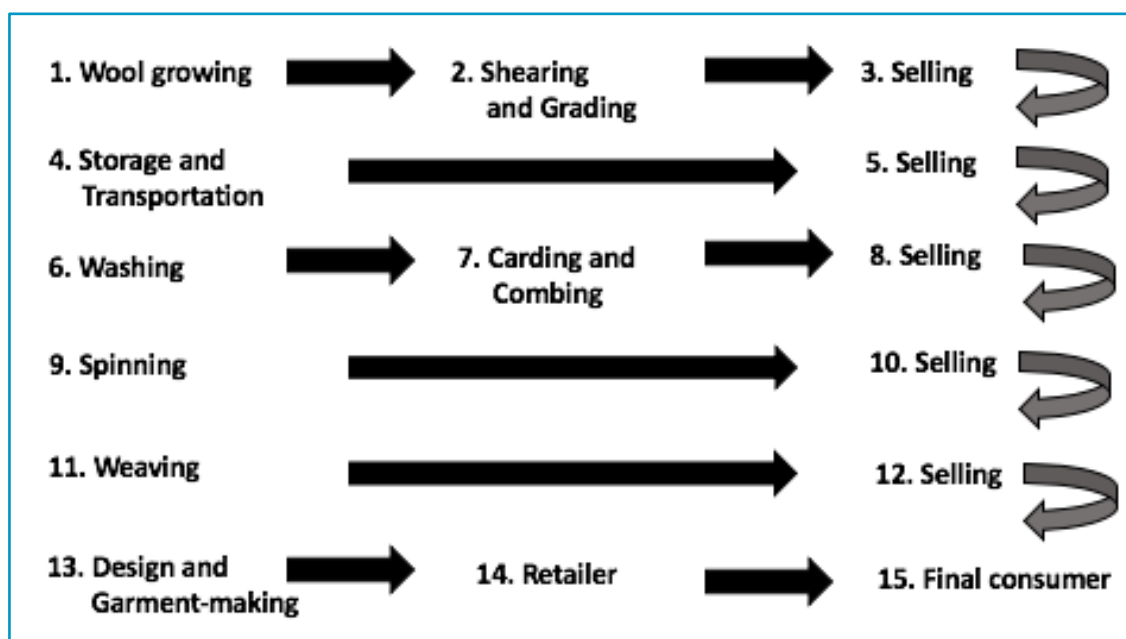
Women have more opportunities in small enterprises and craft markets. However, small productions are less profitable and are not always sustainable. To be a woman and to be a small producer leads to double discrimination. Women small producers face enormous difficulties in buying small quantities of wool from livestock owners and/or cooperatives. Costs of handling, logistics and transportation can be unaffordable. Women have to supplement their wool work with other jobs.

An added problem is the fragmentation of the supply chain. There is a lack of small, local industrial infrastructure for small producers. Women have to absorb costs of purchasing, transportation, storage and handling. Very often they have to go to Béjar (Salamanca) or Portugal to wash their wool, which requires additional time and financial investments.

Balancing family and professional life is also challenging. In general, women do not receive aid or grants from public administrations, and have to self-fund or find external funding to develop their business. Costs include purchasing of equipment, machinery and wool and paying for logistics, storage and training.

Participants in the “Laneras” Workshop designed an alternate wool supply chain, by women for women. In this value chain, women are more visible, present and influential, with equal opportunities at all stages and levels.

The wool supply chain, designed by women for women



Highlighting existing gender gaps in the wool supply chain can promote public policies that raise awareness about the link between women, wool and the sustainability of the Dehesa. This research presents the stories of three women entrepreneurs working with wool and small producers in Extremadura. They use local Merino organic wool and prioritize Spanish stakeholders in the supply chain.

4.5 The “Laneras” project / women “woolers” Hervás in Cáceres^{xxvii}

ACTYVA Cooperative

In 2015, a group of young artisans in the region gathered to explore traditional wool practices, and formed the ACTYVA Cooperative¹⁴¹ (Cooperativa Integral del Suroeste). ACTYVA has promoted important initiatives aimed at revitalizing the wool industry in Extremadura. With 400 members, is the first cooperative to supply natural and organic products to the whole Cáceres region, connecting livestock raisers, farmers, professionals, consumers and users.

Merineando and Dehesa-Lana

One of ACTYVA’s projects is the Merineando Project, which manages several Merino sheep herds. Women who manage this project focus on traditional sewing by knitting with washed, carded and spun wool. Another ACTYVA Project is Dehesa-Lana, co-founded by Almudena Sánchez and Elisa Vera Roma. These women created their own brand to work directly with natural fibres using reinvigorated artisanal techniques. Their ultimate goal is to revitalize the Merino wool industry in Extremadura.

LANERAS beginnings

The Merineando and Dehesa-Lana projects joined forces to launch the LANERAS Project. Its co-founders are Almudena Sánchez, Elisa Vera, Gonzalo Palomo (former president of ACTYVA) and Ana Trejo

^{xxvii} <http://www.cooperactyva.org/2016/03/17/dehesalana-y-laneras/>

Rodríguez (the project's visual creator and photographer). LANERAS is a convener of livestock raisers, artisans and professionals who have the common objective of revitalizing organic Merino wool in Extremadura.

LANERAS's co-founders launched an online crowd-funding campaign using goteo.org to finance the project's beginning. They used the funds to purchase necessary materials for processing their first 1,000 kilos of non-washed wool, and to start an education program that includes videos and didactic guides. Livestock owners like Miguel Cabello (a farmer of black Merino sheep) and cooperatives like Comercial Ovinos have supported LANERAS since its inception, giving the project free raw material to work with. TyN has also supported LANERAS activities,¹⁴² and commissioned LANERAS to create a felt sculpture for the One Square Meter project in 2015.¹⁴³

LANERAS objectives

The main objective of LANERAS is to revitalize Merino wool using traditional methods and to stop wool from being categorized as an agricultural by-product. LANERAS also bolsters women's social networks, stimulates rural economies and recovers ancestral knowledge and techniques.

The project also includes an educational and training component, in response to a lack of interest and training in the region.

- "In the School of Arts in Mérida, they have looms that aren't being used. They are only keeping them."¹⁴⁴
- "We have a serious problem of training in Spain. Traditional knowledge is being lost. There are no schools for people who want to learn how to work with wool. My dream is to open one small School of "Laneras" in order to teach, learn and recover this profession, working with traditional knitting techniques and using a distaff."¹⁴⁵

LANERAS aims to redefine the entire wool industry according to traditional techniques, working with biodegradable products and using semi-industrial processes. The project combines traditional methods with new textile and cutting techniques to produce environmentally friendly. They use organic wool—carded, combed and coloured with natural dyes—to create socks, wool soap sponges, wool dolls, scarves and felt sculptures of small Merino sheep. They guarantee that they are putting excellent quality Merino wool on the market.

LANERAS promotes its causes online through the ACTYVA Cooperative, artisanal markets, fairs and Facebook. They aim to make visible the role of women, not only as preservers of traditional techniques in Extremadura, but also as agents of change and revitalization in rural areas. The project highlights the link between women and wool: "Ecofeminism is the way."¹⁴⁶

LANERAS outcomes

Since 2015, the project has been publicized in different forums at local, national and international levels. In Madrigal and Valverde de la Vera (Cáceres, 2005), LANERAS participated in an initiative called "Bringing knitting needles to the streets"¹⁴⁷ to celebrate the World Day for Knitting in Public Spaces. This day is an annual call to crochet or knit in public, making visible a task normally confined to the home.

The Project has further been promoted by BBB Farming, ACTYVA's communications platform, and was featured on Spanish National Television in 2016.¹⁴⁸ They have also participated in "Laneras" events in Spain, Chile and Lebanon to exchange experiences, learn from women all over the world and teach others to build their own One Square Meter project. In October 2018, LANERAS participated in the Transhumance Festival of Madrid, and the project received the Award for Rural Innovation at the 2018 IV World Forum on

Rural Innovation.¹⁴⁹

Despite its success, financing LANERAS is a constant challenge. The three founders have family responsibilities and must supplement their work in the wool industry with additional jobs. The project does not receive public aids or grants, and so must secure its own funding. “When we did the crowd founding, we didn’t consider the personal element, the cost for people in the project, we were only focusing on the material and production elements.”¹⁵⁰

Interviewed women recognize that there is a lack of recognition and value of women and the wool sector.

“We do not exist as a sector. Women work isolated in different places of Spain. We do not know each other. It would be great to organize an Encounter of Women Laneras to know each other and boost our activities. We would like to make a living of this profession.”¹⁵¹

Today, LANERAS members hope to create an association of LANERAS to develop common projects, such as cooperative programs and training for women, elderly, children and youth. They also aim to build an international network of “Laneras” that can promote sorority between women and make their efforts more visible.

4.6 Charlotte Houman and the “EXTREMERINAS” project in Cuacos de Yuste / Cáceres

Charlotte Houman is a Danish designer with many years’ experience designing textiles. Since 1991, she has lived in Cuacos de Yuste, a small village in Extremadura, where she got married and raised a daughter. She combines her job as a fashion designer with a rural tourism business run by her and her husband. This business helps protect the Dehesa, its livestock and the sustainable production of Spanish wool. Charlotte is committed to her community, even serving as her village’s Culture Councillor for two years.

In 2014, with the support of Concha Salguero from TyN, she founded “EXTREMERINAS,”¹⁵² a project that aims to increase the value of Extremadura Merino wool through the production of high-quality wool items. The Cabello-Bravo family¹⁵³ joined the project and provided the first 1,500 kilos of white and black Merino wool. As part of this project, Charlotte designs high-quality blankets using only natural black and white organic wool. In the production process, she combines innovation with traditional techniques, mixing artisanal methods for washing and carding with computer design to produce a Jacquard Technique (a light design on a dark background and the “negative” on the other side). The final product is an original, high-quality, organic, soft and comfortable product. The Extremeras Project received a Special Mention at the 2018 World Innovation Forum in Moraleja (Cáceres).

Charlotte works across the supply chain of wool in Spain, from farm to final product, with the goal to “increase rural employment and economic rural development.” However, her road has not been easy. Developing a method to produce wool blankets took several years and proved quite expensive due to the dispersion and fragmentation of the Spanish processing chain. “The path has been very long and difficult, but it was worth it.”

Charlotte had to follow different steps to achieve her vision:

- Wool provision. She wanted to work with sustainable wool from Extremadura Dehesas that is traceable and has a story behind. The white and black Merino wool from the Miguel Cabello family was perfect. She also uses wool from the TyN transhumant herd.
- Wool washing. She had to confront the problem that there is only one wool washing plant in Spain (Béjar, Salamanca), and it is designed for large volumes – a minimum of 1,500 kilos of wool weight. This cost Charlotte a high average price per kilo washed.

- Spinning the wool. There are also very few locations for wool spinning, some of which only operate at certain times of the year. Charlotte finally found a small factory in Val de San Lorenzo (León), property of Miguel Cordero and his son, where some small factories still survive.
- Finding digital looms that used the Jacquard (double side) technique. She found these thanks to the brand Entex Textile (Madrid). Entex Textile had to make several prototypes until they achieved the desired results.
- Final touch. After being woven in Madrid, the blankets are taken back to Val de San Lorenzo to be “perched.” This gives a final touch to the texture and makes the blankets even softer.

Charlotte targets a very specific public “that values the product and that is willing to pay for it.” In the coming months, Charlotte is working to commercialize a new product, wool fleeces from organic Merino wool. She has started to network with other women entrepreneurs in Extremadura, including Rocío Ninadew.

4.7 Rocío Ninadew in Cañamero / Cáceres

Rocío Ninadew studied and trained in Seville as a designer assistant. She continued her education in London, where she lived for almost 20 years working in various fields. However, she always retained her ties with the fashion and design sectors.

A few years ago, Rocío returned to Cañamero because “I didn’t want to grow old in London” and decided to try a two-year entrepreneurial project. Her idea is to start an Agency of Sustainable Designers. She works on this idea out of a co-working space in Trujillo (Caceres), where she has access to marketing and entrepreneurship courses.

Rocío would also like to found her own brand of black Merino sheep clothing, “Ovejas Negras,” with a partner in Seville. She is thankful to other industry stakeholders that have helped her.

“The world of wool is definitely very limited. There aren’t a lot of us and we have to support each other.

Thankfully, there is not that secrecy that characterizes the industrial fashion world, like haute couture or big brands.”

Rocío’s clothing collection includes sweaters, dresses, hats and coats. She works with wool from the Cabello-Bravo family and balls of wool commercialized by DLana, a Madrid brand specialized in wool products.¹⁵⁴ She had serious difficulties finding knitters, but after a long search she found a woman who can knit from her house in Cañamero. She has also made contact with a crochet factory in Portugal called Caleris.

Traceability of the wool and responsible consumption are key for Rocío. Along with Charlotte Houman, she is interested in natural dyes and innovative techniques. Her goal is to develop a coherent, responsible and sustainable production process. She is convinced that in North European countries, there are more customers willing to invest in high-quality products like those she produces. She does not want to only sell her products at traditional fairs or local markets. “The Merino wool products from Spain must have an international presence, which they don’t have for now.”

Other initiatives

Annex 3 presents more examples of Spanish initiatives and projects promoting organic Merino wool in the supply chain, including professional associations, cooperatives, livestock farms, school of shepherds and wool fashion designers.

5. Main conclusions, challenges and opportunities for women of the Dehesa in the wool industry

This research highlights the links between women, Dehesa and wool. Women face challenges, as well as opportunities, in the Spanish wool industry.

Economic globalization, non-profitability of holdings, shortcomings in the Spanish wool supply chain, unsupportive EU and national legislations, and existing gender gaps result in negative impacts on women in Dehesa landscapes. However, we also found evidence of progress. Women who participated in this study expressed how they are part of a movement to change the gender status-quo in the Spanish wool sector. They are using a new women-centric approach based on a “feeling of collectivity” to successfully operate within in the wool supply chain. Even if changes are slow and almost imperceptible, the trend of working together is succeeding. As some women expressed, “we find obstacles but it is time to be present in a traditionally male world.”¹⁵⁵

5.1 The Dehesa: still a patriarchal structure

This section outlines five challenges facing women in the Dehesa and provides goals and tools to address each challenge.

Challenge 1: women’s inclusion and equality in the Dehesa

The Dehesa operates under a longstanding patriarchal system, grounded in the past, that does not support women. The gendered division of labour provides few job opportunities for women beyond domestic and care work. The “Culture of the Dehesa” needs a crucial mentality shift towards social and labour equality, greater women’s presence in the public sphere and equitable distribution of domestic tasks.

Goals	Tools for Improvement
Equal opportunities for women and men in the Dehesa and empowerment of women	<ul style="list-style-type: none"> - Gender mainstreaming policies related to land rights, tenure and use; employment; education; and health. - Access to resources and services - Participation in governance - More data, including peer-reviewed gender analyses; monitoring efforts to evaluate the gender impact of measures; and sex- disaggregated data - Gender-responsive budgeting to ensure and support gender policies in the Dehesa
Make gender a strategic priority for rural development	<ul style="list-style-type: none"> - Education and raising awareness about gender for children and youth at schools, professionals of different sectors, local communities and policy makers - Guideline documents for supporting gender integration geared at policy makers, landholders and civil society

Challenge 2: women’s job opportunities

The Dehesas of Extremadura are going through a process of environmental degradation, depopulation, masculinization of the working population and women ageing. Young people, particularly educated women, are moving to cities in search of better economic opportunities. At the same time, the Dehesas lack men who want to work in agriculture as shepherds, farm managers, etc.

Goals	Tools for Improvement
Halt women's abandonment of the landscapes and/or farming estates of the Dehesas	<ul style="list-style-type: none"> - Improve local infrastructure, including transport, basic services (social, educational, health and cultural) and access to Internet and new technologies - Comprehensive national and local plans, including financial aid and/or tax benefits to encourage women to live and work in rural areas
Women's inclusion in traditionally male sectors	<ul style="list-style-type: none"> - Special employment and self-employment public programs targeted at women in livestock, agriculture, forestry and hunting sectors - Public aid, scholarships, or grants to women who want to train as shepherds, livestock managers, etc. - Public and private aid for holdings and/or holders, including support for extensive livestock and transhumance systems, with a strong consideration of women's roles
Better job opportunities for young and middle-aged, rural and neo-rural women	<ul style="list-style-type: none"> - Awareness campaigns to inform landowners about benefits of women's employment in rural areas - Strengthen capacity of workers throughout the supply chain to work toward gender equality - Regional and national public aid (such as social security benefits, tax reductions, etc.) for companies, landowners and entrepreneurs that hire young people, especially women, in rural areas
Increase women's participation in new economic sectors of the Dehesa	<ul style="list-style-type: none"> - Regional and national public policies that include gender mainstreaming to promote emerging economic sectors of the Dehesa - Promote women's participation in sectors such as rural tourism, textiles, crafts, agri-food, cosmetics and jewellery production

Challenge 3: women's participation, and Challenge 4: women's visibility

In the public sphere, women are undervalued or visible in the Dehesa and the wool industry. While women are increasingly becoming managers of small-scale agriculture, they do not have an equivalent voice in decision-making around landscape use, and lack equal access to needed resources.

Goals	Tools for Improvement
Equitable public participation of women in the Dehesas	<ul style="list-style-type: none"> - Women engaged as stakeholders and in consultation groups
Equitable involvement of women at all levels of decision-making bodies of the Dehesa and the supply chain of wool	<ul style="list-style-type: none"> - Support education and capacity building for rural women in decision-making - Quotas systems for decision-making bodies, such as agricultural-livestock cooperatives, professional associations, or boards of directors of textile companies - Monitoring and reporting on the participation of men and women in the decision-making bodies of the Dehesas

Goals	Tools for Improvement
Identification, visibility and recognition of women as engines of change and rural development (economic, community and sustainable)	<ul style="list-style-type: none"> - Guides, brochures and informational material highlighting the role of women in rural areas, aimed at different audiences: academics, agriculture stakeholders, policy makers, etc. - SWOT analysis and diagnostic studies, from a gender perspective, of the situation of and contribution by rural women to the environmental and economic sustainability of the Dehesas - Implementation of green and circular economy programs as best-practice sustainable models practiced and disseminated by rural women
Identification, visibility and recognition of women as “guardians” of the legacy of the Dehesas: traditions, culture, environment and biodiversity	<ul style="list-style-type: none"> - Educational and training programs to describe gender-differentiated biodiversity practices, usages and knowledge - Financial flows to local public administrations and small municipalities for addressing causes of forest loss, climate change and ecosystem degradation, with a strong consideration of local women’s potential contributions - Promotion of women and communities of women working on the sustainability of indigenous breeds, extensive livestock and transhumance - Public and private support for women and communities of women that aim to implement educational and labour programs to rescue and disseminate ancestral culture, traditions and techniques throughout the wool supply chain
Transition towards a strong social-ecological sustainability model, marked by gender equality, in the landscapes of the Dehesa and in the supply chain of wool	<ul style="list-style-type: none"> - Implementation of innovative socio-technical programs and governance models in the Dehesa, based on Ecofeminism, Agroecology and Food Sovereignty - Implementation of educational programs to favour a gender transformation towards restorative, regenerative and sustainable development of the Dehesas

Challenge 5: work-life balance

This is not an equitable gender distribution of domestic tasks and cares. Men are not involved enough, and most of the weight falls on women. This fact reduces the possibility for women to gain employment and representation in the wool industry.

Goals	Tools for Improvement
Work-life balance between men and women in the landscapes and holdings of the Dehesas, and co-responsibility of domestic work	<ul style="list-style-type: none"> - Awareness campaigns and public policies on work-life balance, addressed to the general population, employers, landowners and managers of the supply chain of wool - Educational gender programs for rural schools to raise awareness, beginning in childhood, around equal sharing of domestic tasks - Promotion of local public health and caring services for children, elderly and dependent people in rural areas - Allow flexible schedules as a reasonable accommodation for men and women

5.2 Double discrimination: small producers and women

Women remain under-represented in the wool sector, though small and artisanal enterprises—which are less profitable—are often led by women. Transforming small quantities of wool is expensive and unprofitable for women who have additional jobs, not to mention personal and family responsibilities. The sustainability of women small producers is threatened by high production and processing costs, as well as a lack of collaboration and empathy from big producers. Women have limited access to large buyers in the industrial supply chain, opting for “residual or marginal” markets such as crafts, fairs or festivals and/or individual members of the public. The craft industry is still a niche sector, and it can be difficult to diversify and/or enter new markets for fabrics and garments.

The large textile industry, mainly managed by men, operates separately from small producers and there is no unified wool sector in Spain. There are no communication channels between big and small enterprises, or between women small producers and men in the wool supply chain. Women in our study denounce their loneliness and precariousness and demand a niche in the market. They feel a double discrimination in the supply chain: to be a small producer and to be a woman.

Challenge 6: gender equality in the wool supply chain

Goals	Tools for Improvement
End gender gaps and gender discrimination in the industrial supply chain of wool	Develop comprehensive Gender Equality Plans in companies in the supply chain to promote the participation of women and create equal opportunities
Strengthen the semi-industrial and/or artisanal supply chain of wool at local, regional, national and international levels	Increase public support for livestock holders, companies and/or entrepreneurs that promote artisan or semi-industrial women’s initiatives in the wool industry
Establish a stronger wool sector that is more inclusive and supportive of women, especially medium and small producers	<ul style="list-style-type: none"> - Guides, brochures and informative material highlighting the importance of women in the wool supply chain and the necessity of coexistence between big, medium and small producers - Financial aid to medium and small women producers: livestock holders, women transforming wool, weavers, designers and producers

Challenge 7: women acting together: “a feeling of collectivity”

Goals	Tools for Improvement
Build collective solutions designed by women for women in the supply chain of wool	<ul style="list-style-type: none"> - Business plans or commercial strategies for women producing smaller volumes - “Wool banks” formed by small women producers who make an initial investment and receive support to buy and produce larger quantities of wool. This helps share or reduce cost and removes intermediaries - Development of a network of small processing plants, managed mainly by women, that will create local jobs - Rehabilitation of dis-used infrastructures as new wool processing centres - Women’s wool cooperatives, associations, or companies to launch and finance small processing plants or other collective projects - Cooperatives for women designers

Challenge 8: women's networking: "a feeling of sharing"

Goals	Tools for Improvement
Women's networking	<ul style="list-style-type: none">- Creation of Laneras associations and women's networks to facilitate support and exchange- Local and national Laneras chapters- Mapping and directories of Laneras resources, including contact data of members, weaving techniques, etc.- Special "Women Wool Channels" to facilitate communication between women farmers and shepherds- Creation of an International Network of LANERAS- Institutional support for women's associations, networks and cooperatives related to the wool industry
Networking between related organizations and medium or small women stakeholders	<ul style="list-style-type: none">- Creation of specific wool forums or small reference centres (professional associations, cooperatives, or social networks) that gather different stakeholders, including women, to interact, discuss and launch common initiatives- Direct "communication channels" between livestock owners and the wool industry, especially medium and small producers- Alliances with stakeholders and partnership agreements

5.3 Crucial role of women in the wool supply chain

Organic Merino wool has become a forgotten product, underused and undervalued by livestock owners at its origin and legally defined as a by-product. The enormous economic and environmental potential of this raw material deserves more recognition. Livestock owners, mostly men, focus mainly on meat production.

Challenge 9: women's initiatives around organic wool in the Dehesas

Some women livestock raisers and "Laneras" are working to recover the wool industry, promoting Spanish Merino wool as a first line product. Women produce wool at a semi-industrial or artisanal level, as a recycling and biodegradable product, and with an added-value to rural economies. Women producers also include information about the traceability of wool and guarantee the highest standards of production and quality.

Goals	Tools for Improvement
Women's initiatives that value wool at its origin in the Dehesas, making visible the key role of livestock owners in the supply chain	Awareness campaigns and information activities to promote Spanish Merino organic wool for stakeholders and the general public Research on genetics and food in order to improve the quality of wool and breeds
Women's initiatives that value Spanish Merino organic wool as a local product with added value that represents a unique tool of social cohesion, job creation, social inclusion and settlement of population	<ul style="list-style-type: none"> - Educational programs at schools, covering the different uses, features and benefits of wool, to bring wool closer to people's daily life beginning in childhood - Awareness campaigns to highlight the multiple work opportunities in the wool industry (livestock, textile, furniture, construction, etc.), as well as its environmental, social, health and economic benefits for society - Public support for women to highlight the social, pedagogical, therapeutic and ethnographic value of wool, such as workshops aimed at vulnerable populations, people at risk of social exclusion, youth and the elderly - Public support for private women's initiatives that promote organic wool through art and culture, such as the One Square Meter Project - Support for women's wool initiatives that promote community participation through public activities such as craft fairs, festivals, wool knitting contests, weavers' street encounters, etc.
Women's initiatives that use, produce and distribute organic wool products	<ul style="list-style-type: none"> - Capacity building and support – including market studies – for women's economic initiatives to recover the local Merino wool industry - Public financial aid for women's projects that promote the use of local organic wool and traditional wool practices and crafts - Promotion of women's initiatives that defend traceability of wool and transparency monitoring protocols, which guarantee quality, protect local production and promote the survival of the organic wool sector - Creation of specific brands to help promote the wool market - Creation and promotion of new niche markets that value artisanal techniques and small production of wool products - Creation and promotion of new local markets, including short-circuit and eco-markets, led by women - Promotion of commercial women's initiatives, such as sustainable fashion projects or production of eco-products, that respect the environment and local communities

Challenge 10: retro-innovation and diversification

Women are key for the recovery of Spain's "wool culture." However, prospects are not encouraging: the Spanish wool supply chain is increasingly limited spread out, while the wool industry shrinks. Despite this situation, some "Laneras" in Extremadura have decided to try a new female approach. They do not want to just rescue traditional knowledge or techniques, but also implement new processes for small producers.

To achieve this goal, women Laneras aim for retro-innovation: to adapt past solutions to present problems by combining tradition, innovation, design and craft. Laneras improve and update traditional manufacturing processes by including modern techniques, fabrics and designs, all of which respect the environment and culture. The final result is a high-quality, sustainable and unique product that links women and wool and empowers both.

Goals	Tools for Improvement
Women's initiatives that combine tradition while innovation	<ul style="list-style-type: none"> - Public and private investment in research and production of new fabrics and products including textile collections, decorative items, works of art, etc. - Marketing new wool products, produced by women, related to furniture, craft, decoration, art, construction, wool training and health therapies - Produce and share books or manuals on wool processing and techniques - Training courses on retro innovation techniques at fashion, design, arts, fabrics, knitting and crafts schools

Challenge 11: women's wool knowledge

Women and "wool culture" have been intimately linked for centuries. Wool is a sign of identity for rural women in Extremadura and a source of knowledge and wisdom. In the past, women of different ages and origins wove daily in the streets as a collective and community activity. Ancestral knowledge and wool processing techniques were passed orally from generation to generation, from women to women. However, in the last 50 years, Laneras communities have gradually disappeared, and their spoken knowledge is disappearing. Additionally, today's small wool producers exist within an informal supply chain. Some women from Extremadura are working to rescue and update their traditional knowledge.

Goals	Tools for Improvement
Identify and make use of women's traditional knowledge to preserve the Culture of Wool	<ul style="list-style-type: none"> - Establish a knowledge data base that contains ancestral women's knowledge - Collect and disseminate case studies and best practices, highlighting women's knowledge
Create a new Spanish Culture of Organic Wool by retaining traditional knowledge and promoting new practices	Seminars, conferences, workshops and special courses related to the Culture of Wool in Extremadura and landscapes of Dehesas
Avoid the disappearance of "communities of wool"	Public support for the creation of new weaver communities at local and international levels
Professionalize the supply chain of wool	<ul style="list-style-type: none"> - Creation of specific Training Centres such as "Escuelas de Laneras" (School of Woolers) or School of Shepherds - Specialized management protocols for the supply chain: protocols on shearing, spinning, storing, weaving, etc. - Inclusion of wool training in the curricula of schools of arts, fashion, sewing and design - Capacity building on wool weaving techniques such as the "Tricot" and others that are being lost and forgotten

5.4 Women: new management, new governance, new voices

Challenge 12: a feminist approach for new governance

Women connect in a unique way with nature and landscapes, managing livestock and raw materials in a different way from men. They are progressively transforming the traditional masculine management patterns based on competition, isolation and individualism, as women's management is generally efficient, inclusive and progressive. This "female feeling of collectivity" has been missing in the region's predominant social governance structures, so a promotion of a "women's approach" is fundamental for the sustainable development and success of local economies.

Goals	Tools for Improvement
Include the "female approach" as a new way of management and governance in the supply chain of wool	<ul style="list-style-type: none"> - Cooperation and mutual support (vs competition) - Communication (vs isolation) - Collectivity and exchange (vs individualism) - More responsible management of herds, based on extensive livestock, transhumance and natural feeding - Inclusion of gender and/or "ecofeminism" perspectives in the new governance structures of the wool supply chain

Challenge 13: gender policies and legislation for women's empowerment

Local and European legislation have historically ignored the gender perspective and the role of women as engines of rural development. Public administrations and policy makers are still far from understanding the crucial role of women in revitalizing communities and fighting depopulation. Furthermore, public policies and financial aid are not adapted to meet the real needs of women small producers. Study participants identified the ignorance of legislators and severe and excessive bureaucratic requirements and obligations as obstacles to full participation in the supply chain of wool.

Goals	Tools for Improvement
Economic, environmental, social, health and gender coherence	Bottom-up gender-focused policies to provide adapted responses to real problems of women in the supply chain of wool
Consider the different needs of women and men when developing and implementing policy in the Dehesas	A government-supported gender study of the Dehesas which analyses structural aspects of the landscapes (family, social, labour, economic, health and education)
Adapted and updated understanding of the Dehesas from a gender perspective	Drafting of a National Law on Dehesas which includes gender perspectives and/or an ecofeminist approach
Simplify and reduce bureaucratic / administrative burden	Protocols to simplify bureaucracy and administrative procedures in the wool supply chain: financial and tax audits, quality controls, grants applications, CAP procedures, etc.

Challenge 14: women's voices

Women in the wool industry are starting to be heard, mainly in livestock raising and shepherding. Women go beyond advocating for their economic interest: they promote the sustainability of landscapes while

implementing structural changes in terms of gender equality and economic development. This nascent women's movement needs to be supported by other economic drivers in the agriculture and textile industries. General society also has an important role to play. If communities do not promote women, rural economies will continue to be seriously threatened.

Goals	Tools for Improvement
Increase women's voices in the supply chain of wool	<ul style="list-style-type: none"> - Capacity building to encourage women to lobby policy makers and/or decision-making stakeholders - Conferences, seminars, courses and forums where women in the supply chain of wool can be heard, mainly in urban areas

Acknowledgements

We give enormous thanks to everyone who participated in our study – women and men from the livestock, wool, textile, academic, university, public and corporate sectors, as well as cooperatives, associations and the women’s movement. They provided valuable contributions that have enriched our research. We particularly note their efforts to make the territories of the Dehesa of Extremadura a little more visible while raising the status of pastoralist women in the wool industry.

We especially acknowledge Seline Meijer from IUCN and Concha Salguero from Transhumancia y Naturaleza, who, from the beginning, believed in this project and helped facilitate the process with their patience, knowledge and experience.

Wool, the forgotten heritage of the Dehesa, is a powerful link between nature and a sustainable economy; between transhumance, pastoralism and biodiversity; between tradition and innovation; and between past, present and future.

Women pastoralists, Laneras, knitters, spinners, designers, producers and distributors are the architects of a new rural world. They are betting on the wool industry and promote sustainable management of their landscapes and biodiversity. They are the “guardians” of the old traditions and “guarantors” of the future of the Dehesa. They promote gender equality in the rural world, leaving behind all forms of gender discrimination or inequality.

We deeply thank all of them for their effort, dedication and commitment.

Wool empowers women and women empower wool.

Annexes

Annex 1: The One Square Meter project^{xxviii}

The One Square Meter (1SM)^{xxix} Project was originally developed in 2015 by TyN Association in Spain in collaboration with a group of wool artisan women called “Laneras.” These women came from different sectors, but shared a desire to preserve nature and diversity and to defend mobile pastoralism and the art of weaving. 1SM uses art to communicate the link between grazing and biodiversity, using the material from “grazers” (the sheep) themselves. The name represents the scientific data that one square meter of sustainably grazed land in Dehesa can be home to up to 40 different plant species, representing a biodiversity hot-spot in the Mediterranean.

1SM is a celebration of mobile pastoralism and the people who maintain it, benefiting nature, climate, animals, human beings, society and rural economies. The central artwork of the 1SM project is a knitted wool sculpture . It includes a wool base with needle-felt sculptures represent 20 different plant species. The project tangibly demonstrate the link between mobile pastoralism and biodiversity.

Although artwork and creativity are the core of 1SM, the project is much more. It is a multi-disciplinary, innovative project that empowers women who work with wool. Through 1SM, women can be a part of a weaving “sorority” where they can learn from one another and transmit and safeguard their knowledge for future generations. Laneras share their artisanal techniques of wool spinning, dyeing, knitting and felt sculpting. The final piece helps pastoral communities to communicate their crucial role and, specifically, the role of women in biodiversity conservation and enhancement.

The project is founded in research, science and self, and promotes communication tools aimed at different audiences including mobile pastoralist communities, researchers, decision makers, conservationists and the general public. The energy around One Square Meter continues to grow as new communities around the world create their own One Square Meter projects, depicting the plant diversity found in their regions. 1SM projects have been developed in the Mapuches Community of Women of Nueva Imperial (Chile), a community of craftswomen in Turkey and the latest is being developed in Lebanon. It was also publicized at the 2016 IUCN World Conservation Congress in Honolulu; 2017 Botanical Garden in Madrid; 2017 Seminar Dehesas Vivas organized by WWF Spain; 2018 International Congress on Communities Livelihoods of UICN in Canada; III National Congress of Livestock Trails in Teruel, Spain in 2018; and 2019 Biodiversiart Festival in Madrid.

An exhibition of One Square Meters is planned for the next IUCN World Congress in Marseille in 2021. The exhibit will communicate and raise awareness of the vital interactions between biodiversity, pastoral systems, women and traditional practice and knowledge of human communities that create unique Mediterranean cultural landscapes.

^{xxviii} <http://www.diversearth.org/2018/04/08/spreading-out-roots/>

^{xxix} <https://roads-less-travelled.org/activities/one-square-meter/>

Annex 2: Table of interviews

	Name	Position	Place	Date
1	Almudena Sánchez Sánchez	Founder of "Laneras"	Salamanca	2/10/18
2	Charlotte Houman	Founder of Extremerinas	Cuacos de Yuste (Cáceres)	3-4/10/18
3	Ismael Muñoz - Jurídico de Gestión urbanística	Lawyer, Urban Manager	Municipality of Cuacos de Yuste (Cáceres)	4/10/18
4	Lola Graná	Young shepherdess and member of "Ganaderasen Red" (GER)	Villabuenas de Gata (Cáceres)	5/10/18
5	Ana Trejo	Knitter and photograph at Laneras	Aldeanueva del camino (Cáceres)	5/10/18
6	María Fernández García.	Lanera, Entrepreneur	Valencia de Alcántara (Cáceres), Interviewed in Madrid in the Fiesta de la Trashumancia (Transhumance Festival)	20/10/18
7	María Jesús Jiménez Horwitz	Owner of Quesería Cueva de la Magaha, Member of QUERED	Granada, Interviewed in Madrid in the Fiesta de la Trashumancia (Transhumance Festival)	20/10/18
8	MARISA HERNÁNDEZ CAMPOS Quesos de Campos Marina (Mérida)	Quesos de Campos Marina (Mérida)	Mérida, Interviewed in Madrid in the Fiesta de la Trashumancia (Transhumance Festival)	21-22/10/18
9	EVA LOPEZ GARCÍA - LANERA	Knitter at Laneras	Cáceres, Interviewed in Madrid in the Fiesta de la Trashumancia (Transhumance Festival)	21/10/18
10	Ana Rengifo	Landowner of a farming estate in the Dehesa	Malpartida de Plasencia	23/10/18
11	Luis Gonzalo Fernández García	Manager of a farming estate in the Dehesa	Malpartida de Plasencia	23/10/18
12	Gheorge Gogasa	Man worker in a farming estate of the Dehesa (livestock tasks)	Malpartida de Plasencia	23/10/18
13	Daniela Gogasa	Woman worker in a farming estate of the Dehesa (domestic tasks)	Malpartida de Plasencia	23/10/18
14	Jose M ^a Talavan	Shepherd	Malpartida de Plasencia	23/10/18
15	Gonzalo Palomo	manager of ACTYVA Cooperative	Cáceres	24/10/18

16	Maria Catalan	Biologist. President ACTYVA Cooperative	Cáceres	24/10/18
17	Cecilia Carrasco Méndez 25/10/18	Project officer in FADEMUR	Mérida (Cáceres)	24/10/18
18	Enrique Izquierdo Campón	Manager of the School of Shepherds of Cooprado Cooperative	Casar de Cáceres (Cáceres)	25/10/18
19	Cristina Peña González	Owner of "Quesería La Palilla"	Aliseda	25/10/18
20	Rocío Ninadew	Designer and entrepreneur	Cañamero (Cáceres)	26/10/18
21	Brígida López Godoy (Bibi)	Landowner of a farming estate in the Dehesa, and member of GER	Villafranca de los Barros (Badajoz)	5/11/18
22	Pía Sánchez	Landowner of a farming estate in the Dehesa, and member of GER	Mérida (Badajoz)	5/11/18
23	Fernando Pulido	Professor at Universidad de Extremadura, Forestry engineer and founder of INDEHESA	Plasencia (Cáceres)	12/11/18
24	Isaac García Serrano	Postman	Torrejón el Rubio (Cáceres)	12/11/18
25	Concepción García Pajares (83 year sold)	Former Dehesa worker	Torrejón el Rubio (Cáceres)	12/11/18
26	Luperia Benito Sánchez (83 years old)	Former Dehesa worker	Torrejón el Rubio (Cáceres)	12/11/18
27	Ana María Dominguez	Daughter of a former Dehesa worker	Torrejón el Rubio (Cáceres)	12/11/18
28	Pilar Bonilla	Executive Director of Casa de la Mujer (Women's House) in Cáceres. Junta de Extremadura	Cáceres	13/11/18
29	Ana Rosado	Director of Servicio Extremeño Público de Empleo, Consejería de educación y Empleo, Junta de Extremadura	Cáceres	13/11/18
30	Alberto GarcíaDíaz	CEO of Made in Slow	León	15/01/19
31	Marco Antonio Calderon	Manager of Comercial Ovinos	Villanueva de la Serena (Badajoz)	22/01/19
32	Concha Salguero	International project Officer at TyN	Madrid	28/01/19

Annex 3: Other voices and initiatives that promote the wool sector

Initiatives: Feminist movement

“Weaving Cáceres” initiative

The Feminist Assembly of Cáceres promotes women’s rights and advocates for the presence of women in public spaces through “knitting in the streets” demonstrations. Tejiendo Cáceres (Knitting Cáceres) highlights women as preservers of cultural knowledge and popular wisdom. They set up weaving demonstrations in a popular local park, setting up their “needles, fabrics, threads and wool” and inviting other women to join the group. Their goal is to forge new bonds, take care of each other and share experiences through this support network. The initiative also employs the “yarn bombing” concept, a mode of street art that uses threads and wool to decorate city infrastructure. For instance, knitters have decorated some trees marked for removal as a sign of protest, because “we are worried about the loss of trees, because Cáceres is a small town.”

Fademur Extremadura - Federation of Rural Women Associations¹⁵⁶

FADEMUR is Spanish federation of rural women associations that fight for gender equality in rural areas. In Extremadura, the head office is in the regional capital, Mérida. It includes Rural Women Associations from Extremadura and represents over 6,000 women living and working in rural areas. Their main goal is to promote rural women and their families through on-site and remote training activities to improve professional qualifications and quality of life. They also help women adapt to social and occupational transitions in the rural world.

FADEMUR also develops projects throughout Spain. One such project, the "Rurality" Program, promotes and develops entrepreneurial initiatives created by rural women.¹⁵⁷ FADEMUR Extremadura demands the elimination of all forms of discrimination against rural women and fights job discrimination in the farming industry. The federation advocates for the adoption of the legal term “shared ownership” as a form of recognition for women on farms and to end discrimination that prevents women from enjoying their rights. FADEMUR participated in the elaboration of the 1st Strategic Plan for Gender Equality in the Rural Areas in Extremadura (2017-2020).¹⁵⁸

Initiatives: Preserving the Dehesa practice of extensive livestock and transhumance

FEDEHESA, Spanish Federation of the Dehesa¹⁵⁹

FEDEHESA is a federation of Dehesa landowners and includes several associations from different regions of the Dehesa. Its president is the prolific farmer Pía Sánchez (interviewed for this study). FEDEHESA is supported by the University of Extremadura and its Institute of Investigation of the Dehesa (INDEHESA), coordinated by professor Fernando Pulido (interviewed for this study). Among FEDEHESA’s main objectives are producing scientific and technical knowledge of the Dehesa, raising awareness of its economic and cultural relevance, and supporting the adoption of a National Law for the Dehesa. FEDEHESA lobbies for this law before National and European Institutions.

Platform for Extensive Grazing and Pastoralism¹⁶⁰

The Platform for Extensive Grazing and Pastoralism is an association formed by individual people and organizations. The platform supports shepherds and farms and defends extensive livestock and

pastoral systems for their environmental value. They also promote gender equity in decision-making and other activities related to pastoralism. This platform understands that extensive livestock efficiently uses resources from the territory, including indigenous breeds. This type of farming also ensures that livestock production is compatible with sustainability and with social and environmental services. This group is one of just a few civil society representatives in the pastoral sector.

*Transhumancia Y Naturaleza Association (TyN), WWF Spain & ANP/WWF Portugal: the Mava Dehesa/Montado site project*¹⁶¹

The Association Transhumancia y Naturaleza (TyN)^{xxx} has worked since 1994 to support transhumant and extensive pastoral systems. TyN further works to maintain Spanish drover's roads used by herds, and highlights the roads' role as ecological corridors that connect protected and high-value nature areas.

TyN, in partnership with WWF Spain and ANP/WWF Portugal, have implemented a comprehensive project on Dehesas and Montados, covering Spain's Extremadura and Andalusia regions and Alentejo in Portugal. Its main objective is to explore the link between traditional Dehesa farming practices and biodiversity. The project further aims to improve the Dehesas' economic profitability through the integration of biodiversity values, provision of ecosystems services and new market niches.

The Dehesas/Montados project also supports women. The majority of the Dehesa/Montado project^{xxxi} personnel are women. The organizations involved in the project always consider a gender perspective and actively promote the integration and visibility of rural women. In particular, TyN collaborates with the Madrid Council every year to organize the Transhumance Festival (Fiesta de la Trashumancia), where a Merina sheep herd crosses the centre of Madrid to raise awareness about the crucial role of transhumant pastoralism. Per pastoral tradition, the head shepherd (mayoral) must pay the Mayor for the sheep crossing, and in 2018 the mayoral was a woman for the first time.¹⁶²

*Cooprado Cooperative – School of Shepherds*¹⁶³

The Cooprado Cooperative, located in Casar de Cáceres, began in 2016. The effort included the City Council and the Association for the Integral Development of the Tajo-Salor-Almonte area. Together, the Cooperative founded the first School of Shepherds in Extremadura.

The School of Shepherds aims to train new professionals and ensure the continuity of raising sheep, goat and cow livestock in Extremadura. Students are trained in feeding, reproduction, milking and management of holdings. They can access other courses like agricultural business management, animal health, animal transportation and use phytosanitary objects. One of the school's offerings is a practical course that includes 600 hours of instruction over six months for a dozen students at a time. Following the first year the course was offered, over 50 percent of the students who took the course were working in livestock. The School has now completed three rounds of this course.

The objective of the School is to train future shepherds from Extremadura to practice the profession responsibly and with dignity. The School also seeks to ensure generational replacement among local shepherds. The school further supports technological innovation and the incorporation of women in the livestock sector. In the first year, only one woman was in the School; in the most recent year, there were five female students and seven men. "Every year we have more women in our courses. We work to have more and more women. They are the future."¹⁶⁴

^{xxx} www.pastos.es.

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*Cabello-Bravo livestock farm*¹⁶⁵

Miguel Cabello Cardeñosa (Siruela, Badajoz) comes from a family with roots in traditional livestock. He has been producing sheep meat for over 30 years. His large livestock operation, located in the Siberia of Extremadura, is ecologically sustainable. Miguel is a defender of endangered indigenous breeds such as the black Merino, and he has won several awards for being such a strong defender of the Dehesa. He actively promotes the Dehesa, collaborating with other initiatives and projects like dLana. He also supports initiatives that support women in Extremadura such as Laneras and Extremerinas.

Initiatives: The wool textile industry

*“Made in Slow” – Alberto García Díaz*¹⁶⁶

“Made in Slow” is an online platform created to help recover and preserve the traditional value of wool and its connection to fashion in Spain. Based in León, Made in Slow sells products throughout Spain as well as internationally. The platform is a vehicle for knowledge about cultural products and innovations in wool.

Made in Slow highlights the added-value of a select number of products made with extreme care using ecological and transhumant Merina wool. “Made in Slow was born in an intuitive way. We come from the fashion world, but when we saw the situation of the wool in Spain, we decided to do something about it.”

In collaboration with Boldi Filati (a local yarn and textile company), Made in Slow tells a story of wool that stresses local added-value and its connection to transhumance. Through the “Transhumance by Made in Slow” initiative, they are developing products focused on the fashion sector, commercializing their products in both the industrial and artisanal sectors.

*dLANA. 100% Indigenous Merina Wool*¹⁶⁷

Based in San Lorenzo del Escorial (Madrid), dLana was founded by entrepreneurs who use wool as the raw material to create their fabrics. They use Merino wool and include a seal that certifies 100% Spanish indigenous Merino sheep in their products.

After many site visits with livestock farms, shepherds and artisanal businesses across Spain, along with research, dLana was founded in 2014. The founders create different national clothing collections from exclusively 100% transhumant Merina wool and in collaboration with local artisans. They spin and knit their clothes in small artisanal factories.

dLana is committed to finding new innovative processes that align with their values, produce high-quality products for their customers and help the planet. This is a life objective for dLana’s founders. They started this project when they were looking for responsible and ethical raw materials that respected people, the environment and animals. They chose wool for its magnificent properties and history, and also wanted to help to tackle the problems that wool is facing. They decided to swim against the current and bring back the value of wool.

*Mundo Lanar*¹⁶⁸

Romi and Ato are a couple who decided to move away the city to find an “ideal lifestyle,” leaving behind their professional lives and the security of well-paid jobs. After a casual meeting with a shepherd, they decided to spend their lives working in the wool industry. They founded Mundo Lanar as a sustainable fashion company which uses natural fibres and dyes. Romi and Ato see Mundo Lanar as an “inseparable part of their lives.” Through the company, they are supporting sustainable fashion, ecological agriculture, bio-construction, fair trade, responsible consumption and the preservation of textile traditions.

Mundo Lanar’s head office is in Valle de Soba (Cantabria). The company integrates “old and new traditions” and believes in a “do-it-yourself” culture as a way of encouraging creativity in the fashion world. They believe in the Slow Movement, which claims “little revolutions and big sensations” to “start a life [beyond] consumerism.” They also believe in “coordinated global action” to boost changes that can stop environmental deterioration and its collateral effects in the textile industry.

*We Are Knitters*¹⁶⁹

Pepita Marín and Alberto Bravo are two entrepreneurs from Madrid that started their company in 2010. They learned to knit from YouTube videos and wanted to help lead the revitalization of wool in Spain. “We Are Knitters” helps recover old knitting traditions by selling knitting kits online. The kits include wool, needles and modern patterns. All their skeins are made with 100% natural fibres: Peruvian sheep, alpaca sheep, Merino sheep, cotton, etc.

Pepita and Alberto get their inspiration from street style and transform their ideas into their designs. They are among the most important promoters of knitting traditions in Spain. They sell their products internationally and have created a community of “knitters” for anyone interested in wool or knitting.

*Indigo – clothing atelier*¹⁷⁰

Lala de Dios and Enrique Moreno founded Indigo in Madrid in 1981. It is a small company whose main objective is to explore techniques and traditional equipment used in knitting. Indigo’s atelier is in Titulcia, a small village of 1,100 people near Madrid.

Indigo produces and sells looms and accessories for knitting, spinning and felting; sells books for children; and offers training courses with a wide variety of materials, levels and time schedules. They also offer individual consultations and individual classes. One of their workshops, “The process of wool: washing, carding and spinning,” began in January 2019. They have a new workshop called “Initiation to natural dyes” that started in February 2019. They also offer knitting classes every Tuesday throughout the year. In the last few years, the atelier has also participated in projects for development cooperation in Morocco, Iraq, Ethiopia and Niger, among others.

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