Deliverable 1.2: Women-Led Innovation Research Review

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Guide to FLIARA D1.2 Women-led Innovation Review

The FLIARA knowledge review explores the existing knowledge on **women-led innovation** in farming and rural areas.

Co-creation with FLIARA partners was central to the production of this **transdisciplinary** knowledge review, which draws on multiple forms of knowledge including academic publications, practitioner reports and **relevant European projects.**

Knowledge Inputs

- **The Rural Context** investigates the setting of this project in contemporary rural Europe.

- **Gender in Rural Areas** explores the effects of patriarchal societal norms and gender roles on rural women as well as the effects on agricultural and rural communities.

- **Sustainable Rural Development** discusses the integral role which women play in the sustainable environmental, economic, social and cultural development of rural areas.

- **Rural Innovation** addresses the benefits of innovation, particularly women-led innovation, for rural areas as well as the challenges and supports the women face in this area.

- **Female Entrepreneurship** focuses on the contribution of women entrepreneurs to sustainable rural development.

- **Digital and Ecological Entrepreneurship** examines the prospects in entrepreneurial sectors that are viewed as more sustainable in a number of ways, such as ecological or digital entrepreneurship**.**

- **Foresight and Trend Analysis** highlights the innovative futures methodology used in the FLIARA project.

- **Relevant European projects** provide a valuable resource of existing knowledge. Thirty-one projects were selected and individual Fact Sheets were created to highlight key lessons for FLIARA, with this knowledge also being incorporated into the review.

Female Innovation Ecosystem: Gender in Rural Areas, Sustainable Rural Development, The Rural Context, Foresight and Trend Analysis, Rural Innovation, Female Entrepreneurship, Digital and Ecological Entrepreneurship, Relevant European Projects
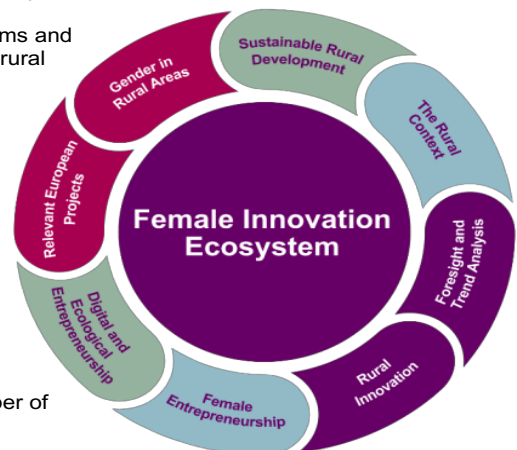
Connection to FLIARA WPs

The knowledge review provides a **starting knowledge base** to support all of the work carried out by the FLIARA project partners, particularly:

- **Foresight and Trend Analysis:** which explores **future trends** for **women in sustainable innovations** on farms and in rural areas.

- **Women-led Innovations in Farming and Rural Areas:** which will deepen our understanding of the **pathways to success** and the **challenges facing women leading sustainable innovations** on farms and in rural areas across the EU.

Key Take Aways

Through the key knowledge inputs, the knowledge review has **worked toward identifying:**

- The main **forces and motivators** behind the innovations led by women in farming and rural areas, as well as the **obstacles and difficulties** they face.

- How **innovation ecosystems** promote **women leading rural and farming innovations**, as well as the **perceived gaps** in the systems.

- The contribution of women-led innovation and entrepreneurship to the sustainable **development of rural areas**, and the **opportunities** in fields like **digital and ecological entrepreneurship**.

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ACRONYMS AND ABBREVIATIONS

CAP	Common Agricultural Policy
DG Agri	Directorate General for Agriculture and Rural Development
EC	European Commission
EU	European Union
EIGE	European Institute of Gender Equality
FAO	Food and Agriculture Organisation of the United States
FLIARA	Female-led Innovations in Agriculture and Rural Areas
OECD	Organisation for Economic Cooperation and Development
SDG	Sustainable Development Goal
UN	United Nations

PROJECT PARTNERS	
Galway	NATIONAL UNIVERSITY OF IRELAND GALWAY
TU Delft	TECHNISCHE UNIVERSITEIT DELFT
TEAGASC	TEAGASC - AGRICULTURE AND FOOD DEVELOPMENT AUTHORITY
UNICAL	UNIVERSITA DELLA CALABRIA
LWL	LONGFORD WOMEN S LINK CLG
UTU	TURUN YLIOPISTO
UL	UNIVERZA V LJUBLJANI
CE	CONSULTA EUROPA PROJECTS AND INNOVATION SL
HNEE	HOCHSCHULE FUR NACHHALTIGE ENTWICKLUNG EBERSWALDE
ELARD	ASSOCIATION EUROPEENNE LEADER POURLE DEVELOPPEMENT RURAL
UOULU	OULUN YLIOPISTO
ECOLISE	RESEAU EUROPEEN POUR DES INITIATIVES COMMUNAUTAIRES SUR LES CHANGEMENTS CLIMATIQUES ET LE DEVELOPPEMENT DURABLE
MENDELU	MENDELOVA UNIVERZITA V BRNE
LNU	LINNEUNIVERSITETET
HLK	HOGSKOLAN FOR LARANDE OCH KOMMUNIKATION I JONKOPING - HLK SCHOOL OF EDUCATION AND COMMUNICATION

PREFACE

In order to assist women-led innovative practices in farming and rural regions, the FLIARA (Female-led Innovation in Agriculture and Rural regions) project intends to establish a European-wide ecosystem. The project helps rural women by improving the innovation ecosystem, which will highlight their accomplishments, serve as a source of knowledge and inspiration, connect them to key players in the industry, increase their visibility in institutional decision-making contexts at the national and international levels, and assist them in building their capacity and skills so they can continue leading or start leading innovative practices.

To give rural women in the EU new opportunities, it is essential to understand how they participate in innovative, sustainable practices on farms and in rural communities. To this end, a thorough knowledge review has been co-created by the FLIARA project partners to close these knowledge gaps. The FLIARA knowledge review offers a foundational body of knowledge to support the whole FLIARA project, but most especially, WP2 and WP3. It begins with a survey of the body of knowledge concerning women's innovation in rural and agricultural settings. A greater amount of women-led innovation in farming and rural regions will be supported by the analysis' identification of significant elements and drivers that require attention. It will look into the barriers in the innovation ecosystem as well as what encourages effective women-led innovation. This will involve identifying the main social and behavioral forces behind transformation. Additionally, it will pay close attention to ecological and technological innovation in farming and rural areas, as well as the potential found there.

The Knowledge Review covers T1.2 'Review of Existing Knowledge Focused On Women-Led Innovation in Farming and Rural Areas', which makes up one of the four tasks in Work Package 1, 'Contextual Concepts and Assessment Frameworks'. To illustrate the importance of the knowledge review throughout the FLIARA project's lifespan, D1.2 'Women-led Innovation Research Review' is separated into two primary sections. The two parts comprise:

Part One: focuses on six key aspects of the knowledge review which will guide the work of the project team and assist them as they carry out the project tasks.

Part Two: (Appendix A) consists of 31 Fact Sheets, which is devoted to past and present European research and innovation initiatives having FLIARA-relevant outcomes. This will serve as a resource for WP2 and WP3, as well as WP4 and WP5, where detailed analyses of a few project findings will be done.

The document opens with the **Executive Summary**, which provides a summary of the six major themes on which the knowledge review has concentrated.

EXECUTIVE SUMMARY

FLIARA (Female-led Innovation in Agriculture and Rural Areas) aims to create a European-wide ecosystem, which supports women-led innovative practices in farming and rural areas. FLIARA Deliverable 1.2 'Women-led Innovation Research Review' is a review report on women-led innovation in farming and rural areas, as well as an inventory of previous and ongoing European projects with results relevant to FLIARA, delivered in the form of Fact Sheets.

In this review report, major drivers of female-led innovation are identified along with successful women-led innovation and the gaps in the innovation ecosystem. It also examines the main elements and causes that enable higher levels of female-led innovation in farming and rural areas. These focal points are examined in the report under the following headings:

THE RURAL CONTEXT

FLIARA focuses specifically on female innovations in agriculture and rural areas. An initial exploration of the rural context in which FLIARA is based references the presence of many differing perspectives on 'the rural' in academia and policy, as well as how multidimensional changes have impacted rural landscapes and contexts. The function and viability of the family farm in rural Europe is then discussed, as well as the natural connection between agriculture and rural areas.

GENDER IN RURAL AREAS

One of the key issues, which FLIARA is set against, is the longstanding patriarchal ethos in which males are recognised as custodians of the countryside, while rural and agricultural women's roles and contributions have frequently gone unacknowledged. The traditional gender roles and patriarchal structures that have often been associated with rural areas are shown to have negative impacts on the role, opportunities and actions of rural women, for example, stimulating out-migration of rural women. A particular focus on the influence of traditional gender roles in agriculture illustrates the influence of gender-based assumptions of interest and involvement in agriculture on farm succession, viability and work on the farm. The uneven, gendered divisions of labour in agriculture and in rural areas more widely is also thought to contribute to the role and economic contribution of women being historically rendered invisible. This lack of recognition of women's contribution can exasperate some of the principle challenges faced by women in rural areas. The difficulties explored revolve around labour and employment, childcare and domestic commitments, and involvement in decision-making.

SUSTAINABLE RURAL DEVELOPMENT

Sustainable development is a major topic on a worldwide scale and is used in many situations, including rural development. Given that each rural area has a different structure and set of resources, it is clear that attaining sustainable rural development depends on considering that context. FLIARA recognises the necessity of involving all rural residents in agriculture and rural areas' sustainable development. It is investigated how specifically rural women contribute to the environmental, economic, social, and cultural sustainability of rural communities.

RURAL INNOVATION

Innovation is increasingly recognised as one of the key methods of stimulating sustainable growth and development, particularly in rural areas. Innovation historically has a dominant association with males and industries related to science and engineering. Women's contributions to innovations are frequently overlooked or undervalued. Nevertheless, it has been demonstrated that women are at the forefront of rural innovation and are crucial in bringing a range of advances to rural regions and agriculture.

Female-led innovation in rural areas and agriculture is enabled by innovation ecosystems, which include and are influenced by contextual factors such as policies, infrastructure, and social and cultural environments. The gaps, which are identified in various aspects of these innovation ecosystems, as well as the social and behavioural drivers of female-led innovation, are further explored, along with their impact on female-led innovation in rural areas and agriculture.

FEMALE ENTREPRENEURSHIP

One of the most common pathways for the sustainable development of rural areas through innovation is entrepreneurship. Entrepreneurship can introduce a number of economic benefits to rural areas, but also holds the potential to stimulate social, cultural and environmental benefits. It has been demonstrated that female entrepreneurs, in particular, significantly affect the viability of their rural communities. Examined are the various motivations behind rural women's decision to pursue entrepreneurship as well as the challenges that female business owners have while setting up a business on a farm or in a rural region.

OPPORTUNITIES IN DIGITAL AND ECOLOGICAL ENTREPRENEURSHIP

The opportunities in sectors of entrepreneurship perceived as more sustainable in a variety of ways, such as digital or ecological entrepreneurship, are becoming increasingly more visible in the subfields of entrepreneurship. The relevance and

impact these emergent areas of entrepreneurship can have on the sustainable development of rural areas, as well as the opportunities that have been identified in these areas, particularly for women, are discussed.

FORESIGHT AND TREND ANALYSIS

The FLIARA project uses a novel Foresight and Trend and Analysis technique (WP2) to envision future sustainability innovation trends in farming and rural regions, with a key focus on the role women will play in these future trends. Aspects and unique features of this futures planning methodology are discussed, along with the relevance of its application in rural and agricultural contexts.

1. INTRODUCTION

1.1 CONTEXT

Rural areas account for more than 80% of the total territory of the EU and are home to over 30% of the EU population. In the European Union, rural areas are valued for their natural landscapes, recreational and tourism offerings, varied food production, and a sense of well-being and quality of life. There is also renewed attention on the rural as a hub of innovation and sustainable business creation, with the digitalisation of rural areas, opportunities for development in the green economy, and the expansion of remote working in a post-Covid society (Eurostat, 2022).

Many EU rural areas face similar challenges, including population decline, limited access to services and infrastructure, lower education and digital skill levels, and lower employment opportunities (Rossi, 2022). Women in rural areas of Europe tend to have more limited prospects and face more gender disadvantage in comparison to women living urban areas (Norlén et al., 2021). The experiences, role, and contributions of rural women and those in agriculture consistently go unrecognised and underutilised; erased by the societal structures created by the gender stereotyping still prevalent in rural areas. In the EU, women make up almost 50% of the total rural population, they represent 45% of the economically active rural population and about 40% work on their family farms (EU, 2019). Nonetheless, and partly because of the patriarchal structures present in rural areas the pivotal role and economic contribution of women in rural areas and agriculture has historically been largely unacknowledged and often neglected (Ní Fhlatharta and Farrell, 2017).

Gender equality and women's empowerment are prerequisites for sustainable development (Sabater, 2020). A lack of recognition for the female contribution has negative implications for the future sustainable development of rural areas and there is widespread recognition of the need for equality in order to achieve sustainable rural futures. The United Nations (UN) 2030 Agenda for Sustainable Development, for example, aims to "leave no one behind" and "endeavours to reach the furthest behind first". Sustainable Development Goal (SDG) 5 aims to "achieve gender equality and empower all women and girls". The Organisation for Economic Co-operation and Development (OECD) also acknowledges the barriers facing women who wish to engage in entrepreneurship and innovation by noting that although they account for over half of the global potential talent base, women as a group are continuously marginalised and their economic, social, environmental and cultural contributions go unrealised (OECD, 2008). On an EU level, the Gender Equality Strategy 2020-2025 sets out key objectives for

achieving the goal of a 'Union of Equality', in which both women and men are "free to pursue their chosen path in life, have equal opportunities to thrive in, participate and lead our European society" (EU, 2020).

Innovation is increasingly viewed as a way to address the issues faced by rural areas and facilitate sustainable rural development. A positive correlation has been seen between rural innovation and an increase in household income, lower elderly dependency ratios, population density and population growth (OECD, 2022). In Europe, women are recognised as key drivers of innovation, particularly in rural areas and at a local level (Segovia-Pérez et al., 2022). However, due to ingrained gender inequalities in involvement, decision-making, access to resources, and control over those resources, rural women face numerous challenges while engaging in rural innovation. Accordingly, there is an evident need to improve understanding and recognition of women's role in farming and rural areas, and in particular, question and challenge the prevailing gender norms, dynamics, and stereotypes that undermine the recognition of women's existing and potential contributions in spearheading agricultural and rural innovation in Europe.

1.2 THE FLIARA PROJECT

The FLIARA project aims to create a European-wide ecosystem, which supports women-led innovative practices in farming and rural areas. This includes different types of rural women inclusive of age, class, culture, race, and ethnicity who are leading or attempting to engage in rural and farming innovations. The core objective of FLIARA is to ensure that women are embedded in, and supported by, a more effective innovation ecosystem which: spotlights their achievements; provides them with a source of inspiration and knowledge; networks them with key actors engaged in innovation; heightens their visibility within national and international institutional decision-making contexts; increases capacity and improves skills to empower them to continue leading or start leading innovative practices in farming and rural areas. The FLIARA project strives to increase understanding of the needs and challenges facing women leading innovative environmental and rural development practices in EU farming and rural areas.

1.3 REPORT STRUCTURE

The 'Contextual Concepts and Assessment Frameworks' established as Work Package (WP) 1 of the FLIARA project develops the concepts, definitions and existing knowledge base underpinning FLIARA, and lays the groundwork for other WPs. Deliverable 1.2 is a Women-led Innovation Research Review. The research review explores the existing knowledge relating to women-led

innovation in farming and rural areas and draws on the learnings of previous research from academic publications, practitioner reports and an inventory of previous and ongoing European projects with results that are relevant to FLIARA.

The report explores the key factors and drivers to support greater levels of women-led innovation in farming and rural areas, explores successful women-led innovation and the gaps in the innovation ecosystem, and identifies key drivers of change. The report explores these key points under the following themes:

- ➢ The Rural Context
- ➢ Gender in Rural Areas
- ➢ Sustainable Rural Development
- ➢ Rural Innovation
- ➢ Female Entrepreneurship
- ➢ Opportunities in Digital and Ecological Entrepreneurship
- ➢ Foresight and Trend Analysis

1.4 REVIEW AND FACT SHEET METHODOLOGY

As part of FLIARA Task 1.2 'Review of existing knowledge focused on women-led innovation in farming and rural areas', led by the University of Galway team, an initial scoping review of knowledge was carried out in order to inform the initial basis of Deliverable 1.2 'Women-led Innovation Research Review'.

The University of Galway team accumulated the literature for the knowledge review, with the assistance of all WP leaders and other project partners. In the initial stages of the project, a scoping knowledge review of academic publications and practitioner reports was carried out to gain a 'bird's eye' view of the existing knowledge relating to the FLIARA project. All project partners were provided with a Scoping Review Template, filled out through the project's Microsoft Teams platform, in which they were asked to identify and provide the details of research reports and literature with local, national or European context, relevant to the FLIARA project. This template asked partners to identify the key concepts, definitions or findings presented in the chosen literature, as well as the relevance of the literature to the overall key themes of FLIARA.

In order to begin building the project inventory, which forms part of Deliverable 1.2, the FLIARA partners were provided another template in the initial stages of WP1, which asked partners to provide details of previous or current European projects, which had relevance to FLIARA. In order to fully take advantage of the knowledge already produced by these projects, partners were asked to outline essential aspects of these projects in this template, as well as any relevance

these projects may have to any other work packages included in the FLIARA project.

Once all templates were received, the University of Galway team compiled the results, reviewed the literature presented by partners and built on this information within the knowledge review. Information from the previous and ongoing European projects put forward by partners was incorporated throughout the knowledge review. The project with the most relevance to FLIARA have been drawn from the project inventory and explored in the form of thirty-one Fact Sheets.

2. THE RURAL CONTEXT

There are several ways to define the term "rural" (Woods, 2010). From an academic perspective, the idea and meaning of rurality continues to evolve and critiqued at a range of scales from global to local against the backdrop of universal trends and processes such as globalisation, climate change, migration and changing ideas about sustainability. In the EU, each country has developed its definition of rurality, frequently in response to a particular political, administrative, and social context. Rarely are international approaches and definitions identical (Depraz, 2008). Although rurality is often described as "a multi-dimensional notion, which might embody multiple meanings for different reasons. As a geographical or spatial concept, for example, a socio-economic or socio-cultural descriptor, a functional concept related to, for instance, labour market flows, or simply as "not urban"" (OECD, 2016).

2.1 CHANGING RURAL LANDSCAPES

Global trends, socio-demographic shifts, economic and environmental processes, and associated government actions have resulted in significant multidimensional changes in rural areas (Frantal and Martinat, 2013). The shift in geographical divisions of labour brought about by the decline of traditional industries, such as agriculture, and the rise of new industries, such as the service sector, has had a push-pull effect on rural communities, stimulating migration patterns between urban and rural regions, bringing urban dwellers to rural areas (Woods, 2005). Contemporary rural in-migration and mobility processes are overwhelmingly complex, comprehensive, chaotic, and pervasive in daily life (Stockdale, 2016).

> Research conducted by Milbourne and Kitchen (2014) revealed that out-migration and in-migration in rural areas of Wales was altering cultural norms due to the movement of people in and out of rural areas.

Rural restructuring has resulted in increasingly multifunctional rural communities in industrialised nations, which, for example, can be attributed to a farmer's identity being defined by a mix of production, consumption, and/or conservation values (Groth and Curtis, 2017). As a result, a significant proportion of rural landscapes have been impacted by these agricultural identity transformations, drastically modifying the environment and negatively impacting, among other things, biodiversity, cultural heritage, and recreational opportunities (Primdahl et al., 2013).

2.1.1 RURAL AND AGRICULTURE

The rural context is synonymous with agriculture (EU, 2021). The family farm is typically held up as a symbol of a traditional "rural way of life" that is revered in national and regional cultures and is viewed as symbolic, not only of farmers but also of rural people and communities in general (Woods, 2014). In rural communities, family farming is also viewed as an economic engine, and a source of rural and economic fortitude (Winter and Lobley, 2016). It is not uncommon for a family farm to continue into the third generation (Lobley et al., 2010) due to its high level of flexibility, resilience, and longevity over time (Glover and Reay, 2015). However, each family farm is distinct, as are its aspirations, because it is a cultural unit whose form, value, and articulation within the larger socioeconomic system will vary considerably (Gasson et al., 1988).

Despite the integral role played by family farms in the European countryside, their number is declining (Darnhofer et al., 2016). The long-term viability of farms has been jeopardised by an array of internal and external challenges, including generational renewal, access to markets, and the ability to access and apply new technologies (De Rosa et al., 2019). These difficulties vary by farm size, location, and family structure, making it exceedingly difficult to design policies to support family farming (Hennessey, 2014). The agricultural sector is nevertheless vital to the economy and way of life in many rural communities, and many family farms are pursuing innovative and sustainable strategies in order to ensure their future viability (Suess-Reyes and Fuetsch, 2016).

Despite the continued importance of agriculture, forestry, and fishing to rural economies, their relative importance has declined over time, accounting for only **12%** of rural jobs and **4%** of rural gross value added (EU, 2021).

3. GENDER IN RURAL AREAS

Traditionally, rural areas were often associated with gender roles, which feature men as breadwinners and women as homemakers. The hegemonic image of rural societies has often been a *patriarchal* one, in which masculinity is associated with power and decision-making, while femininity is linked to caregiving and family responsibilities (Little, 2002). A patriarchal rural societal structure can have significant negative impacts on rural women, their possible opportunities and their roles in rural areas. Migration patterns, for example, are impacted within patriarchal rural societies as male-controlled divisions of labour in rural households can limit the employment opportunities available to women, encouraging out migration among rural women (Leibert and West, 2016).

The European Institute for Gender Equality(EIGE) (2016) defines a patriarchy as a "social system of masculine domination over women".

These uneven gender roles set out for men and women in rural communities, have often revolved around the notion of a *rural idyll* (Little and Panelli, 2003). The rural idyll denotes idealisation of the countryside portraying an idealised picture of rural traditions, characterised by a sense of rootedness, stability, and natural distinctiveness (Waters, 2010). Literature often demonstrates how people may long for the rural idyll as a metaphor for a better life, a place to which they can aspire and a place where traditional values are retained (Shucksmith, 2016). These ideas have already been applied to rural life in order to simplify gendered power dynamics. (Little, 2002).

The *'rural idyll'* is a romanticised construction of rural areas, presenting them as happier, healthier and with fewer problems than urban areas (Rogers et al, 2013).

3.1 TRADITIONAL GENDER ROLES IN AGRICULTURE

Agriculture has historically had a strong gendered component because farming jobs and obligations within agricultural households have typically been split between men and women (Hammersley et al., 2021). The rhetoric of the family farm, in regard to women in agriculture, primarily suggests that a farm is passed down from father to son, maintaining the conventional, father-to-son farm succession and constructing a narrative that claims that women most frequently enter farming through marriage (Sutherland et al., 2023). This context led to family farming traditionally being characterised as patriarchal and perpetuated traditional gender roles and divisions of labour, with men as the head of the farm, fulfilling supervision and decision-making duties, and women as responsible for household tasks and menial agricultural work (Sireni, 2007). However, gender roles can be essential for the survival of patrilineal agricultural families (Price and Evans, 2009). For instance, women are traditionally expected to work at home to support the farm and the farm family, which prevents farm daughters from pursuing any role on the family farm (Shortall, 2006); this is a result of the dominance of the masculine identity in agriculture, where women's labour can be viewed as less significant solely because she is a woman (Price and Evans, 2009). The gender-based expectations towards involvement and interest in farming are often reinforced in childhood (Fischer and Burton, 2014). This common culture involves sons being labelled as the successor from birth or early life, a practice which ensures that "maleness remains at the core of farmer ideal-types" (Fischer and Burton, 2014, p. 426) while women need to use different strategies for business viability (McElwee et al., 2018).

Women in agriculture opt for farm diversification engaging in the side activities which may constitute the 'glue' that keeps households in place, particularly in economically declining rural areas (Markantoni and Van Hoven, 2012). Women engaged in farming, however, frequently have access issues to services or funding. In the EU, women-led farms are approximately half the size of farms led by men, owing in part to land and resource access issues (Sutherland et al., 2023). Because of this, women are more likely to embrace a strategy of diversification and multitasking to balance their farms, families, and businesses (Bock, 2004). In doing so they become agents of change in the development of their farms and influence gender roles within the family by strengthening their position within the farm.

3.1.1 THE INVISIBLE WORK OF RURAL WOMEN

The central role and economic contribution of women in rural areas and agriculture has historically been largely unacknowledged and often neglected (Ní Fhlatharta and Farrell, 2017). The uneven, gendered division of labour associated with rural occupations, featuring men as the main workers and providers in the traditional family structure and women as supporters, has caused women to become an invisible workforce in rural regions. Women in rural areas have contributed to the rural economy behind the scenes, tended to be in the shadows (Haberman and Danes, 2007) and not visible in their secondary roles (Cater and Young, 2019). Zimmerman and Larson (2010) refer to the impact of this in policy and academic terms, where attention to these issues are considered to have been neglected.

In the EU, women account for over 50% of all rural residents, 45% of those who are economically engaged, and around 40% of those who work on their family farms.
(EU, 2019).

3.1.2 PRINCIPLE CHALLENGES FACING WOMEN IN RURAL AREAS

Rural women encounter unique difficulties in a variety of spheres of their existence. These include taking on the role of primary caregiver and bearing additional responsibilities for household organization and other domestic tasks. Understanding these problems for women is crucial to creating accessible and practical policy tools that take into account their duties, preferences, and goals (Bock, 2015). Considering the specific needs of women in these areas, stakeholders, can effectively support their potential contribution to farming, innovation, and the rural economy. Issues revolve around employment, childcare and domestic commitments, and decision-making processes.

3.1.3 LABOUR AND EMPLOYMENT

Access to employment, equal pay, working conditions and gender-balanced leadership in decision-making have been identified as the main gender-based differences in rural employment in Europe (Eurostat, 2022). Celbiş (2022) found that gender is a significant contributor to rural unemployment, highlighting the disadvantages facing women in rural labour markets. In the EU, rural women make up a significant section of unpaid workers and people employed in the informal labour market (EU, 2019). Historically, the subordination of women in rural areas has hindered women from perceiving themselves as entrepreneurs

and leaders of their businesses (Akhmedova et al., 2020). The caring role that women frequently take on also limits their options in terms of career, with some women favouring home-based entrepreneurial activities due to their domestic commitments (Anthopoulou, 2010). This is turn can creates boundaries limited to certain industries including agriculture (Welter and Smallbone, 2010). Women continue to perform unpaid domestic and care labour despite being engaged in the workforce (Andersson et al., 2018), which might make it difficult for them to pursue further education and a career (Gashi Nulleshi and Kalonaityte, 2023).

3.1.4 CHILDCARE AND DOMESTIC COMMITMENTS

Impacted by traditional gender norms, rural women tend to spend more of their time on care and domestic work in comparison to their male counterparts, and thus have less time at their disposal to engage in paid work or entrepreneurship (UN Women, 2022). However, it is clear that a major influencing element is the absence of suitable childcare services, which leads to a lack of choice regarding whether to be more economically active. A Finland study found that the lack of childcare services impacted rural women, particularly in relation to engaging with the labour market (Sireni, 2015). The provision of childcare services in rural areas can also enhance the autonomy of women and has been linked to positive impacts on the development of their own skills and competences, as well as easing the balance between work and personal life for working mothers (Gramm et al., 2020). In other words, women in the rural who engage in entrepreneurship also seek non-material benefits such as work-life balance and social supports that extend to the rural community (Bock, 2015).

3.1.5 INVOLVEMENT IN DECISION-MAKING

Due to traditional patriarchal societies and social and cultural norms, women tend to be disadvantaged in terms of access to resources, and therefore are excluded from decision-making and ultimately, power relations (Molden et al., 2014). The 2022 European Gender Equality Index indicated that women remained outnumbered by men in decision-making bodies in political and economic contexts across the EU (EIGE, 2022). The 2023 Report on Gender Equality in the EU also highlights the lack of female participation in political and economic decision-making, pointing out that the equal participation of men and women in decision-making positions is necessary for the strengthening of society, as well as democracy and economy (EU, 2023). Maseda et al. (2022) contend that in rural areas, women engaged in family businesses usually prioritise the well-being of the family, business, and community and use different strategies to influence decision-making.

4. SUSTAINABLE RURAL DEVELOPMENT

4.1 SUSTAINABLE DEVELOPMENT

The notion of sustainability has become a core concern globally, with the concept being applied in a variety of contexts, including rural development (Harrington, 2016). Sustainability is very much perceived as a social construct and as a result holds many meanings in various contexts. Therefore, there are many definitions and perceptions as to the meaning of the term. Globally however, the Brundtland Report, published in 1987 by the United Nations, outlined the principles of sustainable development as generally understood, and widely accepted today. The report described the concept as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (p. 54). The "Transforming our World: the 2030 Agenda for Sustainable Development" resolution adopted by the United Nations (UN) General Assembly in 2015 sets 17 Sustainable Development Goals (SDGs), which outline the global development priorities and address the major global challenges to all four dimensions of sustainability: environmental, economic, social, and cultural. These 17 SDGs are an intrinsic part of all strategies at EU level and are seen as essential to policy formation, as the SDGs aim to create a harmonious relationship between progress and sustainability (Herman, 2022).

UN Sustainable Development Goals (UN, 2016).

4.2 RURAL DEVELOPMENT

Rural areas are unique in structure, location and available resources, meaning that the geographical, demographic, and economic conditions that prevail must be acknowledged when considering the development of any rural area. Context, therefore, is key when considering the sustainable development of these areas. There are multiple strategies for rural development, including improving agricultural productivity, promoting niche enterprise development, expanding access to infrastructure and services, supporting education and training programs, and implementing environmental conservation initiatives (Scoones, 2015). Therefore, for regional and rural development to be sustainable, the specific locational context of the community must be considered.

Since rural development can take many different forms, depending on the specific needs and priorities of a particular community, there is a risk that each form is given different attention (Scoones, 2015). For instance, it has long been criticized that rural development is only seen as an economic or agricultural process. (Ashley and Maxwell, 2001). Currently, we are aware that there is a need to see rural development as a multifaceted process that also includes social, cultural, and environmental dimensions. Rural development (research, policy, and practice) needs to be context-specific, participatory, and inclusive of marginalized groups. There is a clear need to move rural development towards promoting a diversification of rural development measures and initiatives (Naldi et al., 2015).

4.3 ENGAGING ALL CITIZENS IN SUSTAINABLE RURAL DEVELOPMENT

The United Nations (2015) recognises that sustainable rural development is crucial for the economic, environmental, social, and cultural viability of all nations. To achieve this, it is important to consider and involve all rural citizens, including women. Kapsalis (2022) emphasises the need to harness the strengths, knowledge, and skills of every citizen, tailored to the specific needs of the locality, in order to maximize the impact of sustainable rural development.

Women's active engagement in sustainable rural development is particularly significant. Kingiri (2013) acknowledges the vital role of women, especially those involved in agriculture and natural resource management, in driving rural development. Promoting sustainable rural development requires addressing gender issues and strategically promoting equity between women and men. It is essential to design rural development policies and practices that address power relations, promote greater equity, and enhance social justice. This can be

achieved through empowering marginalized groups, including women as highlighted by Ashley and Maxwell (2001).

4.4 THE IMPORTANCE OF WOMEN IN SUSTAINABLE DEVELOPMENT

UN Women, the United Nations entity dedicated to gender equality and the empowerment of women, state that globally, women are key contributors in overcoming some of the most pressing sustainability challenges facing the world today, from economic crises and a lack of adequate healthcare and other essential services, to climate change and social issues (UN Women, 2023). In the EU, women are seen as the drivers of sustainable rural development, being heavily involved in all four dimensions of sustainable development – environmental, economic, social and cultural – at a local and regional level (Oedl-Wieser, 2018).

4.4.1 ENVIRONMENTAL SUSTAINABILITY

Women are more likely to be affected by environmental issues and are therefore more vulnerable to environmental change due to factors such as social roles and norms or lesser access to financial supports to adapt to change (Stevens, 2010). Due to this, Stevens (ibid) points out that women are more likely to respond to environmental issues. As rural areas are more vulnerable to environmental issues, women's engagement is particularly prevalent in rural areas and agriculture. When adding new activities to the farm, research has shown that female farm managers are more inclined to take environmental considerations, such as soil conservation, into account than male counterparts, who are more likely to prioritise financial considerations (Villamor et al., 2014). In a study of female farmers in the Austrian Alps, Oedl-Wieser, (2018) found that women played a key role in promoting sustainable methods of farming

> WEGO promotes women's environmental sustainability
>
> A transnational network called WEGO (Well-being, Ecology, Gender and Community) created a shared research agenda to teach the next generation of interdisciplinary social-environmental scientists about feminist political ecology in Europe.
>
> Using a feminist-informed political ecology (FPE) paradigm to analyse gender connections in community organizing, this project suggests that women are the first to recognise environmental deterioration.
> (Fact Sheet #24)

and utilising traditional knowledge and methods. The author discovered that women engaged in farming were more likely than their male counterparts to implement strategies which helped their farms adapt to climate change and remain environmentally, as well as economically, sustainable.

4.4.2 ECONOMIC SUSTAINABILITY

The economic activities of women have a significant impact on the economic sustainability of rural areas. The OECD (2015) reports that the lower levels of women in the workforce, in comparison to men, contributes negatively to regional economic sustainability. In 2021, 67% of women of working age (20-64) living in rural areas in Europe were in employment, in comparison to 79% of men of working age in rural areas (Eurostat, 2022). This indicates that the economic activities of women and their participation in the labour force are crucial to ensuring sustainable economic growth and development in rural areas (Klasen and Minasyan, 2017).

Gender Gaps Hindering European Economic Sustainability

A quantitative study of the aggregate cost of gender gaps in the workforce, carried out by Teignier and Cuberes (2014), discovered that the exclusion of women from entrepreneurship and the labour force negatively impacts aggregate productivity and reduces income per capita.

This indicates that the gender gaps in entrepreneurship and the labour force weaken economic sustainability and result in an overall income loss of 10% in Europe.

4.4.3 SOCIAL SUSTAINABILITY

A society's long-term capacity to uphold and improve the welfare of its citizens, communities, and institutions is referred to as social sustainability. The focus is on social equality, justice, inclusiveness, and quality of life for both the present and future generations. It includes the social, cultural, and human components of sustainability. Social sustainability acknowledges that a truly sustainable society requires more than just economic and environmental factors (UN, 2015).

The social aspect of sustainability is one of the least researched dimensions of sustainable development, despite being one of the most complex (Young Lee et al., 2020). Nonetheless, social sustainability is a particularly important factor when considering the sustainability of rural areas and agriculture, as social

sustainability is particularly linked to environmental, economic and cultural sustainability in rural areas (Janker et al., 2019). Due to their conditioning and filters, women are recognised as vital actors in attaining social sustainability since their perspective is essential to achieving social sustainability. Women are also seen as being more sensitive to the social aspects of sustainability. (Dal Mas and Paoloni, 2019). Lemos Lourenço and Neres Lourenço (2016) also point out that women are particularly considerate of social sustainability, arguing that this is because women and other marginalised groups are more significantly impacted by an absence of socially sustainable development.

In the broader sense, women's participation in society helps to strengthen social cohesion inside the EU. They are essential to the growth of inclusive societies, social integration, and local communities. Women's networks, projects, and leadership help to close social gaps and build strong communities. In turn, women's active involvement in regional and local decision-making processes is crucial for social sustainability. More inclusive and equitable policies and practices result from ensuring that women's voices are heard, and their perspectives are taken into consideration.

4.4.4 CULTURAL SUSTAINABILITY

The maintenance and promotion of various cultural expressions, traditions, and identities within a society are referred to as cultural sustainability. The concept and practice of cultural sustainability is increasingly being acknowledged as the fourth pillar of sustainability in both research and policy arenas (Soini and Birkeland, 2014). The relevance of cultural sustainability is highlighted, for example, in the UN SDGs, as Target 4 of SDG 11 sets out to "strengthen efforts to protect and safeguard the world's cultural and natural heritage" (UN, 2015). Preserving the cultural heritage of rural areas and ensuring development is culturally sustainable is a key factor for consideration in the development of rural areas. Diaz (2014) discusses that the preservation and sustainable development of the cultural, historical and landscape heritage of a rural area can be crucial to all other aspects of sustainable development: economic, environmental and social.

Women are seen globally as one of the most prominent groups for ensuring cultural sustainability (Rezaei, 2022). Women are often seen as some of the main conveyors of intangible cultural practices, such as music, art, or handcrafts, and are often more active in the renewing and upholding of these cultural practices (Rezaei, 2022). For example, a group of rural women in northern Portugal set up a co-operative to produce and sell traditional textile products, resulting in the

reinvigoration of local craft traditions while also boosting the economy of their village (Pato et al., 2015).

Cultural Heritage as a Tool for Rural Regeneration - RURITAGE

The RURITAGE Horizon 2020 project, aimed to identify the cultural and natural heritage potential of specific rural areas in Europe and use them as engines for regeneration.
The project selected 13 rural areas as 'role models', to serve as examples of regeneration enabled by cultural and natural heritage. The successful practices of these areas were analysed and transferred to six 'replicator' areas – communities that were trying to create their own heritage-led regeneration strategies but were lacking the relevant skills, knowledge or capacities.

The project facilitated the creation of 'Rural Heritage Hubs' as a meeting place for the role models and replicators to share knowledge and skills. These Rural Heritage Hubs aided the cultural sustainability of the studied areas, with the community-driven hubs remaining active even after the completion of the project, continuing to foster sustainable growth and development through cultural and natural heritage.
(Fact Sheet #11)

Women have consistently contributed significantly to cultural innovation and creativity. The EU can draw on women's varied viewpoints, inventive ideas, and creative insights by encouraging their engagement in cultural sustainability projects. As a result, lasting cultural practices that address current issues and support cultural life may emerge. Future generations can be motivated to actively participate in cultural preservation and sustainable practices by women leaders in cultural sustainability projects who serve as role models. Their accomplishments dispel gender stereotypes and offer young girls role models who are successful and influential in their fields. This in turn can inspire more women to pursue jobs and management positions in the field of cultural sustainability. The FLIARA project in WP3 aims to seek out women engaged in cultural sustainability innovations and present them as key innovation ambassadors with the EU.

5. RURAL INNOVATION

Innovation is increasingly recognised as one of the key methods of stimulating growth and development, particularly in rural areas (Dargan and Shucksmith, 2008). This association of innovation with long-term growth and productivity is a common one. However, the potential for innovation to impact social, cultural, environmental and economic outcomes in rural regions is increasingly accepted and explored. The concept of innovation is ideally placed to address these and other issues that rural areas face as it increases the opportunities for sustainable development and the dissemination of knowledge, which then creates new opportunities for rural areas and their inhabitants (Lee et al., 2020). Rural innovation presents rural populations with opportunities to drive and sustain the development of their own areas in a way that incorporates local context, utilises local resources and knowledge, thereby directly addressing the specific needs of individual rural areas (Ní Fhlatharta and Farrell, 2017). Rural innovations, for example, can address the relative lack of access to necessary resources and services, such as overcoming market distances through online services and automated delivery services or removing barriers to education and training through distance learning (OECD, 2022).

Rural Innovation: "The introduction of something new (a novel change) to economic or social life in rural areas, which adds new economic or social value to rural life"
(Mahroum et al., 2007, p.6).

Innovation: Addressing Rural Challenges

In order for rural areas to thrive, "Unlocking Rural Innovation" (OECD, 2022) examines the significance of utilising their innovative potential. The results outline some of the ways that innovation may address issues in rural regions by:

➢ **Developing resilient and sustainable solutions**: make positive systematic change from the co-operation of multiple stakeholders towards a collective goal.
➢ **Activating the power of collective knowledge**: finding innovative ways to address specific societal challenges by involving various stakeholders.
➢ **Increasing a sense of belonging to a local area and community:** the creation of more active and vibrant rural societies can lead to an increased sense of belonging and a reduction in out-migration.
➢ **Improving the impact and value for money:** finding alternative and cost-efficient ways to provide services and reduce future costs by reducing the negative externalities of economic activities.

5.1 VISIBILITY OF WOMEN IN INNOVATION

The concept of innovation can be highly gendered as the historically dominant association is with males in sectors such as science, engineering and technology (Alsos et al., 2013). As a result, women may carry out innovation activities in industries that are not considered to be prominent sectors for innovation, or in social or geographical contexts where innovation is not looked for or championed, and therefore do not get recorded as innovative. Foss and Henry (2016) emphasise the fact that it is typical for female-led ideas to not be seen as 'real' innovations, which furthers the marginalisation of female innovators.

Research from Bijedić et al. (2016), based on empirical evidence from Germany, found that women are less likely than men to produce technologically based innovations. The authors link this to contextual factors, which perpetuate traditional gender roles and expectations, as well as institutional factors such as tax and family policies, which influence personal preferences in educational and professional choices. Bijedić et al. (2016) conclude that the invisibility of women in innovation, and particularly technologically based innovation, is not because women are less innovative but due to a combination of institutional and cultural factors.

5.2 WOMEN AS DRIVERS OF RURAL INNOVATION

Several scholars report that women are at the forefront of innovation in rural areas (Markantoni and van Hoven, 2012, Ní Fhlatharta & Farrell, 2017). Segovia-Pérez et al. (2022) note that women tend to be the ones to introduce new ideas and methods at a local level. These trends show an awareness among rural female innovators of the needs and opportunities in their localities, which benefit the development of rural areas. However, an examination of female innovators by Torres (2019) found that rural innovations, when carried out by women, are usually either *social innovations*, innovations centered on the conservation of local tradition and culture, or tourism-based innovations. While a very important aspect of rural innovation, it is also crucial to provide robust critiques of narratives that tend to link women predominantly with social innovation above other forms of rural innovation as part of challenging stereotypes of women as somehow responsible for leading on rural social issues.

> *Social innovation* has been defined by the SIMRA project (2020) as "the reconfiguring of social practices, in response to societal challenges, which seeks to enhance outcomes on societal well-being and necessarily includes the engagement of civil society actors".
> *(Fact Sheet #10)*

5.2.1 THE ROLE OF WOMEN IN AGRICULTURAL INNOVATION

Women play an integral role in agricultural innovation. As Martinho (2020) points out, women are associated with a more innovative approach to farm management, often introducing innovative practices and ideas to the farm and thereby positively influencing the sustainability of their farm. Women are often the drivers of multifunctional agriculture also, producing not only commodity outputs like food or agro-fuels, but also non-commodity outputs including environmental services, cultural heritage or landscape amenities (Oedl-Wieser, 2018).

> **Variety of Agricultural Innovations from Female Farm Managers**
>
> De Rosa et al. (2021) surveyed 300 female farm managers across Italy in order to identify the main types of innovations women incorporate into their farms
> Medium or large farms run by women tend to mainly engage with 'traditional' farming innovations, ranging from the implementation of new practices, for example, organic farming, to the incorporation of new knowledge into existing farm practices.
> Smaller farms with female farm managers tend to incorporate 'non-traditional' innovations or focus on farm diversification, such as the production of niche and novelty products or services.

Women are more prone to cross agricultural boundaries and start new businesses on farms, which is why multifunctional agriculture is often associated with women (Dias et al., 2019).

5.2.2 SUPPORTING FEMALE-LED RURAL INNOVATION

Rural innovation ecosystems can support innovation. Policies, infrastructure, and social and cultural contexts are examples of contextual elements that affect and are themselves influenced by innovation ecosystems. (Cukier et al., 2022). Innovation ecosystems also include organisations and institutions such as universities, financial institutions, public organisations, incubators, acceleration programmes and business support organisations (Brown and Mason, 2017). The innovation ecosystem can be viewed as a vehicle through which business support, skills, improvement or government interventions can be implemented (Marshall and Murphy, 2017). Uvarova and Vitola (2019) suggest that rural areas in Europe have gaps or shortcomings in their innovation ecosystems, including a lack of supporting infrastructure, information and educational opportunities, a lack of co-operation and networking opportunities, or insufficient external support.

Literature shows that women are significant contributors within their innovation ecosystems through the sharing of creative ideas, services, products, and approaches (Grekou and Gueye, 2021). Cukier and Chavoushi (2020) however, observe that the complexities of innovation ecosystems can reinforce the barriers faced by female innovators and form gaps in the innovation ecosystem.

Challenges of Rural Innovation – Interreg Europe

Interreg Europe (2019) in a policy brief outlines some of the main gaps experienced in local innovation ecosystems across rural Europe:

➢ **Depopulation and brain drain***:* Rural regions have lower population densities which are unable to sustain the same levels of services and institutions as urban areas. This also encourages out-migration of young, highly skilled and educated citizens.
➢ **Critical mass of innovation actors:** Rural innovation ecosystems have fewer higher education institutions and specialised research facilities, resulting in fewer highly skilled researchers to provide innovation input support innovation ecosystems.
➢ **Digital infrastructure**: Many rural areas do not have access to modern broadband infrastructure, resulting in a lack of digital infrastructure and digital services.

According to Carrasco (2014), the social, political, and economic framework in which women lead innovation has a significant impact on it, both favorably and adversely. Accessing the necessary land, capital, tailored supports, or resources, for instance, are some of the most difficult barriers facing women (Prain et al., 2017). This finding may reflect enduring societal norms about the status of women as innovators, including their relative standing in the eyes of stakeholders who control access to such resources. Prain et al. (ibid) also mention that negative attitudes or an unsupportive family situation can be extremely challenging to overcome and negatively impact innovation efforts. The reinforcing of patriarchal social structures, stereotypes and norms, as well as non-inclusive policies and practices of organisations fortify the many other barriers facing female rural innovators (Cukier and Chavoushi, 2020).

5.2.3 SOCIAL AND BEHAVIOURAL DRIVERS OF WOMEN-LED INNOVATION

To ensure that rural innovation ecosystems can foster female-led ideas, policies and other supports are important change agents. The way society views innovation, the involvement of women and other marginalised groups in innovation, and the kinds of breakthroughs that are judged desirable are all heavily influenced by the policies that encourage innovation. Therefore, policy is a highly influential driver of female rural innovation (Alsos et al., 2016). Institutional change through policy measures focused on gender equality and inclusion has been recognised as a key driver of the social and behavioural change necessary to address the specific issues faced by women in rural areas and therefore facilitate female-led innovation in rural areas and agriculture (Mergaert et al., 2022). Bartoli et al. (2019) suggest that policies supporting rural innovation should be more targeted by considering the needs and challenges facing rural

> Driving Female Innovation in Rural Spain
>
> A project delivered by the Spanish National Rural Network (2010) aimed to develop interregional cooperation in the regions of Andalusia, Asturias, Castile-La Mancha, Castile-Leon and Madrid. The main objective of this project was the promotion of female entrepreneurial initiatives and employment-based social economy initiatives such as cooperatives, worker-owned companies and partnerships. The project utilised information and communication technologies to eliminate the differences experienced by male and female participants in accessing resources and information.
> This project, which prioritised gender considerations throughout, resulted in:
>
> ➢ 883 women participating in training courses
> ➢ 43 new companies established
> ➢ Over 1000 women assisted by employability professionals.

women and providing an articulated set of measures, which addresses each element. Enabling policy frameworks, including supportive regulations and incentives, can create an empowering environment for women-led rural innovation. Government initiatives, such as funding programs, business development services, and incubation centers, can further facilitate the growth of innovative women-led enterprises.

Methods such as *gender mainstreaming* are often turned to as a way of ensuring that the needs of women are considered in all policies and programmes, which are implemented. The European Commission has committed to integrating the process of gender mainstreaming into all future policy design, implementation and monitoring due to its significant potential for promoting gender equality and the empowerment of women. Although the EU policy mandates gender mainstreaming, there are still existing gaps. Shortall (2015) examines this issue within the context of the Common Agricultural Policy (CAP), revealing that policy advancements primarily address the symptoms of gender inequality rather than its underlying causes. A study from the EU on the professional status of rural women in the EU (2019) emphasises specific areas requiring attention, such as directing policy measures towards establishing a supportive infrastructure for sustainable and climate-resilient farming and food production led by women.

Gender mainstreaming involves ensuring that gender perspectives and attention to the goal of gender equality are central to institutional activities, from policy development and legislation to research, advocacy, and resource allocation (True and Mintrom, 2001).

Policy interventions, including gender mainstreaming are essential in addressing the social and behavioral drivers that can contribute to empowering women and fostering a thriving ecosystem for women-led innovation. Additional factors can also inhibit or hinder women's participation and success in innovation. These include access to education and skills, supportive networks, mentoring, and access to finance and resources. Alongside these, are issues around work life balance and caregiving responsibilities, if supported positively via policy and programmes can enable women to pursue innovation while managing family life (Rosca et al., 2020).

6. FEMALE ENTREPRENEURSHIP

6.1 ENTREPRENEURSHIP AS A PATHWAY TO SUSTAINABLE RURAL DEVELOPMENT

Entrepreneurship has been described in many ways, as a behaviour, a process or a range of activities. Frith and McElwee (2009) conceptualise entrepreneurship as a type of behaviour, and/or a range of activities, which drives economic development and growth. Anderson et al.(2012) endeavoured to understand the concept by acknowledging the various social constructions of entrepreneurship, which present the diversity of the term through its different meanings and roles but conclude to understand entrepreneurship as a process of connecting people and resources. Gaddefors and Anderson (2019) view

> The European Commission defines *entrepreneurship* as "acting upon opportunities and ideas and transforming them into values for others, which can be financial, cultural or social" (European Commission, 2023).

entrepreneurship not as one singular thing, but as a verb, "entrepreneuring" (p.7), one does entrepreneurship, rather than entrepreneurship being a result or resulting in something.

The sustainable development of rural communities is increasingly seen as a path that includes entrepreneurship. Due to the creation of new places for innovation, entrepreneurial activities are thought to be a driver of innovation adoption in rural environments (De Rosa et al., 2021). Subsequently, rural entrepreneurship has been linked to a reduction in poverty and unemployment, and the creation of dynamic rural economies (Aggarwal and Johal, 2021). For instance, by utilising what is "there" in the rural area, business and the community can collaborate and support rural development, allowing both the community to thrive and entrepreneurship to flourish (Berglund et al., 2016). The creation of small and medium enterprises (SMEs), particularly in secondary and tertiary sectors, can work towards stabilising and strengthening rural economies (Stathopoulou et al., 2004). Ge et al. (2022), describe SMEs as the economic engine of rural economies, creating employment opportunities and economic development, while also having the ability to positively impact the social welfare of their localities. Atterton (2016) views the entrepreneurial capacity of local populations to be a key factor in the economic sustainability of rural areas, but it is also imperative that all rural areas recognise the value of entrepreneurial residents and maximise their resources in this area for the sake of their sustainable development. McKeever et al., (2015) recognise the economic benefits of

entrepreneurship in rural areas, but also acknowledge the stimulation of additional benefits such as welfare services, and an active social community.

6.2 WOMEN'S CONTRIBUTION TO RURAL AREAS THROUGH ENTREPRENEURSHIP

The participation of rural women in the formal economy is effectively sustaining many rural populations, while the contribution of specifically female entrepreneurship on rural regions has been shown to be crucial in enhancing the sustainability of rural populations (Haugen, 2017). The support and encouragement of rural female entrepreneurship is considered to be "smart economics" due to the positive impact it can have on rural economic efficiency and growth (Ge et al., 2022, p.2). Aggarwal and Johal (2021) view female entrepreneurs as key agents for rural development due to their ability to positively transform rural areas economically, socially and culturally, thereby contributing to the sustainable development of rural areas. Tillmar et al. (2022), describe female entrepreneurship as an untapped resource for the development of rural areas, and point out that female entrepreneurs, while economically supporting their rural areas, also make significant contributions that are not solely economic, such as community-based services, food systems, care services, and often act as the socio-economic glue which holds families together.

> Markantoni and van Hoven (2012) found that the activities of rural female entrepreneurs in Veenkoloniën, Netherlands, had the potential to significantly improve the quality of life and wellbeing of their families, enabling households to remain in declining rural areas.

6.2.1 WHY RURAL WOMEN ENGAGE WITH ENTREPRENEURSHIP

Many factors can be seen as drivers of female innovation and entrepreneurship. Female entrepreneurship and business creation is often viewed as a response to negative circumstances, such as unemployment or the need for a healthy income (Ní Fhlatharta and Farrell, 2017). Minniti (2010) identifies financial constraints as a motivation for women to create an enterprise, as well as a relationship between female entrepreneurship and a lack of employment opportunities for women, which is particularly visible in rural areas. Warren-Smith and Jackson (2004) also found that a lack of employment opportunities was a significant motivator for rural women to engage in entrepreneurship. Cardella et al. (2020) explore the inequalities in employment and parental status among women entrepreneurs in rural areas, while also revealing that women with higher education levels who are unable to find adequate employment possibilities are more inclined to start their

own businesses. The authors discovered that a need for flexibility, necessitated by their other commitments, including farm work or care responsibilities, was another significant factor for women when deciding to become self-employed. In an examination of female agricultural entrepreneurs, Bock (2004) showed that women were motivated by financial difficulties, but also that many women were influenced by a desire to create an independent professional career. This study found that developing a personal career and creating a professional domain of their own was, in some cases, of equal importance to obtaining extra income.

Entrepreneurship is often seen as a way for women to gain empowerment, such as when they start their own businesses and gain additional control of their own life and in turn their own finances (Alkhaled and Berglund, 2018). Female empowerment means giving women the ability to have control and influence within different systems (Roos and Gaddefors, 2022), which can occur when women take charge of their own lives or when institutions and organisations support and uplift them. As a consequence, when women are empowered, they can be true to themselves and have more opportunities in life, which potentially can lead to better performance and satisfaction.

6.2.2 BARRIERS EXPERIENCED BY RURAL FEMALE ENTREPRENEURS

The barriers encountered by women who wish to engage in entrepreneurship can limit or even prevent women from starting their own enterprise. Research carried out by the Policy Department for Citizens' Rights and Constitutional Affairs (2019) found that female entrepreneurs represent only one third of all self-employed people in the EU. The same research found that the entrepreneurial efforts of rural women are often hampered by insufficient business knowledge, skills and confidence. These issues are often perpetuated by a lack of access to the necessary financial resources, training and education, or participation in decision-making. Ní Fhlatharta and Farrell (2017) also mention that access to education; financial services and other resources are significant barriers to rural female entrepreneurship. Ní Fhlatharta and Farrell (2017) draw attention to the reluctance of some rural women to enter entrepreneurship because of hegemonic discourses portraying entrepreneurship as a challenging, male-dominated environment. Sarkki et al., (2021) point to the patriarchal gender roles consistently reinforced in rural areas as a significant

Although they account for over half of the global potential talent base, "women as a group are continuously marginalised and their economic, social, environmental and cultural contributions go unrealised" (OECD, 2008).

barrier, leading to a male dominated economy and policy, as well as a lack of opportunities for education. Price and Conn (2012) also note the impact of patriarchal gender norms in rural areas, reinforcing the key barriers which rural women face, including inadequate access to education, gender stereotyping, patriarchal inheritance practices, difficulties in reconciling work and family obligations and problems accessing resources such as land, finance and business networks, inhibiting their efforts of entering entrepreneurship.

Barriers Faced By Female Rural Entrepreneurs – FEMAGREE

The FEMAGREE (Female agricultural Entrepreneurs identifying barriers to equality) project examined how rural female businesswomen can be supported to become successful entrepreneurs.

Project participants identified the barriers faced when starting their businesses:

➢ **Workload**: almost all participants reported average weekly working hours of well over 40 hours. Many women also were responsible for care work for children, elderly or sick dependants alongside their business.
➢ **Knock-on effects of a high workload**: the high workload negatively impacted other areas of business management and development as there was little time to address any issues outside of day-to-day running of the business, household and family if present.
➢ **Employment costs**: most participants could not offer full-time employment, relying on employed part-time or seasonal staff, with unpaid family help to reduce workload.
➢ **Gender stereotypes**: almost all participants had experienced gender stereotyping in their role as business manager, for example, bank employees, advisors, suppliers or customers asking to speak to their husband or boss.

7. OPPORTUNITIES IN DIGITAL AND ECOLOGICAL ENTREPRENEURSHIP

In recent years, a significant and more noticeable subfield of entrepreneurship is sustainability-related entrepreneurship (Gast et al., 2017). The opportunities in sectors of entrepreneurship perceived as more sustainable in a variety of ways, such as digital entrepreneurship or ecological entrepreneurship, are becoming increasingly more visible. Cohen and Winn (2004) discuss how sustainable entrepreneurial opportunities are identified, using an 'allocative' perspective, which sees entrepreneurial opportunities arising when there is the potential to redistribute resources for the betterment of others without making others worse off.

The ongoing digitalisation of rural areas offers opportunities for rural innovators, especially women, to develop the digital resources that are becoming available to them in order to build sustainable businesses in rural areas while removing some of the obstacles that frequently confront female rural entrepreneurs. In the case of ecological entrepreneurship, the dated assumption which assumes that advances in ecological sustainability require an inherent trade-off in profitability is being replaced by an acknowledgement of the opportunities that lie in ecological entrepreneurship (Winn and Kirchgeorg, 2005), particularly for rural areas, as the combination of ecological and economic development priorities benefits the sustainable growth of rural regions.

7.1 DIGITAL ENTREPRENEURSHIP

Digitalisation has introduced many changes to how modern entrepreneurs conduct business. It has shaped business models and their possible characteristics in line with their digital potential, as well as introducing many new forms of business, which did not exist prior to modern advances in digital technology (Kraus et al., 2018). The continuous advancements in digital technologies consistently create opportunities for entrepreneurs to innovate within their business, from providing a completely new range of digital products and accessing their customer base in new ways, to challenging traditional business with radical new business

Digitalisation is the ongoing integration of digital technologies and digitised data into the economy and society (Eurofound, 2023).

models (Autio et al., 2020). Entrepreneurs in the EU are embracing digital technologies and increasingly incorporating them into their business activities. For example, in 2022, 21% of EU enterprises employed an ICT specialist, 50%

conducted meetings over the internet and 1 in 5 EU enterprises made electronic sales (Eurostat, 2023).

7.2 THE RURAL DIGITAL DIVIDE

For rural areas to benefit from digitalisation and the opportunities digital entrepreneurship presents, rural citizens must have access to the necessary digital technologies and the skills to apply them. However, there is an uneven distribution of digital technologies across rural areas, causing a *digital divide* between urban and rural and testing the resilience of rural areas in an increasingly digital world (Roberts et al., 2017). Poor digital resources in rural areas hinder the success of digital entrepreneurs and in turn, diminishes the positive impacts these businesses can have on rural areas. The ramifications of this digital divide for rural entrepreneurs include limited computer skills, lack of engagement with social media, limited scope for innovation and restricted business growth (Bowen and Morris, 2019).

Digital divides are "the uneven ways in which people have access to digital technology", created by many factors including the accessibility of technologies, provision of technologies and education (Roberts et al, 2017, p.356).

Digitalisation, Gender Equality and Sustainable Development - DESIRA

DESIRA (Digitisation: Economic and Social Impacts in Rural Areas), a Horizon 2020 project which aims to improve the capacity of society and political bodies to respond to the challenges that digitalisation generates in agriculture, forestry and rural areas.

The DESIRA Project established Living Labs – 20 networks of stakeholders established across Europe, consisting of stakeholders who represent a variety of agricultural, rural and forestry domains.
These Living Labs aimed to identify the contribution digitalisation may have on the 17UN Sustainable Development Goals (SDGs).
The DESIRA Living Labs found that digitalisation could positively contribute to SDG5 Gender Equality and SDG10 Reduced Inequality.

(Fact Sheet #2)

7.3 IDENTIFYING DIGITAL ENTREPRENEURSHIP

It can be challenging to distinguish between digital and traditional kinds of entrepreneurship because of the economy's ongoing digitalisation. Sussan and Acs (2017) point out that almost all forms of entrepreneurship could now be viewed as digital entrepreneurship, considering that many traditional enterprises now depend on digital technologies to carry out their day-to-day activities.

Other conceptualisations see digital entrepreneurship as a reconciliation between traditional entrepreneurial activities and the new methods of creating and doing business that are becoming increasingly available due to digitalisation (Le Dinh et al., 2018). Naudé and Liebregts (2020) suggest that digital entrepreneurship is distinct from traditional entrepreneurship in that the digital nature of the entrepreneurial opportunity influences the process of entrepreneurship. Nambisan (2017) argues that digital technology can be part of entrepreneurship as a part of the product, or as digital infrastructure that support the process (e.g. online communities, social media, cloud computing). The digital technology creates less bounded entrepreneurial processes and outcomes, and the agency becomes more distributed in the process (Nambisan, 2017), which results in more fluid spatial and temporal boundaries of the process and also a broader set of actors involved with varied goals and resources. This indicates that the opportunity keeps growing even after a business has been launched and that this interaction takes place amongst a broader group of stakeholders who change over time.

Digital entrepreneurship refers to "the creation of digital businesses and the adoption of digital technologies by existing entrepreneurs" (OECD/European Union, 2019, p.178).

7.3.1 DIGITAL ENTREPRENEURSHIP IN THE RURAL

Digital entrepreneurship holds significant potential to positively affect rural areas. The creation of digital enterprises in rural areas aids economic development as it acts as a critical facilitator of economic growth, job creation and innovation (Zhao and Collier, 2016). This is particularly relevant to rural economies, as the availability of digital technologies encourages rural entrepreneurs by making entrepreneurship less spatially bound, allowing rural enterprises to act on an international platform and compete with larger businesses (Gerli and Whalley, 2022).

Digital Entrepreneurship in Fundão, Portugal

Rodrigues and Franco (2021) examined the impacts of digital entrepreneurship in the municipality of Fundão, Portugal and discovered multiple beneficial implications of digital entrepreneurship on this rural area, including:

➢ Encouraging the formation of local bonds and networks
➢ Stimulating population growth
➢ Attracting new external investments

As such, entrepreneurship is shaped by the interplay of local and online interactions, allowing actors to tap into digital resources and drive transformative changes within their local communities (Jonsson and Gaddefors, 2022).

Digital entrepreneurship has also been shown to have a profound impact on the social and cultural development of rural areas. Shaping Europe's Digital Future (2020) highlights the necessity of facilitating digital entrepreneurship, digital innovation and technological diffusion in regional areas, in an effort to improve quality of life, increase employment opportunities, encourage a fair and competitive economy and close existing participation gaps, particularly in rural areas experiencing population decline.

7.4 WOMEN IN DIGITAL ENTREPRENEURSHIP

The pathway of digital entrepreneurship has been described as more of a level playing field for women as it can remove some of the barriers that women face when engaging with traditional entrepreneurship (Pergelova et al., 2018). McAdam et al. (2019) also suggest that digital entrepreneurship could facilitate the engagement of marginalised groups, including women, as online platforms often develop values independent to local social values and norms, allowing female digital entrepreneurs to carry out their business activities independent of these restrictions. Digital technologies can ease the barriers experienced by female entrepreneurs in a variety of other ways also, for example by offering convenience, ease of use, large audience reach, lower start-up costs, flexibility and interactivity (McAdam et al., 2019).

> The European Commission's 2021 Women in Digital Scoreboard found a significant gender gap in specialist digital skills and low levels of digital literacy among women in Europe, with only 54% of women having at least basic digital skills.

The idea of digital entrepreneurship as a "neutral" kind of entrepreneurship, however, is challenged by some, who perceive it as an outdated viewpoint. Dy (2022) argues that the social and institutional restrictions on marginalised groups engaging with entrepreneurship are often reproduced in the digital space, reinforcing the limitations felt by women and other groups in entrepreneurship. The United Nations Conference of Trade and Development (UNCTAD) (2022) highlighted this point also, stating that the benefits of digitalisation are not automatically experienced by women. This report mentions that women across all regions and continents still face multiple, multi-dimensional obstacles to succeed in digital entrepreneurship, including

> **Skills of Female Digital Entrepreneurs – DEW**
>
> DEW (Digital Entrepreneurship for Women) addresses the issue of social and economic exclusion of women, particularly those from marginalized backgrounds.
> The DEW project highlighted the four most important skills which must be developed for successful female digital entrepreneurs:
>
> ➢ Self-awareness
> ➢ Motivation
> ➢ Planning and management
> ➢ Financial literacy
> (Fact Sheet #4)

gender bias, lower participation in decision-making processes, limited digital skills and unequal access to funding (UNCTAD, 2022).

7.5 ECOLOGICAL ENTREPRENEURSHIP

Ecological entrepreneurship has been referred to by a variety of terms, including "sustainable entrepreneurship", "environmental entrepreneurship", and "green entrepreneurship". The interest in ecological entrepreneurship has grown considerably in recent years, with the demand for "green" products and services growing, and consumers and producers' alike being more invested in the incorporation of sustainable principles into the activities of enterprises (Sumathi et al., 2014). This has been encouraged by the gradual recognition that environmental protection and economic sustainability can go hand in hand (Winn and Kirchgeorg, 2005). Ecological entrepreneurship does not solely prioritise ecological or social missions, nor does it focus primarily on the financial aspects of entrepreneurship, although they do generally seek economic return (Muñoz and Cohen, 2017).

> *Ecological entrepreneurship* balances economic health, social equity, and environmental resilience, and creates long-term opportunities for sustainable development, providing win-win solutions for all stakeholders (Winn and Kirchgeorg, 2005).

7.5.1 TRAITS OF ECOLOGICAL ENTREPRENEURS

Research has shown that ecological entrepreneurs tend to possess similar personal characteristics and motivations for engaging with this type of entrepreneurship. Silajdžić et al. (2015) found that, although significantly impacted by other factors such as location and local support, the success of ecological entrepreneurs often hinges on whether the entrepreneur possesses strong motivation, a clear mission and a forward-thinking mindset. Gast et al. (2017) also found that the entrepreneurs' motivations are closely linked to the creation of successful ecological enterprises. The authors point out that some ecological entrepreneurs share similar motivations to other entrepreneurs, such as a desire for independence and autonomy, but their primary motivation is to create a sustainable enterprise, educate and spread their green values. Personal values have also been found to have a significant impact on the success of ecological entrepreneurship endeavours. The alignment of personal sustainable and lifestyle factors of the entrepreneur with the ecologically conscious enterprise appears to underpin successful and authentic ecological enterprises (Swan et al, 2016).

7.5.2 ECOLOGICAL ENTREPRENEURSHIP IN RURAL AREAS

The development of rural areas depends on the preservation of the natural environment and landscape while also fostering sustainable growth, therefore ecological enterprises stand to benefit rural communities in particular. An examination of ecological enterprises in rural areas of Bosnia and Herzegovina revealed that the communities which housed ecological enterprises benefitted economically and environmentally, but also socially, through environmental education, rural community growth, and job creation (Silajdžić et al., 2015). Ecological entrepreneurship has also been successfully employed as a method of converting traditional rural economies to more sustainable ones by introducing different types of opportunities to the population, such as renewable energy alternatives or methods of reducing food waste (Todirica et al., 2018). Two of the most notable ecological entrepreneurship opportunities for rural areas are organic farming and eco-tourism.

7.5.2.1 ORGANIC FARMING

The European Commission defines *organic farming* as "an agricultural method that aims to produce food using natural substances and processes" (European Commission, 2023).

Organic farming as an ecological entrepreneurship strategy is economically effective, ecologically compatible, socially responsible and can have many beneficial implications of the sustainable development of rural regions (Terziev, 2016). Organic farming tends to have a limited environmental impact when compared with other methods of farming, as it encourages the responsible use of energy and natural resources, biodiversity, soil and water quality (European Commission, 2023).

Mieszajkina (2016) outlines the significant development potential for rural regions. For example, while organic farming is more labour-intensive, the produce tends to have a higher price point, guaranteeing more revenue while creating additional job opportunities. Organic farming also has the potential to increase the commercial and tourism attractiveness of rural regions, creating opportunities for further business creation and income generation.

As of 2021, organic agriculture is practices in 187 countries, with 72.3 million hectares of agricultural land and 3.1 million farmers dedicated to organic farming (FAO, 2021).

7.5.2.2 ECOTOURISM

Ecotourism is another form of ecological entrepreneurship, which combines the conservation of the natural environment with positive economic outcomes. It typically occurs in naturally beautiful or unique areas and should contribute to the preservation of such areas. Ecotourism enterprises are typically small-scale operations, with typical examples being wildlife viewing, nature walks or cultural tours (Swan et al., 2016). Ecotourism encourages knowledge acquisition and appreciation of the environment while supporting sociocultural and environmental sustainability (Nowaczek and Fennell, 2002). Ecotourism must be developed in a way that is environmentally conscious in order to combine social and economic concerns with conservation goals. Ecotourism, which is most

> Ecotourism is defined by Fennell as "a sustainable form of natural, resource-based tourism that focuses primarily on experiencing and learning about nature, and which is ethically managed to be low impact, non-consumptive and locally originated" (2004, p.43).

common in rural regions, has been found to have a positive impact on the development of rural areas by preserving the environment, generating wealth, and enlightening tourists about the region while bringing about social and cultural benefits (Boiko, 2020). A study of ecotourism entrepreneurs in rural Australia, carried out by Swan et al. (2016) demonstrated that ecotourism businesses often choose to remain small to ensure low impact tourism, prioritising their ecological commitments over continuous growth. Despite this strategy, the study showed these ecological enterprises continued to have significant impacts on their surrounding rural areas, conserving the natural environment and aiding economic development.

7.6 WOMEN IN ECOLOGICAL ENTREPRENEURSHIP

Ecological entrepreneurship presents a new variety of options for innovative, entrepreneurial women. Female entrepreneurs, in comparison to their male counterparts, tend to be more strongly motivated by ecological values and tent to more frequently engage with ecological entrepreneurship in its many forms (Gunawan et al., 2021). Women who engage with ecological entrepreneurship also have the potential to create significant personal gains. Savastano et al., (2022) found that ecological entrepreneurship could be a source of empowerment for women in rural areas, benefitting their personal wellbeing and development while encouraging the sustainable socio-economic development of their societies. Marković et al., (2019) also demonstrated that through ecological entrepreneurship, women could gain status, approval and recognition in their societies, potentially enhancing women's self-esteem and strengthening their position in their community.

Utilising traditional ecological knowledge for income creation - EWTEK

EWTEK (Empowering Women with Traditional Ecological Knowledge), a Horizon 2020 project coordinated by the University of Rotterdam, Netherlands, focused on the advancement of rural women in Morocco and the promotion of socioeconomic development through the utilisation of traditional ecological knowledge.

The project highlighted that women are continually underestimated for their important contribution to producing and securing food, managing natural resources, and their ability to earn an income through these activities. Therefore, the project investigated women's traditional ecological activities, looking in particular at the transfer of women's ecological knowledge and environmental practices into income generating activities.

The results showed that the traditional ecological knowledge possessed by the rural women could be successfully integrated into the development of products derived from natural resources, thereby creating an income for the women involved.
(Fact Sheet #9)

8. FORESIGHT AND TREND ANALYSIS

The Knowledge Review for the FLIARA project detailed and outlined above, explores and highlights past and current literature and projects, which enhance our understanding of women leading, or challenged in their attempts to lead rural and farming innovative practices. Work Package 2 of FLIARA goes beyond the current and contemporary and employs an innovative foresight and trend analysis methodology to envision future sustainability trends in farming and rural areas and the role women will play in these future trends. The key objective for FLIARA in this process is to envision the role of women in the innovations demanded for sustainable farm and rural futures. The specific objectives are; envisioning sustainable farm and rural futures in European contexts, identifying sustainability innovations necessary to realise these visions, and identifying possibilities to be promoted and obstacles to be removed to allow women's contribution to these sustainability innovations support this. The following section provides a brief introduction to key aspects of foresight and trend analysis, which will be further explored and developed in WP2, T2.1 and T2.2.

8.1 WHAT IS FORESIGHT ANALYSIS?

The initial futures planning and development methodologies, which predate techniques such as foresight analysis, emerged in the United States during the 1950s, with techniques such as long-range planning (Gómez-Limón et al., 2009). However, these initial techniques were held back by their assumptions that futures could be considered as predictable paths, derived from currently available information (Gómez-Limón et al., 2009). The foresight analysis carried out as part of FLIARA involves planning, designing and evaluating alternative futures, rather than forecasting or crafting one specific future. 'Foresight and the Transition to Regional Knowledge-based Economies', a report from the European Commission (2004) explains that foresight does not strive to predict or reveal the future as if it were predetermined, but rather to assist in shaping it. Foresight promotes a perspective that regards the future because of our own creative efforts, rather than a predetermined outcome. (EC, 2004). The manifestations of these alternative futures are most often organised in the form of trends, scenarios or futures images. Trends, in the context of foresight analysis, are general

> The Forward Thinking Platform, a network of foresight practitioners from different sectors and disciplines, defines as "a systematic, participatory, and multi-disciplinary approach to explore mid- to long-term futures and drivers of change" (2014, p.14).

tendencies or directions of a movement or change over time. Megatrends are major trends at large or global scales (Forward Thinking Platform, 2014).

8.2 ENVISIONING RURAL FUTURES USING FORESIGHT AND TREND ANALYSIS

Foresight and trend analysis is often applied to, and is well suited to rural and agricultural contexts (Prager and Wiebe, 2021). The involvement of a variety of relevant stakeholders is crucial to sustainable rural development, and the modern foresight concept requires participation and active use of the expert knowledge of relevant stakeholders (Gusmanov et al., 2020). Whereas other planning methods focus on guessing or assumption of future conditions, foresight analysis creates a map of possible futures by visualising the unique socioeconomic conditions of a rural area and considering the possible pathways of achieving desired results (Calabrò and Cassalia, 2018).

9. CONCLUSION

9.1 THE FLIARA PROJECT

The FLIARA project aims to create a European-wide ecosystem, which supports women-led innovative practices in farming and rural areas. The following fundamental aspects of FLIARA underpin the scope of our review of existing knowledge. The project is set against a background of two key issues:

- A long-standing patriarchal ethos, where males are recognised as custodians of the farm and countryside, while the role of rural and farming women has often gone unrecognised.
- The imperative nature of engaging all rural citizens in the sustainable development of agriculture and rural areas.

The main goal of FLIARA is to make sure that women are included in and supported by a more effective innovation ecosystem that highlights their accomplishments, serves as a source of knowledge and inspiration, connects them with key actors involved in innovation. An effective ecosystem also needs to increase rural women's visibility in institutional decision-making contexts at the national and international levels and builds their capacity and improves their skills to enable them to continue leading or start leading innovative practice on farms or in rural areas.

9.2 CONTRIBUTIONS OF THE KNOWLEDGE REVIEW

This review report has presented a knowledge base for the project by exploring academic literature, practitioner reports and relevant European projects. It has worked towards identifying how female-led innovation is enabled by rural innovation ecosystems and has explored the perceived gaps in rural innovation ecosystems including a lack of supporting infrastructure, information and educational opportunities, a lack of co-operation and networking opportunities, negative attitudes, or insufficient external support.

The project also increases our understanding of the needs and challenges facing women leading innovative environmental and rural development practices in EU farming and rural areas. To support this, the review of existing knowledge has explored the various barriers to female-led innovation fortified by the reinforcing of patriarchal social structures, stereotypes and norms, as well as non-inclusive policies and practices of organisations. The key factors and drivers that support female innovation, particularly policy supports and gender mainstreaming, have also been discussed in the context for female-led innovation in rural areas and agriculture.

The FLIARA project intends to combat existing gender norms and stereotypes by presenting the innovative capacity of women in agriculture and rural areas, with a particular focus on women's contribution to the four dimensions of sustainability – environmental, economic, social and cultural. The review has explored the imperative nature of involving women in sustainable rural development, as women are seen to hold distinct roles in furthering the environmental, economic, social and cultural development of rural areas and agriculture. The contribution of entrepreneurship, and particularly female entrepreneurship, to the sustainable development of rural areas is explored, as well as the opportunities in areas such as digital and ecological entrepreneurship for rural and farm women.

9.3 IMPLICATIONS

Gender discrimination is still pervasive in rural regions and the agriculture industry across the EU. When it comes to pay, training opportunities, and leadership roles, women still may experience discrimination. Their ability to make decisions and their participation in agricultural organizations and policymaking is still constrained by conventional gender roles and stereotypes.

What we have seen from this knowledge review is the crucial role women currently play in engaging and leading sustainability innovations on farms and in rural areas. Rural and farm women are challenged in their endeavours to become rural innovators and entrepreneurs by a multitude of issues, however, the literature and project examples provided above highlight how women can surmount challenges to carve out careers in rural settings, in addition to making positive change.

What becomes obvious from our exploration of the literature and previous and current EU project is the imperative nature of engaging rural women in innovation and entrepreneurship to overcome environmental challenges and addressing climate change in rural areas. To achieve this however, we need to overcome current barriers in addition to reconsidering stereotypes, policies and supports and services.

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Female-Led Innovation in Agriculture and Rural Areas

Deliverable 1.2: Women-led Innovation Research Review

Appendix A

FLIARA Fact Sheets: Relevant EU Projects

TABLE OF CONTENTS

ACRONYMS AND ABBREVIATIONS

CAP	Common Agricultural Policy
CoP	Community of Practice
DSS	Decision Support System
EC	European Commission
EIGE	European Institute of Gender Equality
EIP	European Innovation Partnership
ERA	European Research Area
EU	European Union
FAO	Food and Agriculture Organisation of the United States
FHS KIS	Farm Health and Safety Knowledge Innovation Systems
FLIARA	Female-led Innovations in Agriculture and Rural Areas
FPE	Feminist-informed Political Ecology Framework
GEAM	Gender Equality Audit Monitoring
GEPs	Gender Equality Plans
GMP	Green Morocco Plan
IAs	Innovative Actions
ICT	Information and Communications Technology
IDM	Individual Decision Making
IoT	Internet of Things
MAA	Multi-Actor Approach
NBS	Natural Based Solutions
OECD	Organisation for Economic Cooperation and Development
RFOs	Research Funding Organisations
RPOs	Research Performing Organisations
RTDI	Research, Technology, Development, Innovation
SDG	Sustainable Development Goal
Tas	Transfer Agents
TEK	Traditional Ecological Knowledge
UN	United Nations
WP	Work Package

Deliverable 1.2 Review of Existing Knowledge Focused on Women-Led Innovation in Farming and Rural Areas

The following Fact Sheets have been created as part of D1.2 'Review of Existing Knowledge Focused on Women-Led Innovation in Farming and Rural Areas', which is a deliverable attached to Work Package 1. D.1.1 has been divided into two parts, namely, Part A, the knowledge review and Part B, Fact Sheets. The following Fact Sheets are provide relevant data and information, which are relevant to the FLIARA project, focusing on issues of gender, agriculture, rural areas, innovation, sustainability and governance. The inventory of previous European projects was collaboratively developed by all project partners.

The Fact Sheets will act as a resource for WP2, WP3, WP4 and WP5, highlighting key projects relevant when considering case study selection, community of practice events, policy perspectives and previous results relevant to achieving FLIARA's key aims and objectives.

Additionally, the Fact Sheets compile existing knowledge, research, and innovation while highlighting gaps within the innovation ecosystem. These insights will play a vital role in shaping FLIARA's tasks along with reviewing existing knowledge and research.

The Fact Sheets within FLIARA build and expand upon the findings obtained from various research and innovation projects funded by the European Commission. They serve as a solid foundation for understanding the complexities of gendered spaces.

To differentiate between completed projects and ongoing projects, the Fact Sheets employ distinct formats for each. This allows for clear distinction as the outcomes of ongoing projects are yet to be finalised.

A total of 31 Fact Sheets have been explored below. All of the Fact Sheets are relevant to gender equality, rural and farm innovations.

The Fact Sheets aim to disseminate key information on research and innovation to policymakers, project partners and stakeholders.

GENDER PERSPECTIVE

N#	Acronym	Project	Other themes
3	ACT	Communities of PrACTice for Accelerating Gender Equality and Institutional Change in Research and Innovation across Europe	Gender equality, gender imbalance, gender dimension, gender bias
5	ATHENA	Implementing gender equality plans to unlock research potential of RPOs and RFOs in Europe	Gender equality, gender equality plans, institutional change, research performing organisations
7	CHANGE	CHAlleNging Gender (In)Equality in science and research	Gender equality plans, transfer agents, gender balance, research performing organisations, gender gaps
4	DEW	Digital Entrepreneurship for Women	Gender equality, under-representation of female entrepreneurs, digital skills, inclusion, entrepreneurship
8	EFFORTI	Evaluation Framework for Promoting Gender Equality in Research and Innovation	Gender equality, research and innovation, technology, innovation and development
9	EWTEK	Empowering Women with Traditional Ecological Knowledge	Gender issues, gender imbalance, rural women, Morocco, socioeconomic development, natural resources
6	FEMAGREE	Female Agricultural Entrepreneurs: Identifying Institutional Barriers to Equality	Female agricultural entrepreneurs, effectiveness of current rural development policies
13	GEISIE	Gender and Ethnic Integration in Science, Innovation, and Entrepreneurship	Gender and ethnic diversity, integration, innovation
16	GENDER ACTION +	Gender Equality Network to Develop ERA Communities To coordinate Inclusive and sustainable policy implementation	Gender equality plans, research and innovation, European research area
12	RE-WIRING	Realising Girls' and Women's Inclusion, Representation and Empowerment	Gender and social, economic and cultural empowerment
24	WEGO	Well-being, Ecology, Gender, and cOmmunity	Gender, ecology, wellbeing, community responses, network
14	WE-GREEN	Rural Women's Empowerment through Green Social Entrepreneurship	Green Skills; Entrepreneurial Learning - Entrepreneurship Education

INNOVATION PERSPECTIVE

N#	Acronym	Project	Other themes
25	AURORAL	Architecture for Unified Regional and Open digital ecosystems for Smart Communities and wider Rural Areas Large scale application	Leadership, ICT
22	CULTIVATE	Co-designing food sharing innovation for resilience	Food, Bioeconomy Natural Resources, Agriculture and Environment
27	DEAL	Digital Entrepreneurship for Adult Learners	Entrepreneurial learning, digitalisation, active ageing, innovations developing training
19	DEMETER	Building an Interoperable, Data-Driven, Innovative and Sustainable European Agri-Food Sector	Internet of Things, Sustainable agriculture
31	EU FarmBook	EU-FarmBook: supporting knowledge exchange between all AKIS actors in the European Union	Agriculture and forestry, practice orientated, EU-FarmBook Alliance, sustainability
18	LIAISON	Better Rural Innovation: Linking actors, networks and instruments	Research and innovation, multi-actor approach, optimising innovation in agriculture
20	MIND STEP	Full data analysis and machine learning, mention gender balance on stakeholder selection that's it	Food security, sustainable agriculture and forestry
10	SIMRA		Gender equality, gender imbalance, gender dimension
21	NEWBIE	New Entrant netWork: Business models for Innovation, entrepreneurship and resilience in European agriculture	New entrants, innovation, entrepreneurship, resilience, sustainable farm businesses
11	RURITAGE		Heritage-led strategy, rural regeneration. Systemic innovation areas, resilience
29	CO-EVOLVERS	Coevolutionary approach to unlock the transformative potential of nature-based solutions for more inclusive and resilient communities	Natural Based Solutions (NBS), technology and bioeconomy
2	DESIRA	Digitisation: Economic and Social Impacts in Rural Areas	Digital transitions, sustainable development goals, digital transformations

SUSTAINABILITY PERSPECTIVE

N#	Acronym	Project	Other themes
17	IMAJINE	Integrative Mechanisms for Addressing Spatial Justice and Territorial Inequalities in Europe	Economic, social inequality, civil society, public services
28	MOVING	Mountain Valorization through Interconnectedness and Green Growth	Mountainous regions, build capacities, increase awareness
23	PREMIERE	Preparing multi-actor projects in a co-creative call	Multi-Actor-Approach, co-creation, co-innovation, coherent
1	RURALIZATION	The opening of rural areas to renew rural generations, jobs and farms	Rural regeneration, rural innovation, generational renewal, economic and social sustainability
30	SafeHabitus	Strengthening Farm Health and Safety Knowledge and Innovation Systems	Farm Safety, knowledge and innovation systems, community of practice

GOVERNANCE PERSPECTIVE

N#	Acronym	Project	Other themes
26	BLAST	Blended Adult Learning for the Social-ecological Transition	Socio-ecological transition, Sustainable Development Goals, civic engagement, adult education initiatives
15	Gender Quotas	Gender Quotas and the Democratic Quality of Local Decision-Making Processes in Clientelistic Regimes	Gender quotas, gender equality, empowering women, inclusive, democratic quality of local decision-making processes

RURALIZATION

Funded	Horizon 2020
Grant	€ 5, 995 904,00
Time Frame	May 2019 – April 2023
Coordinated by	Technische Universiteit Delft, Netherlands.
Main themes	Rural regeneration, rural innovation, rural youth, generational renewal, multi-actor approach, economic and social sustainability.
Other Themes	Place attachment, newcomers, new entrants into farming, access to land, trends and future dreams
Further Information	https://ruralization.eu

AIM OF RURALIZATION

The project aimed to trigger a process of RURALIZATION that is, development towards a new frontier where new generations find economic and social opportunities.

CONTEXT

RURALIZATION identifies the need to **regenerate rural regions** towards sustainable development due to the unequal advancements of urban and rural areas across the European Union. It highlights the need and value of attracting new generations into rural areas. Their presence is vital in developing fresh and innovative solutions, which address issues such as ageing and declining population.

A **multi-actor approach** has been identified to address these challenges. By collaborating with diverse stakeholders, it offers many insights into good practices and innovative opportunities that will lead to **sustainable developments**. It also identifies the drivers of change such as **rural youth, rural newcomers, new entrants** into agriculture and their access to land.

The project focuses on developing, evaluating, and disseminating novel tools and strategies that support rural regeneration. These tools were identified by the key actors involved in the project in order to design policy and regenerate other lagging rural regions.

RESULTS

RURALIZATION focused on rural newcomers and new entrants into agriculture and assessed the issue of access to land. These new generations of existing and potential rural inhabitants were key drivers of **innovation in rural regions**.

RURALIZATION highlights the value and input of new generations in developing and regenerating rural regions towards a sustainable future. A Toolbox was created by the RURALIZATION project in order to **exchange knowledge** and findings to various actors to develop and regenerate rural regions. The Toolbox includes rural trends, a good practice guide, a map of the

case studies, a handbook for local authorities and a resource database. All of these resources highlight the opportunities and challenges rural regions encounter when regenerating and developing their area towards a viable future.
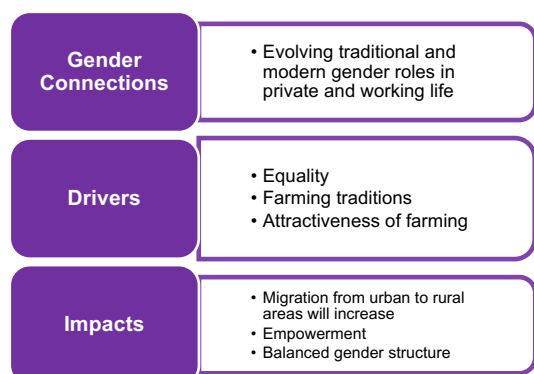
RURALIZATION, among other groups, uncovers numerous insights into the future dreams and trends of young women who work and/or reside in a rural settings. The trend of changing gender roles was recognised by the participants involved in the EU funded project.

The project featured sixty trend cards including:

- 10 Megatrends
- 20 Trends
- 30 Weak signals

All of these trends identified the drivers of the trends and their impacts. The trend cards are available to view here. Examples of the megatrends include an ageing population, benefitting from globalisation, benefiting from **urbanisation**, caring for the **environment, climate change** and counteracting **unequal development and rural decline**, growing food demand, infrastructure, accessibility and connectedness of regions, migration patterns and sustainability transition.

The graph below highlights the drivers and impacts of the changing gender roles occurring in rural regions.

The RURALIZATION project created 30 case studies on rural newcomers, new entrants into farming and successors that highlighted a gender differentiation in relation to farm scale, with large-scale farms being more male dominated, while small-scale farming and market gardening having a mix of participants, with women being more frequently involved. The case studies can be accessed here.

The results also highlighted **multifunctional farming** as a potential approach to support women entering agriculture, specifically noting activities relating to social agriculture, processing and agrotourism. Issues faced by rural women presented through these case studies included a lack of agricultural technology tailored for female use, as well as preconceptions of rural women and women in agriculture.

This Horizon 2020 project identifies the **opportunities and limitations young women face in relation to the rural economy and social sustainability**. It gives women an opportunity to highlight their needs and concerns regarding rural generations, employment opportunities and agriculture. It also identifies the challenges women can encounter when entering agriculture, accessing land, and residing in rural communities as rural newcomers.

RURALIZATION offers many insights into women's experiences and novel perspectives in relation to innovating and developing agriculture and rural communities towards a viable future.

Gender Connections	• Evolving traditional and modern gender roles in private and working life
Drivers	• Equality • Farming traditions • Attractiveness of farming
Impacts	• Migration from urban to rural areas will increase • Empowerment • Balanced gender structure

RURALIZATION Gender Connections

Funded	Horizon 2020 programme
Grant	€ 4, 990 128.45
Time Frame	June 2019 – May 2023
Coordinated By	UNIVERSITA Di Pisa, Italy
Main Themes	Digital transitions, sustainable development goals, digital transformations, socioeconomic impacts.
Other Themes	Digital game changers, socio-cyber-physical system, gender and digital technologies.
Further Information	https://desira2020.eu

AIM OF DESIRA

DESIRA (Digitisation: Economic and Social Impacts in Rural Areas) aims to improve the capacity of society and political bodies to respond to the challenges that digitalisation generates in agriculture, forestry and rural areas.

CONTEXT

DESIRA examines the past, present and future of **digital transformations** within **agriculture, forestry and rural areas**. The project aims to enhance the capacity and raise awareness and knowledge of digitalisation to individuals in society and political bodies.

In providing societies with the necessary information, we can improve their ability to respond to issues brought on by **digitalization**. The socioeconomic effects of ICT developments in forestry, agriculture, and rural areas may be one of these difficulties. As it seeks to achieve particular goals, DESIRA also adds to the framework for the Sustainable Development Goals. However, inequality can arise if specialized tasks are prioritized above more general objectives.

DESIRA investigates these disparities, the function of digitalization, and its effects on people and governmental entities.

RESULTS

This Horizon 2020 project increased the capacity of society by equipping individuals with the relevant knowledge and awareness about digital transformation.

The process of transforming digitalisation in societies involves utilising a Social-Cyber-Physical-System which includes digital game changers and socio-economic impacts that contribute to meeting Sustainable Development Goals.

By utilising this system, it allows individuals and political bodies to identify and respond to the opportunities and challenges of digitalisation in agriculture, forestry and rural areas along with meeting the Sustainable Development Goals.

The project offers relevant tools to assist with the transformation of digitalisation:

- Gnomee
- Living Lab Maker
- Rural Digital Europe Dashboard

These tools offer diverse supports to societies such as a platform for publications relating to digitalisation, digital game changers, results identified along with the socio-economic impact of the work.

DESIRA: LESSONS FOR FLIARA

The gender aspect within DESIRA includes meeting Sustainable Development Goals 5 (improving gender equality) and 10 (reducing inequalities).

A gender digital divide is identified throughout the project. This includes the difference in genders relating to digital technology and resources.

DESIRA has identified many insights into the diverse challenges and opportunities that women experience during ICT related innovations. The graph below highlights the drivers and impacts of digitalisation in relation to gender.
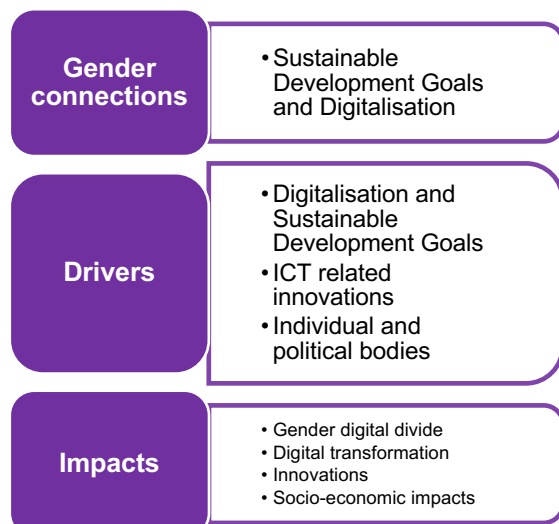
DESIRA highlights the **opportunities and challenges of transforming digitalisation**, its socio-economic impacts upon societies and the diverse ways **rural communities** can create and design sustainable digitalisation pathways within their rural regions.

Gender connections	• Sustainable Development Goals and Digitalisation
Drivers	• Digitalisation and Sustainable Development Goals • ICT related innovations • Individual and political bodies
Impacts	• Gender digital divide • Digital transformation • Innovations • Socio-economic impacts

Gender Connections in DESIRA

Funded	Horizon 2020
Grant	€ 2 995 771, 25
Time Frame	May 2018 – October 2021
Coordinated By	FUNDACIO PER A LA UNIVERSITAT OBERTA DE CATALUNYA, Spain
Main Themes	Gender equality, gender imbalance, gender dimension, gender bias, knowledge exchange, gender fair.
Other Themes	Community of Practice (CoP), GenPort, GEAM (Gender, Equality, Audit, Monitoring)
Further Information	https://act-on-gender.eu

CONTEXT

The ACT project enhanced and expanded current knowledge and insights on **gender equality** within **universities, research centres and research funding organisations**.

The project formed **learning communities** to address gender equality in respective organisations.

ACT focused on the following issues:

- Gender bias in recruitment, retention and advancement in careers.
- Gender imbalance within decision making processes.
- Incorporated gender dimension in research, innovation content and teaching.

This Horizon 2020 project addressed these issues by offering a tailored approach to representative organisations to improve gender equality within their European Research Area.

The project established **Communities of Practices,** identified their needs, and created opportunities to foster synergies while adopting best practices when addressing gender equality within their organisation.

It allowed organisations to learn from each other and deepen their existing knowledge while enhancing gender equality within their organisation.

AIM OF ACT

Communities of PrACTice for Accelerating Gender Equality and Institutional Change in Research and Innovation across Europe aims to expand knowledge, collaborative learning and institutional change concerning gender equality within the European Research Area.

RESULTS

The ACT project offered support and resources to Community of Practices (CoPs) on gender equality along with other topics. The project offered a support toolkit, training materials, survey tool (GEAM), an online hub for knowledge sharing (GenPort), thematic videos, online workshops and discussions.

It developed GenPort in collaboration with Advance HE, FUOC and Notus. The GenPort platform allows CoPs to collaborate with others, share best practices and experiences.

ACT also created the GEAM (Gender, Equality, Audit, and Monitoring) tool which offered pre designed surveys that focused specifically on gender equality.

These support and resources allowed CoPs to share information and templates to assess and address gender inequality.

The CoPs also allowed respective organisations to build relationships, knowledge and best practices in addressing gender imbalances within the European Research Area.
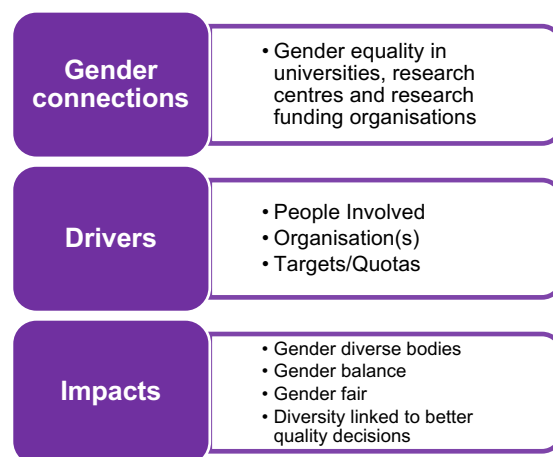
ACT: LESSONS FOR FLIARA

The ACT project offered many tools and insights to organisations when addressing gender inequality. It examined gender bias, imbalances and inequalities within the **European Research Area**.

The project also raises awareness of the diverse supports available to CoPs to become gender aware and gender sensitive within their organisation. By offering such tools and insights it created **diversity** and gender equality.

The ACT project highlighted the value of equal participation and representation of diverse gender bodies in **decision making processes** and **leadership roles** to ensure all experiences, perceptions and expectations were identified and met.

By including diverse **gender bodies** in these processes, it effectively implemented gender equality goals and altered the current power structure.

The following graph highlights the drivers and impacts on gender equality identified within the ACT project.

Gender connections
- Gender equality in universities, research centres and research funding organisations

Drivers
- People Involved
- Organisation(s)
- Targets/Quotas

Impacts
- Gender diverse bodies
- Gender balance
- Gender fair
- Diversity linked to better quality decisions

Gender Connections in ACT

By universities, research centres and research funding organisations utilising ACT's mechanisms it has improved gender equality within **research and innovation institutions**. The project has also developed a collective representation of gender within the European Research Area.

![DEW - Digital Entrepreneurship for Women logo]

Funded	Erasmus +
Grant	€ 271.430,00
Time Frame	November 2021 – October 2023
Coordinated By	Longford Women's Link CLG
Main Themes	Gender equality, under-representation of female entrepreneurs, digital skills, inclusion, entrepreneurship, education, gender-specific training.
Other Themes	Opportunities and challenges faced by female entrepreneurs.
Further Information	https://www.dewproject.eu

AIM OF DEW

Digital Entrepreneurship for Women (DEW) provides strategies to address the challenges encountered by both current and potential female entrepreneurs in a post pandemic world.

CONTEXT

DEW aims to enhance the strategies and coordination mechanisms used to support women's entrepreneurship.

It hopes to demonstrate the innovative approaches utilised to address the unique needs and challenges faced by **women entrepreneurs** and evaluate whether these efforts are achieving **gender equality goals.**

DEW aims to address the following issues:

- The under **representation** of women in the realm of entrepreneurship.
- Specialised **digital enterprise** training that is tailored to gender-specific needs.

RESULTS

The following highlight the innovative solutions DEW aims to deliver throughout the lifetime of their project:

- The provision of Gender specific training.
- Open Educational Resource Platform.
- Contribute to policy development by completing a gender lens to the ENTRECOMP Framework along with each of the DEW partner Country's completing a report.

DEW: LESSONS FOR FLIARA

DEW provides key learnings for FLIARA as it focuses on **female entrepreneurs** across five countries to gain knowledge on the diverse experiences, challenges and opportunities they experience within the entrepreneurial space.

Gender connections	Drivers	Impacts
● Female entrepreneurs	● Policy ● Female entrepreneurs	● Sustainable enterprise ● Transfer skills to other female entrepreneurs

Gender Connections in DEW

Funded	Horizon 2020
Grant	€1, 828 310,00
Time Frame	February 2021 – January 2025
Coordinated By	Consulta Europa Projects and Innovations SL, Spain
Main Themes	Gender equality, gender equality plans, institutional change, research performing organisations, research funding organisation.
Other Themes	Gender imbalances, career progression of female researchers, monitoring, cultural change.
Further Information	https://www.athenawquality.eu

AIM OF ATHENA

ATHENA aims to implement gender equality plans to unlock research potential of research performing organisations (RPOs) and research funding organisations (RFOs) in Europe.

CONTEXT

Athena aims to implement **gender equality** plans across six **research performing organisations** and two research funding organisations to:

- Remove the existing obstacles to recruitment.
- Address the gender imbalances in decision making processes.
- Maintain and advance the careers of female researchers.

The project assesses the current practices in place for **female researchers**, identifies the needs and preferences of female researchers to progress in their career and become involved in decision making processes.

RESULTS

Athena will carry out qualitative and quantitative data analysis to gain greater insights into the existing **gender bias** within organisations.

It offers many resources and supports to research organisations to develop, implement and monitor **gender equality plans** within their institutions.

ATHENA: LESSONS FOR FLIARA

The FLAIRA project can learn from ATHENA via its promotion and implementation gender equality plans within research and academia. Its focus on identifying gender specific obstacles and detecting ways to manage and remove these challenges is also of key interest to FLAIRA.

Gender connections	Drivers	Impacts
● Gender Equality Plans	● Women researchers	● Gender Equality
	● Research organisations	● Cultural change
	● Policy	● Gender balance

Gender Connections in ATHENA

Funded	Horizon 2020
Grant	€85 730,40
Time Frame	May 2018 – April 2019
Coordinated By	BAYERISCHES STAATSMINISTERIUM FUR ERNAHRUNG, LANDWIRTSCHAFT UND FORSTEN, Germany.
Main Themes	Female agricultural entrepreneurs, effectiveness of current rural development policies.
Other Themes	Gaps in current support systems and traditional gender roles.
Further Information	https://www.bayfor.org/en/projects/project-archive-with-thematic-filter/femagree.html

AIM OF FEMAGREE

FEMAGREE identified the effectiveness of rural development policies in supporting female agricultural entrepreneurs.

CONTEXT

FEMAGREE explored the effectiveness of **rural development** policies in supporting and assisting **female agricultural entrepreneurs** to establish, develop and sustain their **business**.

The project was carried out in Bavaria, Germany and in a region in the West of Ireland. The catchment areas have similar agricultural structures along with traditional gender roles.

RESULTS

FEMAGREE utilised a qualitative approach (Interviews and Workshops) to gain insights and perspectives from current and future female agricultural entrepreneurs about the **support systems** in place. These enquiries provided insight into the:

- Supports available to female entrepreneurs in the past.
- Existing tools that may be improved on to assist with their business.
- Identified gaps in current support systems.

FEMAGREE collected the data from 34 female agricultural entrepreneurs to gain greater **knowledge and awareness** of the problems and challenges they encounter first hand when establishing and growing their business within their community. The following findings were identified from as the key difficulties when starting and growing a business within their region:

- Bureaucracy

- Access to finance

- Employing people

This project raised awareness and exchanged knowledge to equip women to establish and grow their business towards a viable future.

In addition to expanding the number of female role models and female-run **agricultural start-ups**, assisting female entrepreneurs and their businesses will enable the transfer of skills to other women in the community. Additionally, it would enable female business owners to strategically plan for their enterprises.

The EU funded project explored the existing supports and tools available to female agricultural entrepreneurs and their effectiveness in meeting their needs and demands when starting up their **enterprise**. The graph below highlights the drivers and impacts of supporting young entrepreneurs within the agricultural industry.

Gender Connections	• Rural Development policies effectiveness in supporting female agricultural entrepreneurs.
Drivers	• Policymakers • Support Systems • Female agricultural entrepreneurs
Impacts	• Increase number of female run start ups • Female role models • Transfer business skills

Gender Connections in FEMAGREE

FEMAGREE explored the obstacles women face as agricultural entrepreneurs, identified existing supports along with gaps within the current support system. The project also gained greater insights into the difficulties women experience when starting up their enterprise within their community.

The FLIARA project can utilise the key results from FEMAGREE and disseminate them via its Community of Practice events, in addition to taking key learnings and exploring similar challenges and opportunities via the project case studies.

Funded	Horizon 2020
Grant	€ 2 026 381.25
Time Frame	May 2018 – October 2022
Coordinated By	INTERDISZIPLINARES FORSCHUNGSZENTRUM FUR TECHNIK, ARBEIT UND KULTUR, Austria.
Main Themes	Gender equality plans, transfer agents, gender balance, research performing organisations, gender gaps, gender equality, and gender dimensions.
Other Themes	Knowledge transfer, raising awareness, networking, activities carried out by transfer agents.
Further Information	https://www.change-h2020.eu/the_project.php

AIM OF CHANGE

CHANGE aims to support research performing organisations (RPOs) to design and implement gender equality plans.

CONTEXT

CHANGE (CHAlleNging Gender (In)Equality in Science and Research) aims to promote **gender equality** in research and science through the implementation of diverse activities by **institutional Transfer Agents** (TAs).

At the beginning of the CHANGE project a **gender institutional benchmark** was carried out to identify the various actions suitable to develop tailored gender equality plans within institutions.

These findings from the benchmark were included in the gender equality plans and were tailored to each activity within the institution itself.

As there is no one solution that works for all institutions, the transfer agents used these findings to spearhead various gender equality strategies in each one.

CHANGE allowed institutions to raise awareness, exchange knowledge and network with each other to mutually learn and co-produce knowledge of tailoring **gender equality plans** within their institutions.

RESULTS

The transfer agents within the CHANGE project have carried out various activities to enhance gender equality knowledge within their work environment.

The following activities have been carried out over the seven research performing organisations:

- Raising awareness events
- Gender training workshops
- Surveys
- Interviews

By carrying out these activities within the participating regions it identified the gender gaps and imbalances within **research performing organisations**. These findings have been included within policy papers and aim to close the gap between research to action and theory to practice.

The following highlight the four recommendations identified within the policy paper for stakeholders to improve **gender-inclusive research programmes and funding**:

- Transforming gender equality plans into a national eligibility criterion and gender equality as a quality marker for research performing organisations.

- Communication and collaboration mechanisms amongst RFOs and RPOs.

- A mix of different types of measures implemented along all phases of the funding process at all structures.

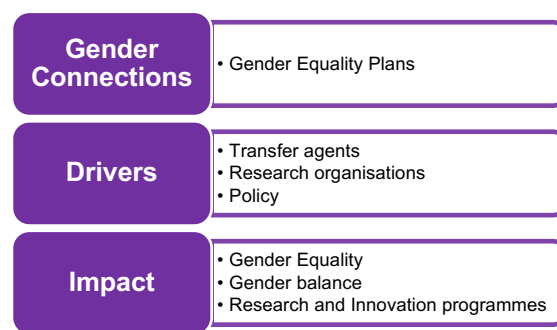- Multiple assessment criteria to support diverse research paths.

The CHANGE project builds community of practices between participating regions and therefore influences other research organisations to change their culture towards **gender equality** (spill-over effect).

The CHANGE project promotes and enhances gender equality within research performing organisations within the European Research Area.

The project focuses on gender equality plans within the participating regions to raise awareness of gender gaps and ways to mitigate these gaps from occurring in the future.

The graph below highlights the relevance of gender within the CHANGE project, the drivers and impacts of the transfer agents in adopting gender equality plans within research performing organisations.

Gender Connections	• Gender Equality Plans
Drivers	• Transfer agents • Research organisations • Policy
Impact	• Gender Equality • Gender balance • Research and Innovation programmes

Gender Connections in CHANGE

The Gender Equality Plans developed by CHANGE can benefit the FLIARA project by adopting the strategies used to promote gender equality and also CHANGE's experience in using transfer agents for knowledge exchange and adoption of gender equality measures in agriculture and rural areas.

FLIARA can take policy insights from the CHANGE project to advocate for gender-responsive policies in the agricultural sector. By studying the CHANGE project's interventions and outcomes, FLIARA can identify effective strategies for promoting gender equality and balance in agricultural decision-making. FLIARA can also integrate lessons from the CHANGE project's research and innovation programs to promote gender-responsive and inclusive initiatives.

Fact Sheet 8: EFFORTI

EFFORTI

Funded	Horizon 2020
Grant	€ 1 998 985,00
Time Frame	June 2016 – May 2019
Coordinated By	FRAUNHOFER GESELLSCHAFT ZUR FORDERUNG DER ANGEWANDTEN FORSCHUNG EV Germany
Main Themes	Gender equality, research and innovation, technology, innovation and development, gender balance.
Other Themes	Gender dimension, equal participation, policies.
Further Information	https://efforti.eu/

AIM OF EFFORTI

EFFORTI (Evaluation Framework for Promoting Gender Equality in R&I) aims to assess strategies and approaches for advancing gender equality in the fields of research and innovation. This includes an examination of methods aimed at creating more inclusive and responsive research, technology, development, and innovation (RTDI) systems.

CONTEXT

The EFFORTI project aims to promote **gender equality** along with establishing a more responsive **RTDI systems (research, technology, development, innovation)** within research and innovation by creating and developing EFFORTI tools and frameworks to improve the equality culture within Europe.

The EFFORTI framework analyses, develops, and evaluates gender equality measures, their outcomes and impacts on promoting gender equality.

The key objectives of the EFFORTI project were to:

- Develop an evaluation framework for evaluators, science managers and policymakers.
- Analyse policy measures and their performance.
- Extract evidence based lessons on the arena of policymaking on gender and RTDI systems.

The Horizon 2020 programme identified and evaluated the existing gender equality measures, their impacts on research and innovation along with establishing a more receptive RTDI systems.

By evaluating and analysing the existing **gender equality measures** with the most current approaches to RTDI, it will exchange knowledge and learnings

between stakeholders and contribute to better gender equality policies across the EU.

EFFORTI aims to foster the **creativity and talent** of females within research and innovation by implementing the EFFORTI tools to promote gender equality and increase the number of women in **research and development.**

EFFORTI has created and developed **learning tools** to assist and improve gender equality measures within research and development.

The graph below highlights the comprehensive tools produced by the EFFORTI project team from combing the evaluation of gender equality measures with the recent approaches of RTDI systems.

EFFORTI tools

These EFFORTI tools create opportunities and templates to develop and visualise a tailored programme theory within an institution/organisation.

These resources target gender equality measures on RTDI along with supporting personnel in **management positions** to develop a **custom-tailored programme** within their organisation.

The project creates a platform to share learnings and knowledge in relation to gender equality measures within research, development and policies across the EU.

EFFORTI's database highlights 26 case studies within a total of 7 Countries who participated and implemented the tools and framework. All of the case studies identify gender equality measures and the diverse tailored programmes implemented to develop better equality practices on RTDI across Europe.

EFFORTI: LESSONS FOR FLIARA

EFFORTI identifies the various tools and frameworks to assist and improve gender equality measures on RTDI systems.

The graph below highlights gender equality within EFFORTI along with its drivers and impacts of promoting gender equality within research and innovation.
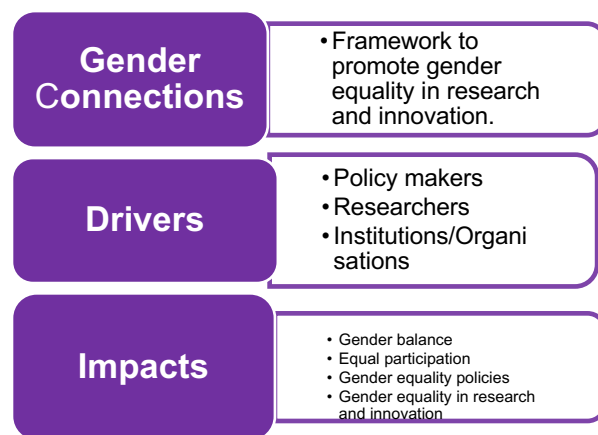
Gender Connections in EFFORTI

FLIARA can learn from such findings and tools produced by the EFFORTI project, especially from the approaches to engage and collaborate with policy makers, researchers and other institutions advancing gender equality. Also, from their support in formulating custom-tailored programmes for measuring gender equality in innovation within the agricultural and rural sectors were women have been forgotten.

Funded	Horizon 2020
Grant	€ 236 257, 70
Time Frame	July 2015 – May 2018
Coordinated By	ERASMUS UNIVERSITEIT ROTTERDAM Netherlands
Main Themes	Gender issues, gender imbalance, rural women, Morocco, socioeconomic development, natural resources, Green Morocco Plan (GMP), traditional ecological knowledge (TEK).
Other Themes	Gender practices, economic directives, environmental practices.
Further Information	https://cordis.europa.eu/project/id/657223

AIM OF EWTEK

EWTEK (Empowering Women with Traditional Ecological Knowledge) focuses on the advancement of rural women in Morocco and the promotion of socioeconomic development. The programme aims to leverage the region's natural resources and align with the goals of the Green Morocco Plan. It incorporates gender policies to address the specific needs and challenges faced by rural women. Additionally, EWTEK recognises

the importance of traditional ecological knowledge in achieving sustainable outcomes.

CONTEXT

In rural areas of Morocco, women play a crucial role as custodians of **Traditional Ecological Knowledge** (TEK) associated with the management of natural resources. Their significant contributions to food production, resource management, and **income generation** through these endeavours have been undervalued and overlooked.

This project encompasses two primary focal points:

- An examination of the socio-historical and political backdrop of the country, aimed at evaluating the Moroccan government's intentions and motivations in tackling gender-related concerns.
- An ethnographic exploration into women's traditional knowledge activities, with a specific emphasis on the transmission of their traditional knowledge and environmental practices to newly developed income-generating endeavours.

Implemented within the Rhamna province, this Horizon 2020 project focuses on two **rural communities**, shedding light on the distinct opportunities and challenges faced by rural women within Moroccan society which are aligned within the Green Morocco Plan. The project emphasises the significance of attaining **social status** and fostering **economic growth** in the region.

Additionally, the project underscores the invaluable contribution of women's

traditional knowledge in the production, preservation, sustainable management of natural resources along with their contributions to the local economy. EWTEK aims to create a positive change and promote gender equality in the region.

RESULTS

The project carried out focus groups, semi-structured interviews along with in-depth observations across the two rural communities in Rhamna to gain insights into the existing obstacles rural women encounter within the Moroccan region.

The results of the EWTEK project have empowered women and raised awareness about their significant contributions to society.
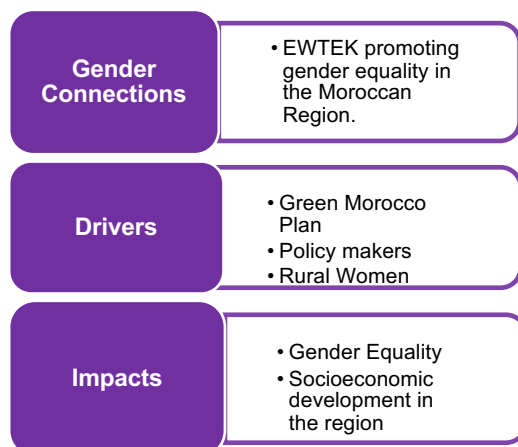
By leveraging their traditional ecological knowledge, women have been able to preserve, secure and manage natural resources to align with the goals of the Green Morocco Plan. Therefore, this has enhanced rural **women's economic opportunities and livelihoods**.

The points below indicates the key challenges that have been identified by rural women and their experiences within the Green Morocco Plan:

- Political representation and accountability to higher authorities are lacking, preventing local populations from seeking guidance and support for their initiatives. Despite being mandated by the Moroccan government, women's participation in decision-making processes remains inadequate.

- The significance of traditional knowledge as a catalyst for women's social enterprise is not adequately recognised. Additionally, traditional skills associated with critical aspects of product development are often overlooked, posing potential implications for women.

EWTEK: LESSONS FOR FLIARA

The Horizon 2020 project also highlighted the importance of women's social status and their role in driving socioeconomic development within the Moroccan region. It has led to increased recognition and appreciation of women's traditional knowledge, fostering a sense of empowerment and self-confidence among rural women.

The EWTEK project provides insights about government motivation and interest in addressing gender issues that can help FLIARA in its policy recommendations. By considering these drivers and impacts, EWTEK provides guidance for other projects on gender to navigate socio-political and environmental challenges transversally and engage stakeholders effectively.

Additionally, EWTEK provides understanding of the challenges and opportunities face by rural women which can help FLIARA tailor its interventions and track progress. The below graph highlights the drivers and impacts within the EWTEK project.

Gender Connections	• EWTEK promoting gender equality in the Moroccan Region.
Drivers	• Green Morocco Plan • Policy makers • Rural Women
Impacts	• Gender Equality • Socioeconomic development in the region

Gender Connections in EWTEK

FLIARA can learn lessons from this project, in its quest to seek out sustainable innovative projects based on traditional skills and endogenous, local development.

Funded	Horizon 2020
Grant	€ 2 995 771.25
Time FRAME	May 2018 – October 2021
Coordinated BY	FUNDACIO PER A LA UNIVERSITAT OBERTA DE CATALUNYA, Spain
Main THEMES	Gender equality, gender imbalance, gender dimension.
Other THEMES	Community of Practice (CoP), GenPort, GEAM (Gender, Equality, Audit, Monitoring), food security, agriculture.
Further INFORMATION	https://www.simra-h2020.eu

AIM OF SIMRA

SIMRA (Social Innovation in Marginalised Rural Areas)seeks to advance understanding of social innovation and innovative governance in agriculture, forestry and rural development, and how to boost them, particularly in marginalised rural areas across Europe,

with a focus on the Mediterranean region (including non-EU).

CONTEXT

The specific objectives of SIMRA include:

- A systematic theoretical framework and a systematic operational framework.
- A categorization/ classification ('catalogue of diversity') of the social innovation's observable in rural areas.
- An integrated set of methods developed for the evaluation of social innovation and its impacts.
- A co-constructed evaluation will be carried out (by academic and practice community) of success factors for social innovations across selected case studies.
- New/improved knowledge of social innovations and novel governance mechanisms.
- Collaborative learning and networking opportunities created and innovative actions (IAs).

Social innovation is an activity that compromises the creation of reconfigured social arrangements or networks between diverse actors, including civil society which may involve the creation of **new institutions or governance arrangements** in the hope that enhanced development outcomes with respect to economy, society or environment or any combination thereof might arise.

Social innovation can bring new solutions to problems in rural areas, especially in marginalized rural areas, which must re-invent their role, and their capacity to innovate. However, much remains to be done to link Social Innovations with the desired policy outcomes.

SIMRA has developed new patterns of cooperation, **co-construction and collaborative learning** through novel approaches in order to bridge the research-policy-practice gap.

RESULTS

Results summarise challenges that rural women are facing, explore social innovation initiatives as promising solutions, and analyse their implications on gender equity in the five case studies.

Published research from the SIMRA project (Sarkki et al., 2021) proposes a new concept: **Reconstructive Social Innovation Cycle.** This refers to a cyclical innovation process that engage women via civil society initiatives. These initiatives reconstruct the existing state of affairs, by questioning marginalizing and discriminative practices, institutions, and cognitive frames that are often perceived as normal. The new concept helps with assessing the implications that women-led social innovations have for gender equity.
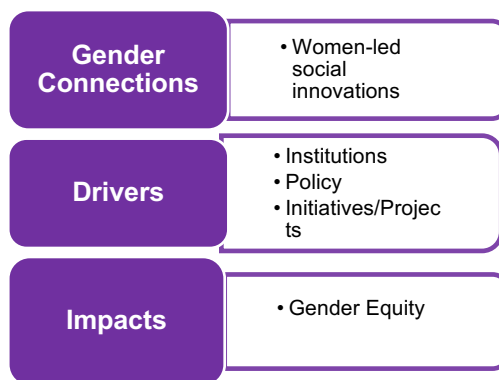
SIMRA: LESSONS FOR FLIARA

The aim of the reconstructive social innovation cycle is to analyse and comprehend the impact of women-led social innovations on gender equity, particularly in contexts where gender equity has been undermined.

Through conducting training courses, workshops, publications and case studies it

has gained greater insights into women-led social innovations and the challenges they encounter.

The graph below highlights the drivers and impacts of **women-led social innovations** within the SIMRA project.

Gender Connections	• Women-led social innovations
Drivers	• Institutions • Policy • Initiatives/Projects
Impacts	• Gender Equity

Gender Connections in SIMRA

SIMRA investigates social innovation in rural areas that face challenges such as marginalisation, geographical remoteness, and limited access to resources and services. The project comprehends social innovation and how it can contribute to **rural development, resilience, and sustainability**, aspects which are central to the FLIARA project

References

Sarkki, Simo, Cristina Dalla Torre, Jasmiini Fransala, Ivana Živojinović, Alice Ludvig, Elena Górriz-Mifsud, Mariana Melnykovych, Patricia R. Sfeir, Labidi Arbia, Mohammed Bengoumi, Houda Chorti, Verena Gramm, Lucía López Marco, Elisa Ravazzoli, and Maria Nijnik. 2021. "Reconstructive Social Innovation Cycles in Women-Led Initiatives in Rural Areas" *Sustainability* 13, no. 3: 1231. https://doi.org/10.3390/su13031231

SIMRA 2020. Social Innovation in Marginal Rural Areas. At: http://www.simra-h2020.eu/

RURITAGE
Heritage for Rural Regeneration

Funded	Horizon 2020 programme
Grant	€ 9 975 651,25
Time Frame	June 2018 – August 2022
Coordinated By	ALMA MATER STUDIORUM - UNIVERSITA DI BOLOGNA, Italy
Main Themes	Heritage-led strategy, rural regeneration. Systemic innovation areas, resilience
Other Themes	Governance, business models, ecosystem, civil society, unemployment
Further Information	https://www.ruritage.eu/

AIM OF RURITAGE

Through community-based activities, knowledge exchange, capacity building and the development of tailored heritage-based tools, the RURITAGE project aims to support rural areas in their regeneration process.

CONTEXT

The RURITAGE project aimed to transform rural areas into **sustainable development laboratories** through the improvement of their cultural and natural heritage.

Some key objectives of the RURITAGE Project are to:

- Increase the knowledge about heritage-led strategies for rural regeneration via role models.
- Use a mapping approach to link cultural and natural features/interactions.
- Develop six replicators to show the effectiveness of the heritage-led strategies.
- Foster spaces for networking, transferring knowledge, promoting community empowerment, and learning.

The project gathered stakeholders and local communities within 19 **Rural Heritage Hubs**. A collaborative and participatory approach was implemented, to promote capacity building and skills transference.

During the development of the project, RURITAGE identified six Systemic Innovation Areas as paradigms of heritage-led regeneration strategies:

- Pilgrimage
- Local food
- Migration
- Art and festival
- Resilience
- Landscape

RESULTS

RURITAGE offered Rural Heritage Hubs to boost the social innovation potential related to heritage in a participatory and co-creation process. To promote mutual learning, **Role Models and Replicators** were applied.

The outcomes of the projects included a set of tools and services aimed at rural communities to foster such heritage-led regeneration strategies. The outcomes can be outlined as follow:

- Atlas is an interactive tool that maps human-landscape interactions.
- Replicator Tool Box & My Cult-Rural Toolkit: set of good practices and innovative solutions.
- Serious Games kit, Decision Support System (DSS), Regeneration Guidelines: a set of tools to foster change and collect feedback from rural communities.
- Troubadour: to foster interactions between rural landscape and people.
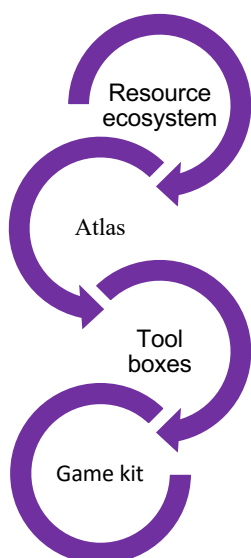
RURITAGE's resources

All of the resources and tools allow for rethinking and setting new guidelines on the transformation of rural areas into sustainable development.

RURITAGE: LESSONS FOR FLIARA

RURITAGE offers tools and insights that can be used to enrich FLIARA's contribution to innovation systems. Even though RURITAGE does not include a gender perspective, their approach to technological and social innovations, mobility and accessibility can be used as inspiration for the case studies and policy recommendations.

The **Role Models Strategy** implemented to create scenarios imposes a good practice for FLIARA's case study task and its **Community of Practice** events. This analysis serves a holistic and multidisciplinary perspective that can be transferred to the multifaceted analysis of gender, sustainability and long-term transformation.

The graph below highlights the drivers and impacts on gender equality identified within the RURITAGE project.
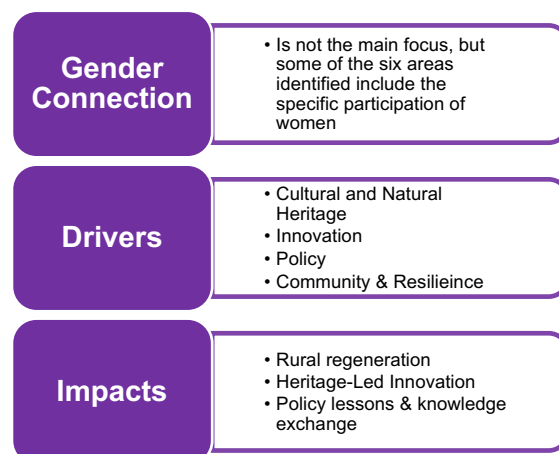
Gender Connections in RURITAGE

All the tools and lessons mentioned allowed RURITAGE to prove evidence and support the replication of its results to **heritage-led regeneration** strategies and plans at different levels: Regional, National, European and global level.

Funded	Horizon Europe
Grant	€ 2 461 349,75
Time Frame	March 2023 – February 2026
Coordinated By	UNIVERSITEIT UTRECHT, Netherlands
Main Themes	Gender and social, economic and cultural empowerment.
Other Themes	Racial inequality, policy and sustainability.
Further Information	https://re-wiring.eu/

AIM OF RE-WIRING

Contribute to practical, sustainable and structural institutional change [in the political, social, economic and cultural spheres], through evidence-based understanding of cumulative effects of gender stereotyping and multiple forms of discrimination and disadvantages.

CONTEXT

The RE-WIRING project aims to 're-wire' institutions so as to dismantle the structural root causes of gendered power hierarchies.

The project is carried out in six countries (Belgium, the Netherlands, Spain, South Africa, Poland, and the UK) and stakeholders from different backgrounds.

The approach includes qualitative data, policy analysis and other interventions. The goal is to understand how power and other barriers play a role in gender inequality and exclusion. It uses a multidisciplinary **Transformative Equality Approach** that considers institutional, experiential, and symbolic aspects of gender equality.

Intersectionality is one of the key drivers of the project since its ultimate goal is to dismantle the structural causes of gender inequality and hierarchies. For that matter, it combines a wide range of research strategies and uses co-creation tools to develop innovative solutions and policy recommendations.

RESULTS

The RE-WIRING project is ongoing, so the results are unavailable.

The project is working towards understanding gender inequality and exclusion while identifying its root causes. Some of the outcomes expected are practical solutions and **policy responses**, co-created with local communities.

RE-WIRING: LESSONS FOR FLIARA

The RE-WIRING project is hugely relevant to FLIARA as its core ethos of women empowerment and transformation considering the sustainability spheres are also central within the FLIARA project. Its focus on institutional change, including laws and policies, is another shared interest.

Gender connection	Drivers	Impacts
● Gender gaps ● Root causes ● Power ● Cross cultural sensitivity	● Empowerment ● Transformation ● Discrimination	● Intersectionality ● Inequality ● Structural change

Gender Connections in RE-WIRING

Funded	Horizon 2020
Grant	€170 121, 60
Time Frame	June 2018 – May 2020
Coordinated By	UNIVERSIDAD DE NAVARRA Spain
Main Themes	Gender and ethnic diversity, integration, innovation.
Other Themes	Female participation
Further Information	https://cordis.europa.eu/project/id/799330

AIM OF GEISIE

GEISIE (Gender and Ethnic Integration in Science, Innovation, and Entrepreneurship) analyses extensive databases to evaluate patterns, gain insights and enhance the study of gender and ethnic integration.

CONTEXT

Despite the growing presence of gender and ethnic diversity in the workforce, it remains unclear whether there has been a proportional increase in **gender and ethnic integration.**

The GEISIE project examines and analyses the databases for three primary purposes:

- To evaluate patterns and tendencies concerning gender and ethnic integration within the domains of science, innovation, and entrepreneurship.

- Gain insight into the factors influencing gender and ethnic integration, as well as their effects and potential obstacles.

- Enhance the research methodology in the study of gender and ethnic integration and devise indices that can effectively monitor changes in these areas.

The Horizon 2020 project examines integration across various dimensions encompassing teams, organisations and fields.

To examine these dimensions the project utilises extensive databases such as PATSTAT, Microsoft Academic Graph and government registry data.

These databases, coupled with name-matching algorithms, enable the estimation of the gender and ethnicity of **scientists, inventors and entrepreneurs.**

The findings from GEISIE hold significant importance for researchers investigating areas such as innovation, entrepreneurship, **social inclusion**, social structure, and inequality.

RESULTS

By GEISIE employing algorithms it examined both the inventors' gender and the gender focus of the invention(s).

Below outlines the findings that have been identified within this Horizon 2020 project:

- There is a noticeable upward trajectory in the involvement of women in the realm of innovation.

Concurrently, there has been a rise in the development of innovations specifically directed towards women.

- Female inventors demonstrate a tendency to develop innovations that cater specifically to women. A correlation has been found between the presence of women on an innovator team and the focus of the innovation on women.

- Female entrepreneurs who offer products or services that cater to women appear to derive advantages when female investors are involved in the process.

From collecting and analysing large databases, GEISIE has gained insight into gender and ethnic integrations patterns within the fields of science, innovation and entrepreneurship.
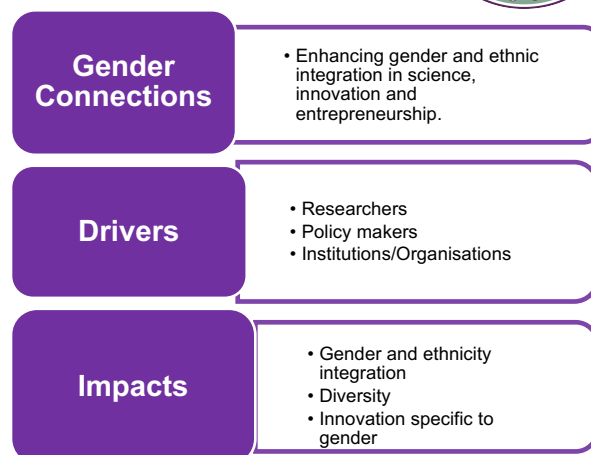
GEISIE: LESSONS FOR FLIARA

The findings from the data analysed and collected throughout this project highlights the impact of female innovators, the involvement of women in innovation along with female inventors.

This integration of women across the entire innovation chain, spanning from science to innovation to entrepreneurship to investing, holds significant importance.

This causal relationship contributes to the generation of more innovations specifically tailored to meet the needs of women.

The graph below identifies the drivers and impacts of enhancing gender and ethnic integration in science, innovation, and entrepreneurship.

Gender Connections • Enhancing gender and ethnic integration in science, innovation and entrepreneurship.

Drivers • Researchers • Policy makers • Institutions/Organisations

Impacts • Gender and ethnicity integration • Diversity • Innovation specific to gender

Gender Connections in GEISIE

This Horizon 2020 project examined, evaluated, and gained deeper understanding of gender and ethnicity integration in the fields of science, innovation, and entrepreneurship. GEISIE has enhanced and developed the study of gender and ethnicity integration. In doing so, it provides a wealth of data and information hugely relevant to the FLIARA project, when seeking out key case study examines across the EU.

Funded	Erasmus+
Grant	€ 202.425,00
Time Frame	February 2022 – February 2024
Coordinated By	ASOCIATIA CENTRUL PENTRU LEGISLATIE NONPROFIT
Main Themes	Cooperation, adult learning.
Other Themes	Green Skills; Entrepreneurial Learning - Entrepreneurship Education.
Further Information	http://trainingforfood.eu/we-green-project/

AIM OF WE-GREEN

Foster social green entrepreneurship among women in rural communities through education in the form of practical local programmes.

CONTEXT

The WE-GREEN project aims to promote gender equality in energy, climate and sustainability by reducing the gap between the EU Green Deal and the EU Gender Equality Strategy.

The project focuses on greening the economy of **rural areas** to achieve a sustainable **economic transformation**. Some initiatives foreseen are such as green businesses, sustainable farming methods and tourism or ecosystem restoration.

To tackle these issues, WE-GREEN will focus on the education and training of rural communities, particularly those of girls and women. **Education and green entrepreneurship** are set as pivotal points of the project.

In summary, the WE-GREEN project acknowledges challenges caused by gendered **migration in rural areas** that lead to **economic and social inequalities**.

RESULTS

The WE-GREEN project is still ongoing, but considering the current publications available, some of the expected outcomes are a) a handbook for project management that will guide partners; b) online dissemination and network activities involving also stakeholders; c) campaigns to raise awareness d) research and good practices including training and capacity building activities.

WE-GREEN: LESSONS FOR FLIARA

WE-GREEN is an ongoing project with shared interests concerning FLIARA. Some of the possible lessons FLIARA could draw are the approach to gender mainstreaming in the context of rural sustainability. Also, the greening of rural communities can be linked with the sustainability and development of rural innovations led by women.

Gender connection	Drivers	Impact
● Policy gaps ● Gendered migration ● Entrepreneur and leadership	● Economic empowerment ● Sustainability ● Resilience	● Green economy ● Female businesses ● Rural development

Gender Connections in WE-GREEN

Funded	Horizon 2020
Grant	€ 152 125 05
Time Frame	September 2018 –July 2020
Coordinated By	UPPSALA UNIVERSITET Sweden
Main Themes	Gender quotas, gender equality, empowering women, inclusive, democratic quality of local decision-making processes.
Other Themes	Challenging stereotypes, gender imbalances, political and governance structures, equal participation, promoting women's visibility.
Further Information	https://cordis.europa.eu/project/id/792969

AIM OF GENDER QUOTAS

Gender Quotas examine how the implementation of gender quotas affect the democratic quality of decision-making processes at the local level in Albania.

CONTEXT

This Horizon 2020 project seeks to analyse the effects and implications of implementing gender-based representation measures in order to enhance the inclusivity and fairness of local governance.

GENDER QUOTAS set specific targets or requirements for the **inclusion of women** in various **political positions** or **decision-making bodies**, such as local councils or committees.

The purpose of these quotas was to address the existing **gender disparities** and promote gender equality by ensuring a more balanced and diverse representation of both men and women in local governance.

The objectives of GENDER QUOTAS include:

- Promoting gender equality and addressing gender imbalances that exist in local decision-making processes by increasing the representation and participation of women.

- **Enhancing democratic processes:** Examine the impact of gender quotas on the democratic quality of local decision-making processes. By promoting a more inclusive and diverse representation, gender quotas contribute to more effective and equitable decision-making, ensuring a broader range of perspectives and interests are taken into account.

- **Empowering women's voices:** By providing women with equal opportunities to participate in political processes it amplifies their voices, addresses specific needs and concerns while promoting and shaping policies and decisions that will impact their lives.

- **Challenging gender stereotypes**: By promoting the visibility and success of women in political positions, gender quotas break down the gender-based barriers and the preconceived notions about women's roles and capabilities in decision-making processes.

- **Building inclusive and representative local institutions:** By implementing gender quotas the project created space for diverse perspectives and experiences to be valued, leading to more inclusive policies and governance structures.

GENDER QUOTAS examined the impact and value of women within political processes at a local level to gain insights into the opportunities and challenges women experience when participating in decision-making processes at a local level in Albania.

RESULTS

This project offers a deeper understanding of women's role in decision-making processes locally.

The project provides comprehensive training in data analysis, management techniques and advances theoretical and methodological approaches as well as valuable scientific and transferable skills.

This combination of knowledge, skillset, networking opportunities and collaborative engagements position the researcher among the accomplished researchers in Europe, fostering a strong competitive edge.
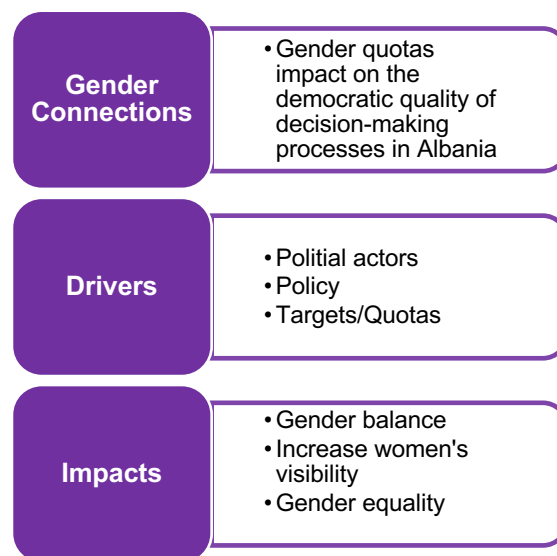
Through the projects integration of theoretical and methodological approaches, original data, interdisciplinary methods, and extensive public engagement and dissemination of research findings, this project presents a distinctive viewpoint on the subject of gender quotas and democratisation.

GENDER QUOTAS: LESSONS FOR FLIARA

GENDER QUOTAS enhances the position of women within various studies such as democratization, representation, political anthropology, and feminist institutionalism.

The project examines the gender disparities and imbalances within local decision-making processes. It highlights the value of inclusivity and women participating in these processes to ensure equality and balance. The concept of governance within the FLIARA conceptual framework can be enhanced via the lessons learned from the GENDER QUOTAS project.

The graph below highlights the drivers and impacts on gender equality identified within the GENDER QUOTAS project.

Gender Connections • Gender quotas impact on the democratic quality of decision-making processes in Albania

Drivers • Politial actors • Policy • Targets/Quotas

Impacts • Gender balance • Increase women's visibility • Gender equality

Gender Connections in GENDER QUOTAS

This Horizon 2020 project aims to enhance our comprehension of the opportunities and constraints encountered by women who aspire to engage in local-level decision-making processes.

GENDER ACTION+

Funded	Horizon Europe
Grant	€2 999 814,00
Time Frame	June 2022 – May 2025
Coordinated By	INSTITUTE OF SOCIOLOGY OF THE ACADEMY OF SCIENCES OF THE CZECH REPUBLIC PUBLIC RESEARCH INSTITUTION Czechia
Main Themes	Gender equality plans, research and innovation, European research area.
Other Themes	Community of practice, policy, inclusivity, collaboration.
Further Information	https://genderaction.eu/

AIM OF GENDERACTIONPLUS

GENDERACTIONplus (Gender Equality Network to Develop ERA Communities To coordinate Inclusive and sustainable policy implementatiON) aims to foster the advancement of gender equality and inclusivity goals within the newly established European Research Area. It will collaborate with stakeholders to establish a policy of community of practice, facilitating coordination and collective efforts.

CONTEXT

GENDERACTIONplus seeks to enhance the alignment of **gender equality** and **inclusivity** goals in the new European Research Area. This is achieved by establishing two Communities of Practice: one compromising national authorities, and the other consisting of **representatives** from **Research Funding Organisations**.

The project aims to foster collaboration and coordination in advancing gender equality in research and innovation.

RESULTS

GENDERACTIONplus aims to advance gender equality, inclusivity, and research quality in **European Research and Innovation** through policy coordination, stakeholder engagement and institutional changes.

GENDERACTIONPLUS: LESSONS FOR FLIARA

The lessons learned from GENDERACTIONplus will be highly significant for FLIARA and its efforts to promote gender equality and inclusiveness along with highlighting the impacts it can have in research and innovation.

The table below highlights the drivers, impacts and gender connections within the GENDERACTIONplus project.

Gender connections	Drivers	Impacts
● Gender equality and inclusivity in European Research Areas	● Community of Practice ● Organisations/ Institutions ● Policy	● Gender balance ● Gender fair ● Inclusivity

Gender Connections in GENDERACTIONplus

Funded	Horizon 2020
Grant	€ 4 768 397,50
Time Frame	January 2017 – June 2022
Coordinated By	ABERYSTWYTH UNIVERSITY, United Kingdom
Main Themes	Economic, social inequality, civil society, public services.
Other Themes	Territorial autonomy, multi-level policymaking, science.
Further Information	https://imajine-project.eu/

AIM OF IMAJINE

Advance social science knowledge and understanding of territorial inequalities and related policy measures beyond the state-of-the-art, as well as contribute to the ongoing conceptualisation of territorial cohesion, spatial justice and the European Social Model.

CONTEXT

The IMAJINE project aimed to address **spatial justice and territorial inequalities** in Europe. The aim focuses on the constant growth of **regional disparities** in Europe, in regard to economic growth, social exclusion and environmental challenges.

The project sets an innovative framework for analysing spatial justice, where the **sustainability pillars** are incorporated. The project is backed up by qualitative and quantitative methods that would help researchers identify the underlying causes and dynamics of territorial inequalities.

At the same time, it offers policy recommendations, through the engagement of policymakers, stakeholders and civil society.

The IMAJINE project focuses on NUTS2 and NUTS3 regions to compare and facilitate the analysis of such regional disparities. It allowed the project also to emphasise and influence regional autonomy and the cohesion of EU policies on special justice.

RESULTS

Some of the conclusions produced by the IMAJINE project highlight the complexity and multidimensional nature of territorial inequalities. A wide range of factors plays an important role in determining the drivers that contribute to this disparity.

Policies in response to territorial inequality must be context-specific and tailored to the challenges of each region. Also, the implementation process must come hand in hand with stakeholder engagement and integration of the governance structures.

Finally, even though **territorial autonomy** was vital in the analysis, the **EU Cohesion Policy** plays a significant role in promoting spatial justice and reducing those

disparities. More flexibility and constant improvement of such policies can keep contributing to positive and equitable outcomes.

The deliverables that contributed to the analysis can be summarised as follow:

- Innovative theoretical framework that expands the knowledge on spatial justice and territorial disparities.

- Empirical evidence via quantitative and qualitative research. This involved data collection and case studies.

- Policy recommendations.

- Knowledge exchange through workshops, conferences and policy forums to establish dialogues between researchers, policymakers, practitioners, etc.

- Research capacity building on spatial justice, which led to the development of educational materials.
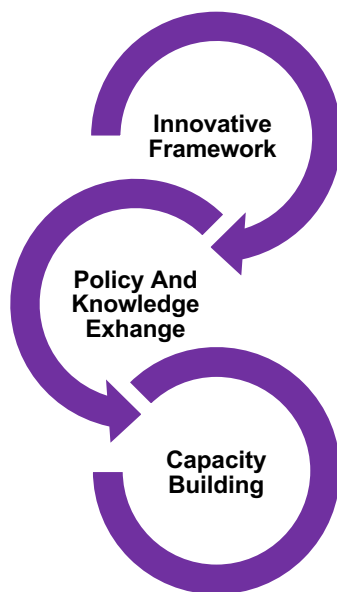
IMAJINE's resources

IMAJINE: LESSONS FOR FLIARA

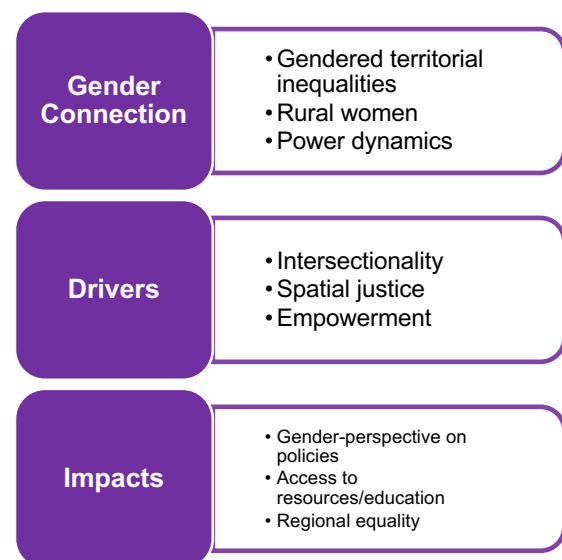The FLIARA project can draw several lessons from the IMAJINE project.

To begin with, the IMAJINE project recognises the importance of gender in addressing territorial inequalities.

Gender interacts with other dimensions like race and age, which policies should consider. Apart from spatial injustice, women face different territorial inequalities that can help FLIARA address obstacles to innovation and rural development for women.

Policies trying to address spatial justice must include a gender perspective that includes roles, norms and power dynamics, a project finding which is central to the FLIARA project

IMAJINE recognises that in rural areas women face other challenges like access to resources, services and representation.

By considering these outcomes, the FLIARA project can explore how gender inequalities affect women's access to funding, networks and entrepreneurial opportunities in rural areas. Thus, **empowering women** to participate and start rural innovation initiatives.

Gender Connections in IMAJINE

LIAIS⬡N

Funded	Horizon 2020
Grant	€ 4 999 143, 75
Time Frame	May 2018 – April 2022
Coordinated By	HOCHSCHULE FUR NACHHALTIGE ENTWICKLUNG EBERSWALDE, Germany.
Main Themes	Research and innovation, multi-actor approach, optimising innovation in agriculture, forestry and rural areas.
Other Themes	Co-innovation initiatives, partnerships, co-creation, knowledge exchange.
Further Information	https://liaison2020.eu

AIM OF LIAISON

LIAISON aimed to make a significant and meaningful contribution to optimising interactive innovation project approaches and the delivery of EU policies to speed up innovation in agriculture, forestry, and rural areas.

CONTEXT

The LIAISON project focused on fostering innovation in agriculture, forestry, and rural areas within the European Union.

The project aimed to optimise the approaches used in interactive innovation projects and the delivery of EU policies in order to accelerate the pace of innovation in these sectors.

By facilitating collaboration and knowledge exchange among stakeholders, LIAISON drove **positive and transformative changes** that enhanced the sustainability, productivity, and **competitiveness of agriculture, forestry, and rural areas** across the EU.

RESULTS

LIAISON provided practical solutions to **farmers, foresters, and rural communities** by offering:

- Comprehensive and practical guides that offer step-by-step instructions on creating partnerships, overseeing projects, and efficiently sharing outcomes.
- Concise reports focusing on enhancing the organisational framework for partnerships, projects, and innovation networks, aimed at policymakers.
- Diverse communication resources such as videos, online platforms that showcases the successful innovation partnerships in agriculture, forestry and related enterprises or initiatives.

This multi-actor approach supported practitioners in **co-innovation initiatives** by providing relevant tools and research to speed up innovation and provide viable solutions.

LIAISON also carried out a 'light-touch' review of **200 innovation partnerships** along with conducting **32 case studies**. The outcomes derived from the qualitative information revealed the necessary instruments required for collaborative innovation.

The project offered interactive mechanisms for joint creation and shared learning, networking, effective communication, dissemination, tools for evaluating impact, and methodologies and instruments for self-assessment.
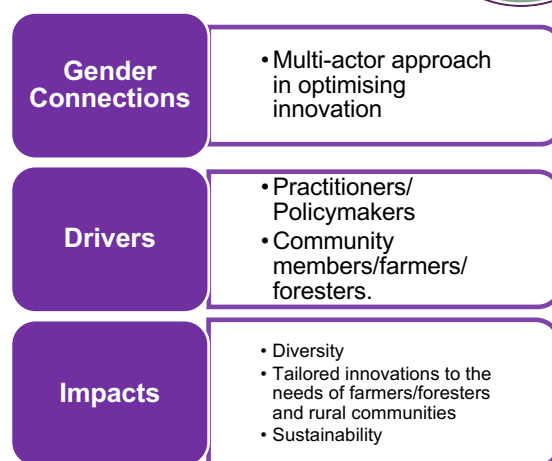
LIAISON: LESSONS FOR FLIARA

This multi-actor approach is a key learning for FLIARA as it indicates the impact it has upon co-creation and co-innovation initiatives.

It highlights the impact of knowledge exchange among relevant stakeholders/organisations along with tailoring to the needs of diverse communities. The key message for the FLIARA project is the importance of the multi-actor approach for advancing women engaged in innovative practices.

By utilising an interactive innovative approach, it contributes to sustainable developments within communities. FLIARA can draw the learnings from the LIASION project seeking out case studies where women are leading or engaged in interactive innovative approaches and disseminate the learnings from them to enhance the engagement of other women across the EU.

This project identifies the value of actors collaborating to achieve a common goal and becoming innovative in how they address the issues within their sector/community.

The graph below highlights the drivers, impacts and gender connections identified within the LIAISON project.

Gender Connections	• Multi-actor approach in optimising innovation
Drivers	• Practitioners/ Policymakers • Community members/farmers/ foresters.
Impacts	• Diversity • Tailored innovations to the needs of farmers/foresters and rural communities • Sustainability

Gender Connections in LIAISON

This Horizon 2020 project creates opportunities within communities to co-innovate with their peers to develop their community/sector towards a sustainable future.

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Funded	Horizon 2020
Grant	€ 14 998 282,38
Time Frame	September 2019 – August 2023
Coordinated By	SOUTH EAST TECHNOLOGICAL UNIVERSITY, Ireland
Main Themes	Internet of Things, Sustainable agriculture.
Other Themes	Data science, vegetable growing, digitalisation.
Further Information	https://h2020-demeter.eu/

AIM OF DEMETER

To lead the digital transformation of Europe's agri-food sector through the rapid adoption of advanced IoT technologies, data science and smart farming, ensuring its long-term viability and sustainability.

CONTEXT

The DEMETER project aims to transform agriculture in Europe and promote **sustainable food production** through technology. DEMETER tries to answer new challenges in **agriculture** such as climate change, population growth and the need for sustainable resource management tools.

The project tries to bring a solution through digital technologies and the **Internet of Things (IoT)** in agriculture.

There is a large amount of data unexplored and overlooked that can be used in order to improve the efficiency, productivity and sustainability of the sector.

DEMETER tries to close this gap with the development of a data-driven ecosystem that connects stakeholders to the agricultural value chain.

RESULTS

The DEMETER project is still ongoing, but some expected results are **the optimisation of resources** used, reduction of environmental impact and enhancement of the resilience and **competitiveness** of farming in Europe.

The project is fostering partnerships and knowledge exchanges among researchers, consumers, policymakers, farmers to co-create sustainable agricultural practices.

DEMETER: LESSONS FOR FLIARA

The DEMETER project has already published a report on Gender, Youth and Technology that remarks on the importance of gender perspective in approaching rural and technology development.

The report emphasises the relevance of gender-disaggregated data, innovations and technologies that consider women's needs and roles in agriculture, and their participation in decision-making and access to resources.

Gender Connection	Drivers	Impacts
● Gender sensitive technology ● Women empowerment	● Technology ● Gender-responsive policy ● Rural development	● Innovation + women's needs ● User-friendly practices ● Capacity building

Gender Connections in DEMETER

Funded	Horizon 2020
Grant	€ 4 000 000,00
Time Frame	September 2019 – December 2023
Coordinated By	STICHTING WAGENINGEN RESEARCH, Netherlands
Main Themes	Food security, sustainable agriculture and forestry.
Other Themes	Policy and decision making, bioeconomy.
Further Information	https://mind-step.eu/

AIM OF MIND STEP

To support public decision making in agricultural, rural, environmental and climate policies, taking into account the behaviour of individual decision-making units in agriculture and the rural society.

CONTEXT

The MIND STEP PROJECT addresses the Work Programme Topic RUR-04-2018-2019, via analytical tools and models to support agricultural and food related policies. The objectives of the project revolve around the EU CAP and supporting decision-making on topics such as agriculture, rural, environmental and climate policies.

At the same time, MIND STEP aims to create a data framework to support policy

analysis and monitoring in **agriculture**. This toolbox can be applied to assess regional and national policies. The development will be carried out with the collaboration of stakeholders.

The project is attempting to create a modular and customisable **Individual Decision Making (IDM) Model** to assess the impact of those policies on individual choices. It puts a focus on individual farms and local impacts.

RESULTS

The MIND STEP project is still ongoing but some of the deliverables already published show key policy questions for ex-ante Impact Assessment of **EU Agricultural and Rural Policies**; indicators for measuring the impact of policies on IDM; report on policy gaps; prototypes for databases (economic and bio-physical databases and large-scale data); and literature review linking economic and biophysical databases.

MIND-STEP: LESSONS FOR FLIARA

Even though the main focus of the MIND STEP project is not gender, there are lessons that can be learned for the FLIARA project: : inclusive data collection to support evidence-based decision-making; participatory approach where women, policy makers and target groups exchange ideas; and capacity building, of policymakers and women on the implementation and evaluation of innovation projects.

Gender Connection	Drivers	Impacts
● Capacity building ● Inclusive data	● IDM ● Science ● Decision-making	● Policy ● Agriculture, food ● Global policies

Gender Connections in MIND STEP

Funded	Horizon 2020
Grant	€ 1 995 040,75
Time Frame	January 2018 – December 2021
Coordinated By	STICHTING WAGENINGEN RESEARCH, Netherlands.
Main Themes	New entrants, innovation, entrepreneurship, resilience, sustainable farm businesses.
Other Themes	Sustainable development, access to land, young farmers.
Further Information	http://www.newbie-academy.eu/

AIM OF NEWBIE

The primary objective of the NEWBIE network is to enhance innovation, entrepreneurship, and resilience within Europe's agricultural industry by empowering new entrants to effectively establish sustainable farming enterprises across the EU.

CONTEXT

The European Commission have recognised a concerning deficiency of new farmers, as evidenced by statistical data revealing a decline in the number of young farmers in the EU27 and a lack of succession from older farmers to the new generation at an adequate replacement rate.

To address this challenge, the NEWBIE Network was established with the aim of **enabling new entrants** to start sustainable farm businesses in Europe.

The network facilitated the creation and dissemination of **innovative business models**, including new entry models, to cater to a diverse range of new entrants.

The primary objective of the NEWBIE network is to promote **innovation, entrepreneurship**, and resilience within the European farming sector by assisting new entrants in successfully establishing sustainable farm businesses across Europe.

The following are the objectives of the NEWBIE project:

- Gather and critically evaluate and promote existing and potential new farm business models.

- Enhance the flow of educational and scientific information on new business models and entry models between different geographical areas in Europe.

- Produce and disseminate accessible, practice-based, educational and scientific information on business models and entry models, ensuring long-term availability for new entrants through traditional and non-traditional agricultural knowledge systems.

- Increase awareness of available new business and entry models within the agri-food industry and rural businesses.

- Encourage creative experimentation within practice, education and research on new entrant business models.

- Provide support for the implementation of the European Innovation Partnership (EIP) 'Agricultural Productivity and Sustainability' by collaborating with Operational Groups.

- Contribute to research agendas and policy development on new business models and entry models for new entrants.

RESULTS

The NEWBIE project carried out a total of 90 case studies, a **transnational dynamic learning gender**, and a connected national dynamic learning agenda along with a toolkit. The toolkit includes four parts:

- NEWBIE Umbrella Toolkit
- NEWBIE Hurdles and solutions
- NEWBIE World map
- NEWBIE Topic specific Toolkit

The toolkits offer practical (online) resources that offer up-to-date guidance for new entrants, successor's advisors, delivering practical resources, lessons, and insightful tips based on discussions with different networks and practical experiences.

The materials are collaboratively developed in strong partnership with relevant stakeholders from supportive environments, ensuring effective adaptation to evolving need and expectations of all involved.

NEWBIE: LESSONS FOR FLIARA

The NEWBIE project offers many supports and resources for new entrants in establishing farm businesses. These materials assist and equip new entrants in entering the agricultural sector/industry.

The graph below highlights the drivers, impacts and gender connections identified within the NEWBIE project.
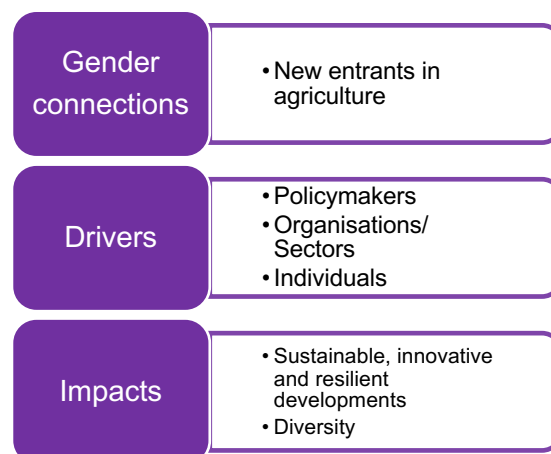
Gender Connections in NEWBIE

This Horizon 2020 project offers many insights into the opportunities and challenges new entrants encounter when entering a sector/industry. The project identified these barriers and provided resources and toolkits for individuals to avail of and assist with the challenges they may experience. Within the context of FLIARA, the team can look to the NEWBIE project for ideas and recommendations that could enhance the engagement of women as new entrants into farming and how they can engage in innovative practices to enhance farm viability and sustainable actions.

Funded	Horizon 2020
Grant	€ 9 025 268,50
Time Frame	January 2023 – December 2026
Coordinated By	THE PROVOST, FELLOWS, FOUNDATION SCHOLARS & THE OTHER MEMBERS OF BOARD, OF THE COLLEGE OF THE HOLY & UNDIVIDED TRINITY OF QUEEN ELIZABETH NEAR DUBLIN, Ireland
Main Themes	Food, Bioeconomy Natural Resources, Agriculture and Environment.
Other Themes	Governance, sustainable economy.
Further Information	https://cultivate-project.eu/

AIM OF CULTIVATE

Build sustainability and resilience in urban and peri-urban areas through a ground-breaking online social innovation support platform, namely The Food Sharing Compass.

CONTEXT

The CULTIVATE project aims to address the inequalities and vulnerabilities at urban and peri-urban food systems. The project tries to promote **Food Sharing Initiatives**, for which it uses the **Food sharing Compass** and other tools that help cities navigate towards sustainable food systems.

CULTIVATE brings together cultivators, policy makers, **food supply actors**, researchers and civil society. The various steps the project will follow are activation of local hubs, replication of key tools, integration and beyond, expanding food sharing activities in urban and peri-urban areas.

RESULTS

The CULTIVATE project commenced recently, so no results have been published. Yet, from the information provided, some of expected outcomes are

- SHARECITY200, to expand the previous one;
- Food Sharing Calculator that includes sustainability impact assessments;
- Menu of Good Governance for policy makers;
- Community of Practice framework;
- Library of Citizen Engagement.

CULTIVATE: LESSONS FOR FLIARA

CULTIVATE seeks to foster innovation and for that will include new approaches, technologies and practices to improve sustainability and inclusivity of the food system.

FLIARA can create synergies and focus those approaches to foster inclusive innovation among women in rural areas.

Gender Equality	Drivers	Impacts
● Gender gaps ● Root causes ● Inclusivity	● Food sharing ● Citizen engagement ● Governance	● Urban communities ● Food waste

Gender Connections in CULTIVATE.

Funded	Horizon Europe
Grant	€4 998 268,75
Time Frame	January 2023 – December 2027
Coordinated By	HOCHSCHULE FUR NACHHALTIGE ENTWICKLUNG EBERSWALDE, Germany.
Main Themes	Multi-Actor-Approach, co-creation, co-innovation, coherent.
Other Themes	Knowledge exchange, capacity building.
Further Information	*https://cordis.europa.eu/project/id/101086531* *https://www.liaison2020.eu*

AIM OF PREMIERE

The PREMIERE project aims to facilitate the growth of cohesive and thoroughly planned multi-actor initiatives.

CONTEXT

The European Union (EU) strategies such as the Green Deal and Farm-to-Form address societal challenges that necessitate inventive solutions in agriculture, forestry, and rural areas.

To speed up **innovation solutions** in **agriculture, forestry, and rural areas a Multi-Actor-Approach (MAA)** is required.

The Horizon 2020 sister-project, LIAISON (2018-2022) has identified many learning and insights in how a MAA is understood by existing and potential actors.

In response, the PREMIERE project will play a key role in advancing the development of MAA through two primary avenues:

- Contribute to the formation of project consortia that shares knowledge of proposal writing, project activities and beyond by enhancing the connection between Horizon Europe multi-actor projects and Operational Groups.

- PREMIERE will also provide insights and tools to support the implementation of innovative governance and informed decision-making in policy and administration for the **green transition**.

PREMIERE will draw from the findings of the LIAISON project and incorporate these ideas to develop a range of tools, training programmes, and networking events to enhance capacity development.

PREMIERE: LESSONS FOR FLIARA

The reasons why PREMIERE is of interest for FLIARA is the focus on multi-actor approaches and the value of collaborating and co-creating to develop innovative solutions to address issues impacting communities and sectors.

Gender Connections	Drivers	Impacts
● Women involved in the MAA ● Diversity	● Policy ● Stakeholders, participants, executive agencies, organisations	● Inclusivity ● Knowledge Exchange ● Tailored needs

Gender Connections in PREMIERE

Fact Sheet 24: WEGO

Funded	Horizon 2020
Grant	€ 3 870 806, 62
Time Frame	January 2018 – June 2022
Coordinated By	ERASMUS UNIVERSITEIT ROTTERDAM, Netherlands.
Main Themes	Gender, ecology, wellbeing, community responses, network.
Other Themes	Resilience, sustainability, class, empowerment, equitability, climate, development, researchers.
Further Information	https://wegoproject.eu

AIM OF WEGO

WEGO (Well-being, Ecology, Gender and cOmmunity) is a trans-national network that aims to develop a collective research and training plan to educate the upcoming generation of interdisciplinary social environmental scientists in Europe, focusing on feminist political ecology.

CONTEXT

WEGO's research examines gender relations in the community from a **feminist-informed political ecology framework (FPE).**

Through an international and interdisciplinary lens, WEGO examines the interplay of **gender and power dynamics** in community responses to ongoing climate, economic, and environmental crises across various socio-ecological contexts.

The primary goal was to offer insightful and compelling analysis that highlights the significance of gendered community responses to climate change, economic shifts, and environmental challenges.

Additionally, WEGO seeks to deepen our understanding of the necessary changes for enhanced **resilience and sustainability**.

The project acknowledges the interactions between gender, class, caste, race, culture, and ethnicity in shaping ecological transformations and determining a community's potential for sustainable development.

RESULTS

WEGO achieved the following results within its project:

- WEGO has contributed and established a strong network of feminist political ecology researchers by collectively publishing material throughout the project.
- The project also provided training which included the use of political art, workshops, second and tertiary level teaching and writing blogs. The project also undertook ethnical research in communities. This research was carried out

horizontally to gain greater insights into the current mechanisms in place in the region itself.

- WEGO actively collaborated with civil society organisations, government bodies, and policymakers in Europe to promote a comprehensive gender perspective in the pursuit of sustainable development.

These results were achieved through a range of distinctive activities conducted by WEGO. These activities are highlighted in the graph below.

WEGO-Training Labs

Secondments

Building strong approach to ethnical research

Outreach and societal relevance

Working online

Activities carried out in WEGO

WEGO offers an innovative approach in informing and implementing a feminist-informed political ecology framework to tackle **socio-ecological challenges** to build sustainable, resilience and equitable futures by collaborating with communities in Europe.

WEGO: LESSONS FOR FLIARA

WEGO provides valuable tools and knowledge that can enhance FLIARA's impact on innovation.
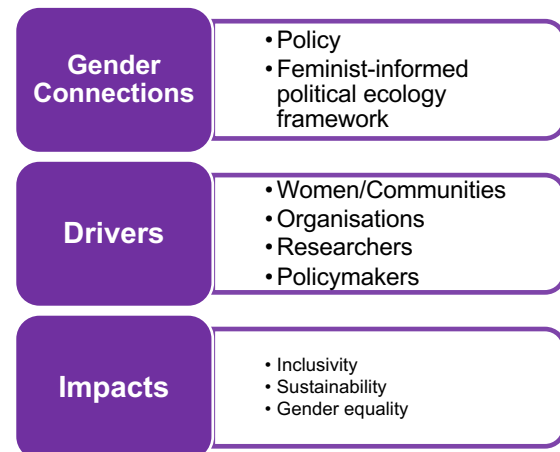
The project highlights the importance of including feminist political ecology in decision making processes.

The recommendations identified by the WEGO project team highlight the need to

effectively engage, listen, communicate, and value the input from women.

The project identifies the importance of obtaining gender perspectives to build a mainstream **gendered environmental policy.** The recommendations identified by the WEGO team can be found here.

The graph below highlights the drivers, impacts and gender connections relevant for FLIARA.

Gender Connections
- Policy
- Feminist-informed political ecology framework

Drivers
- Women/Communities
- Organisations
- Researchers
- Policymakers

Impacts
- Inclusivity
- Sustainability
- Gender equality

Gender Connections in WEGO

WEGO indicates the value of feminist political ecology within decision making processes and its impact upon communities' response to climate and environmental crises in different socio-ecological contexts.

AURORAL

Funded	Horizon 2020
Grant	€ 14 569 392,75
Time Frame	January 2021 - December 2024
Coordinated By	COMISSAO DE COORDENACAO E DESENVOLVIMENTO REGIONAL DO ALENTEJO, Portugal
Main Themes	Leadership, ICT.
Other Themes	IoT, Public services. Entrepreneurship.
Further Information	https://www.auroral.eu/

AIM OF AURORAL

Increasing connectivity and delivering a digital environment of smart objects interoperable services platforms able to trigger dynamic rural ecosystems of innovation chains, applications and services.

CONTEXT

The AURORAL project aims to increase connectivity and create a digital environment for smart objects and interoperable service platforms. The project tries to stimulate innovation chains and other services in rural areas to create economic growth and development.

AURORAL is grounded on the Internet of Things upon an open API-based system. It involves 25 partners from 10 European countries and focuses on five key elements: **farming, tourism, mobility,** **energy, and health.** The ultimate goal is to create 50 innovative applications to create thriving digital ecosystems.

RESULTS

The AURORAL project has engaged with stakeholders and established synergies with other projects and platforms, such as the Living-in.EU movement, to create KPIs for measuring **Smart Communities**.

The project organises workshops and local pilots in seven countries: Portugal, Norway, Finland, Spain, Italy, Austria, and Sweden.

- Policy recommendation on relevant ICT standardization, EU priorities and business opportunities.
- Baseline for digitalised rural ecosystems in Europe.
- Analysis of the status and needs for the open call for crosscutting services.
- Report on monitoring methodology to track AURORAL's relevance and replicability in European Rural Areas.

AURORAL: LESSONS FOR FLIARA

The project is still ongoing but, some lessons can be transferred to FLIARA.

First, promoting inclusivity through technology and innovation, by creating an entrepreneurial ecosystem and investments platforms (e.g., Smart Communities). Secondly, AURORAL focuses on sustainable rural areas by promoting efficiency of resources and **sustainable agricultural practices**. Finally, the interdisciplinary approach engaging topics such as farming, tourism, mobility, as mentioned.

Gender Equality	Drivers	Impacts
● Development	● Innovation	● Efficiency
● Inclusion	● Cooperation	●Entrepreneurship

Gender Connections in AURORAL

Funded	Erasmus +
Grant	N/a
Time Frame	2019 – 2021
Coordinated By	ECOLISE, Belgium.
Main Themes	Socio-ecological transition, Sustainable Development Goals, civic engagement, adult education initiatives, social and environmental innovations.
Other Themes	Delivery of education, community-led, Community of Practice, blended learning, transforming education and learning across Europe.
Further Information	http://wiki.ecolise.eu/index.php?title=Blended_Adult_Learning_for_the_Social-ecological_Transition

AIM OF BLAST

BLAST (Blended Adult Learning for the Social-ecological Transition) aims to facilitate significant personal and community-driven transformation by encouraging active participation in the socio-ecological transition aligned with the Sustainable Development Goals, the Paris Climate Agreement, and associated objectives.

CONTEXT

BLAST's primary focus lies in promoting transformative learning throughout Europe, aiming to facilitate personal and collective growth.

The project's objective is to facilitate significant personal and community driven change by **empowering individuals** to actively participate in the **socio-ecological transitions** which are aligned with the Sustainable Development Goals and the Paris Climate Agreement.

The project also focused on:

- Creating an environment for adult educators to enhance their skills in delivering blended transformative learning for civic engagement.

- Expanding the reach and improving accessibility, quality, attractiveness, and coordination of transformative adult education initiatives across Europe that support social-ecological transition.

- Identifying, pooling, encouraging, and disseminating social and educational innovations relevant to the project's goals.

- Leveraging the outcomes of the other EU projects that are related to the project's objectives.

BLAST collaborates and encourages communities to become innovative in their regions to address the socio-ecological challenges they encounter.

RESULTS

The project creates an endogenous development by allowing the communities to drive the development on the ground.

It gives community members an opportunity to develop and enhance their region towards a sustainable future.

This **Community of Practice** offers a tailored approach that may assist and influence other members and communities when addressing the socio-ecological problems within their regions.

BLAST: LESSONS FOR FLIARA

BLAST offers many insights for FLIARA as it highlights the importance of the various **social and educational innovations, community-led developments**, blended learning, education initiatives along with developing results from other EU related projects.

These findings gain deeper understandings into the opportunities and challenges communities encounter when addressing the socio-ecological problems within their regions.

BLAST also aims to support communities to actively participate in the socio-ecological transition in response to the Sustainable Development Goals (SDG).

Four of the SDG that apply to the BLAST project and are relevant to FLIARA include: achieving gender equality, reducing inequalities, creating sustainable cities and communities along with partnerships for the goals.

The graph below highlights the drivers, impacts and gender connections within the BLAST project.

Gender Connections	• Sustainable Development Goals • Socio-ecological transition
Drivers	• Policy • Communities/ Stakeholders
Impacts	• Gender equality • Sustainable communities • Multiplier effect - knowledge transfer

Gender Connections in BLAST

This Erasmus+ project focuses on gaining insights into the opportunities and challenges Community of Practices encounter when responding to the socio-ecological problems within their region. Women in many rural communities engage and often lead such projects as those explored via the BLAST project. FLIARA can learn from these findings to examine the engagement of women in these community projects and how their involvement enhances socio-ecological transitions.

Funded	Erasmus+
Grant	€ 286 214. 00
Time Frame	November 2020 – October 2022
Coordinated By	EQUAL Ireland.
Main Themes	Entrepreneurial learning, digitalisation, active ageing, innovations developing training, courses and curriculum.
Other Themes	Information and Communications Technology (ICT),
Further Information	https://deal-eu.org

AIM OF DEAL

The aim of DEAL (Digital Entrepreneurship for Adult Learners) is to equip Target Users with the essential knowledge, skills and capabilities needed to empower them to effectively use digitalisation. This

empowerment enables them to seize self-employment and entrepreneurship opportunities.

CONTEXT

The DEAL Project is driven by the recognition of a deficiency in digital entrepreneurship skills highlighted by the EU Commission, along with the concerning rates of **unemployment**.

This situation coincides with the potential offered by **digitalisation**, especially in fostering **self-employment** and entrepreneurship opportunities, specifically targeting **older individuals**, rural populations, and women.

DEAL aims to provide support to vulnerable target users who are preparing to face the inevitable effects of digitalisation.

Furthermore, external factors like evolving **technologies**, globalization, climate change and urbanization are global catalysts for change that will impact both national and European enterprises.

RESULTS

DEAL has achieved the following objectives:

- Equipped a group of individuals from the target demographic with the necessary knowledge, skills, confidence, and competence to pursue self-employment opportunities through entrepreneurship.
- Developed an Education and Training programme focused on Digital Entrepreneurship and Self-Employment Opportunities, along with freely accessible resources (Toolkits, mapping, and case studies).
- Created an Operational Manual to ensure transparency and make the project results and outcomes

readily available for further utilisation.

The project places the needs of the learners at the forefront, ensuring that the programme is tailored to meet their specific requirements.

DEAL: LESSONS FOR FLIARA

DEAL offers many insights and resources that can be used to enhance FLIARA's contribution to gender, digitalisation and entrepreneurship.

The project gains deeper understandings into the role of gender and entrepreneurship by carrying out case studies.

These case studies identified the innovation approaches women undertook when starting up their enterprise.

It highlights how women used their existing assets and skills along with building their knowledge where needed to develop and expand their enterprise.

The graph below highlights the drivers, impacts and gendered connections identified within the DEAL project.
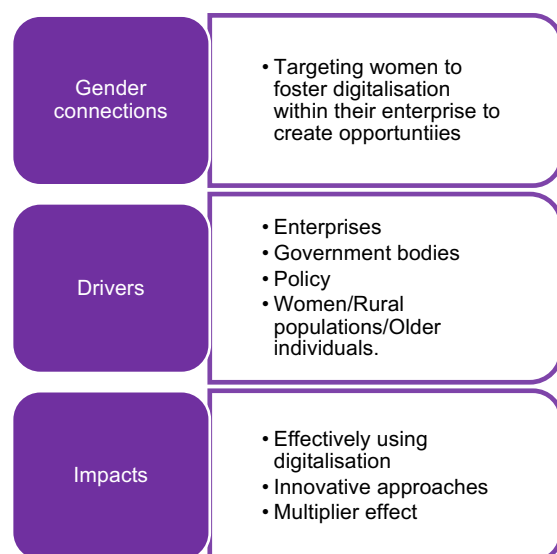
DEAL recruited and provided necessary knowledge, information and competences to participants involved in the project which included individuals with low income, older and female cohorts.

This education and training equipped the participants to have the necessary self-confidence to take advantage of digitalisation for developing opportunities within their enterprise.

Gender connections	• Targeting women to foster digitalisation within their enterprise to create opportuntiies
Drivers	• Enterprises • Government bodies • Policy • Women/Rural populations/Older individuals.
Impacts	• Effectively using digitalisation • Innovative approaches • Multiplier effect

Gender Connections in DEAL

MOVING
MOuntain Valorisation through INterconnectedness and Green growth

Funded	Horizon 2020
Grant	€5 996 748, 75
Time Frame	September 2020 – August 2024
Coordinated By	UNIVERSIDAD DE CORDOBA, Spain.
Main Themes	Mountainous regions, build capacities, increase awareness, co-develop, bottom-up participatory approach, policy, climate change, opportunities.
Other Themes	Resilience, Sustainability.
Further Information	https://www.moving-h2020.eu

AIM OF MOVING

The MOVING project aims to enhance capacities and collaboratively develop policy frameworks throughout Europe. Its main focus is on establishing new or expanding existing value chains to enhance the resilience and sustainability of mountainous regions.

CONTEXT

Mountainous regions account for 36% of Europe's total area and play a crucial role in providing both **public and private goods**.

Despite their ecological and socio-economic significance, there is a lack of up-to-date comparable information on the impact of **climate change, demographic shifts and socioeconomic factors** in these areas. Additionally, there is a need for an appropriate mix of policies to address these challenges.

It is essential to have advanced knowledge regarding the vulnerability of land use, production systems, and related value chains as well as comprehensive understanding of the long-term trends and dynamics affecting European mountains. This knowledge will serve as a foundation for designing future policies.

RESULTS

The main objective of the MOVING project is to strengthen capacities and collaboratively develop policy frameworks across Europe.

This will facilitate the establishment of new or improved **value chains**, thereby contributing to the **resilience** and sustainability of mountainous areas. The project aims to leverage local assets and promote the delivery of both private and public goods.

MOVING: LESSONS FOR FLIARA

The MOVING project is of interest to FLIARA as we can learn greatly from via its exercises around future trends and the multi-actor approach which is included in the Community of Practice (23 multi-actor platforms and an EU platform).

Gender connection	Drivers	Impacts
● Community of Practice Future Trends	● Policy Mountainous regions	● Climate change Value chains Sustainability Resilience

Gender Connections in MOVING.

coevolvers

Funded	Horizon Europe
Grant	€ 5 254 627,00
Time Frame	November 2022 – October 2026
Coordinated By	LUONNONVARAKESKUS, Finland
Main Themes	Natural Based Solutions (NBS), technology and bioeconomy.
Other Themes	Agriculture and Environment.
Further Information	https://co-evolvers.eu/

AIM OF CO-EVOLVERS

COEVOLVERS goes beyond the state of the art by introducing a co-evolutionary approach, which offers a radically new view for NBS design and implementation by looking at NBS at the interface of technological and biological spheres and considering full co-creation as an interplay not only between the stakeholders but also between human and nonhuman actors.

CONTEXT

The CO-EVOLVERS project aims to design and implement a **nature-based solution (NBS) for sustainability**, by using cost-effective strategies to foster resilience. Most NBS lack inclusivity, CO-EVOLVERS introduces a co-evolutionary approach that considers the relation between technology and the biological spheres.

The project will create seven living labs across Europe to study socio-politics of NBS.

RESULTS

The labs the project is creating are:

- Enhancing urban biodiversity in the city of Tartu, Estonia to create a multispecies city.
- Reducing wildfires in Catalonia, Spain by implementing sheep grazelands.
- Greening a post-industrial suburb in Turku, Finland, known as the Pansio-Perno neighbourhoods.
- Creating a healing garden for individuals with mental health problems at a rehabilitation institute in Hungary.
- Deepening the connections between the Murray Park Community Woodland and the local community in Scotland.
- Committing to diversity in the Molentargius-Saline Regional Park, the largest city in Sardinia, Italy.
- Promoting collective actions in a cross-border community in Beskydy through the implementation of a virtual commons.

CO-EVOLVERS: LESSONS FOR FLIARA

Some of the lessons we can extract from CO-EVOLVERS are their focus on inclusive and participatory approaches to include marginalized and vulnerable groups, that are applicable to women in rural areas; Offer place-based and context-specific focus to address unique set of challenges and finally promoting sustainability.

Gender Equality	Drivers	Impacts
● Inclusivity ● Marginalized groups	● Current limitations ● Co-evolution	● NBS ● Communities ● Diversity

Gender Connections in CO-EVOLVERS

Fact Sheet 30: SafeHabitus

Funded	Horizon Europe
Grant	€ 4 732 381,25
Time Frame	January 2023 – December 2026
Coordinated By	TEAGASC, AGRICULTURE AND FOOD DEVELOPMENT AUTHORITY, Ireland
Main Themes	Farm Safety, knowledge and innovation systems, community of practice.
Other Themes	Agriculture and environment
Further Information	https://www.safehabitus.eu

AIM OF SAFEHABITUS

SafeHabitus is a multi-actor project that has come together to strengthen Farm Health and Safety Knowledge Innovation Systems (FHS KIS) and support the EU transition to social sustainability in farming.

CONTEXT

The SafeHabitus project aims to address risks of **fatal and non-fatal injuries** on **agricultural workers** by improving health and **safety on farms**. Thus, the project objective is to raise awareness in this aspect.

For achieving this, SafeHabitus will create digital storytelling methods to give voice to farmers. It includes also a multi-actor approach that brings together stakeholders to create farm work **risk management tools**. Ultimately, SafeHabitus will also assess consumer willingness to pay extra for products that consider health and safety.

RESULTS

SafeHabitus Communities of Practice (CoP) aim to empower actors and stakeholders by promoting learning, knowledge exchange and practical tools on health and safety. The CoPs include a wide range of participants, from farmers, to advisors, health authorities or industry representatives.

The CoPs are expected to start in autumn 2023, with meetings held 2 to 4 times per year until December 2026.

SAFEHABITUS: LESSONS FOR FLIARA

SafeHabitus offers lessons that can be applied to FLIARA in their search for gender inclusivity.

First, with their integrative approach that allows interdisciplinary collaboration to ensure multiple perspectives are considered. Secondly, the co-designing and co-creation, allowing the solutions to be contextually relevant. Finally, policy influence. Safe Habitus tries to bring systemic change and promote the integration of specific topics into agricultural policies and regulations.

Gender Equality	Drivers	Impacts
● Integrative approach	● Safety ● Knowledge	● Farm conditions ● Policy change

Gender Connections in SAFEHABITUS

EU-FarmBook
Pilot version

Funded	Horizon Europe
Grant	€ 15 002 553,75
Time Frame	2022 - 2029
Coordinated By	Ghent University, Department Plant and Crop, Laboratory of Chemical Crop Protection, Coupure Links, Gent. Belgium.
Main Themes	Agriculture and forestry, practice orientated, EU-FarmBook Alliance, sustainability, digital platform, multi-actor approach.
Other Themes	Innovation, practical knowledge, farmers, foresters and advisors.
Further Information	https://eufarmbook.eu/

AIM OF EU-FARMBOOK

The EU-FarmBook aims to consolidate all the tangible outcomes of EU-funded research and innovation process into a single, user-friendly platform. It hopes to make practical knowledge easily accessible to farmers, foresters and advisors throughout Europe.

CONTEXT

The EU-FarmBook platform has been developed through the collaboration of two EU-funded Horizon 2020 projects (EURAKNOS and EUREKA). These projects have successfully brought together a diverse consortium of partners. By adopting a **multi-actor approach**, these projects have worked collectively to create the EU-FarmBook platform.

RESULTS

The EU-FarmBook project is ongoing.

The project hopes to create a digital platform to bridge the gap between research and practice while making **information** more accessible to **farmers**, **foresters and advisors.**

EU FARMBOOK: LESSONS FOR FLIARA

The reasons why EU-FarmBook is of interest for FLIARA is its capacity to disseminate the FLIARA project results via platform. By utilising the EU-FarmBook, the FLIARA results can be effectively disseminated and communicated across the EU.

The table below outlines the drivers, impacts and gender connections that may be included within the EU-FarmBook project.

Gender Connections	Drivers	Impacts
● Multi-actor approach	● Farmers, foresters and advisors. ● Projects	● Diversity ● Sustainability ● Knowledge exchange/innovation

Gender Connections in EU FarmBook

FLIARA has conducted a comprehensive review of results obtained from a range of European Commission-funded research and innovation projects, including Horizon 2020, Framework 7, Horizon Europe, and Erasmus+. Through this deliverable, FLIARA has gained valuable insights and lessons by exploring existing knowledge and research. This approach encompasses completed projects as well as ongoing initiatives with emerging results, enables FLIARA to enhance current research and innovation.

This deliverable specifically explores the dynamics of gender production and the construction of accepted gender norms within different historical contexts and social groups. By examining and investigating gendered spaces through various projects, FLIARA expands its review to incorporate broader topics, including power dynamics and equitable resource allocation. Additionally, it sheds light on the barriers faced within the various projects such as women-led innovations, digitalisation, training, agriculture, and rural areas.

The 31 Fact Sheets within this deliverable provide a deep understanding on the outcomes, tasks, and lessons of projects that are relevant to FLIARA, covering themes such as gender connections, innovation, and research. Consistently, these Fact Sheets highlight common themes such as gender, innovation, training, digitalisation, empowerment, rural areas, multi-actor approaches and agriculture. By focusing on these themes, FLIARA is able to gain a deeper understanding and further develop these areas throughout its project.

The Fact Sheets serve as a valuable resource, both enhancing our understanding of women-led innovations, agriculture and rural areas along with facilitating the utilisation of key research and innovation.

Female-Led Innovation in Agriculture and Rural Areas