



**AGENT-BASED
SUPPORT TOOL FOR
THE DEVELOPMENT
OF AGRICULTURE POLICIES**

**D10.7 Directives on gender equality and
non-discrimination within AGRICORE**



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Executive Summary

The purpose of the present report is to provide a general overview of gender equality in Research and Innovation Actions following the perspective and the key ambitions of Horizon 2020 framework programme. The first of the key ambitions is to provide a brief description of the latest directives of EU describing the elimination of gender mainstreaming in research. The second part relates to the strategic approach of gender equality within the Agricore project. The content aims to briefly describe the support of gender balance in project research activities and decision making processes along with the systematic review of the role of gender in agriculture and rural developments.

This report is part of WP10 that is dedicated to the Project Management where an entire Task covers the overview of the directives for gender equality and non-discrimination. (Task 10.9- Gender Dimension as presented in the Grant Agreement). The point of attention of the Task 10.9 is to avoid any potential gender biases within the project framework in general but additionally within the research towards the development of the smart IT platform services in agriculture. To summarize all the related attributes Deliverable “D10.7- Gender equality and non-discrimination within AGRICORE” has been structured at the very beginning of the project to reassure all the necessary activities towards gender equality.

Abbreviations

Abbreviation	Full name
EU	European Union
EC	European Commission
ERA	European Research Area
RIA	Research and Innovation Actions
RRI	Responsible Research and Innovation
KPI	Key Performance Indicator
ETAN	European Technology Assessment Network
STEM	Science, technology, engineering, mathematics
GE	Gender equality
EIGE	European Institute for Gender Equality
GES	Gender equality strategy
CAP	Common Agricultural Policy
EEAB	External Expert Advisory Board

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1 Introduction

In AGRICORE, the gender equality (GE) objectives posed within the framework of the European Research Area (ERA) constitute a starting point at the very beginning of the project (M6). To achieve a holistic overview this report includes the gender balance and non-discrimination principles established within the agricultural sector in general, along with the guiding roadmaps of the European Commission (EC) in research and innovation actions. The objectives for fostering gender equality in research and innovation are basically to promote the participation of an increasing number of women in Research and Innovation Actions (RIA) along with the integration of women in leadership position. The objectives are briefly discussed below as they constitute the point for the development of a non-discriminative strategy within the AGRICORE Project.

The development of a conceptual framework where gender issues are systematically incorporated in agricultural research and development is one of the outer goals of this report. The identification of those specific points, that can be used as spotlights to avoid gender inequality during the project implementation phase, will be reported in this document contributing significantly to meet the EU goal of gender equality and non-discrimination. The main objectives of this initiative are to:

- remove legal and other barriers to the recruitment, retention and career progression of female researchers while fully complying with EU law on gender equality;
- address gender imbalances in decision-making processes;
- strengthen the gender dimension in research programmes [1].

In this context, the aspects that are affecting and formulating the above mentioned points are collected and presented towards gender integration in practice, starting from a proper representation of females in the consortium and reaching to the incorporation of gender as a determining factor in the specific research area of AGRICORE, establishing a more responsible and responsive to gender challenges strategy.

2 Gender equality as a crosscutting issue in Horizon 2020

Being one of the most successful financial framework programmes, Horizon 2020 integrates gender aspects. Gender is a crosscutting issue across the whole programme where actions are integrated throughout the funding process, from inclusion in the legal text, through content in the work programme, grant implementation and monitoring. Horizon 2020 was the first framework programme to include a specific article on gender equality in its regulation and to establish gender as a crosscutting issue. Gender is mainstreamed across Horizon 2020 by using dedicated targets and evaluation criteria. So far, 104 universities and research organisations have been supported in implementing gender equality action plans through 14 projects with a total EU contribution of €33 million [2]. Promoting gender equality links H2020 with ERA objectives, strengthening further the gender dimension in European research and innovation.

The strategic engagement for gender equality in all EU policies is of critical importance since the achievement of gender equality is as much a matter of improving economic outcomes and research and innovation performance, as it is of fairness and social justice. Equality between women and men is a fundamental European value, enshrined in the EU treaties. Accordingly, the EU has a well-established regulatory framework on gender equality, including binding Directives, which apply widely across the labour market including the research sector [3].

The Horizon 2020's contribution to gender equality in Research & Innovation is reflected at the scheme 'Science with and for Society' which aims to remove barriers to the recruitment and career progression of female researchers. Gender is also one of the key elements of Responsible Research and Innovation (RRI) that aims "to foster the design of inclusive and sustainable innovation". RRI can be, thus, considered as an approach where different societal actors (such as researchers, citizens, policy makers, third sector organizations) work together during the research and innovation process to align the process and outcomes with the values, needs and expectations of society.

It is obvious that the regulation related to gender equality covers a wide spectrum of attributes, objectives and fields of applications. To approach effectively EU perspective, a specific part of the Framework Regulation is quoted. Article 16 of the Framework Regulation on gender equality of the EU states that it "*shall ensure the effective promotion of gender equality and the integration of a gender dimension in research and innovation content. Particular attention shall be paid to ensuring gender balance, subject to the situation in the field of research and innovation concerned, in evaluation panels and in bodies such as advisory groups and expert groups. The gender dimension shall be adequately integrated in research and innovation content in strategies, programmes and projects and followed through at all stages of the research cycle*" [4].

The achievement of this specific objectives is of high importance for the EC. Therefore, the EC monitors the implementation of Gender Equality as a crosscutting issue through four Key Performance indicators (KPI):

- **KPI 1:** Percentage of women participants in Horizon 2020 projects (total workforce)
- **KPI 2:** Percentage of women project coordinators in Horizon 2020 projects, incl. Marie Skłodowska-Curie Actions (MSCA) fellows, ERC principal investigators and scientific coordinators in other Horizon 2020 activities (corresponding to the Principal Contact Person at proposal level)
- **KPI 3:** Percentage of women in EC advisory groups, expert groups, evaluation panels, individual experts, etc.
- **KPI 4:** Percentage of projects considering the gender dimension in R&I content [4].

European Commission has taken all the appropriate measures to enhance the Gender issues even from the proposal writing stage, where during the preparation of grant agreements, project

offices are called to review and indicate if the gender dimension is incorporated in the description of Action (DoA) of the projects. The general logic of the Commission showing the integration at all stages of the funding process is represented in the Figure below.

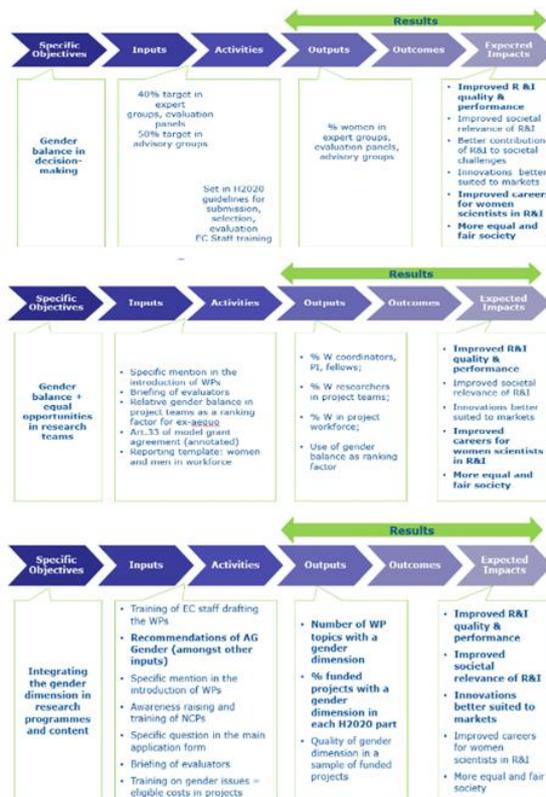


Figure 1. Integration of gender equality at all stages of the funding process

The next section summarizes all the actions at the European and national levels that has been done so far bearing significant progress in the proportion of women in different levels of research and innovation community based on three priority areas:

1. Gender equality in scientific careers
2. Gender balance in decision making
3. Integration of the gender dimension in research content

2.1 Gender equality in scientific careers

The participation of women in science and technology contributes to increasing the quality, societal relevance and competitiveness of research and innovation. Specifically, gender balance in decision making contributes to widening the scope of research and innovation policies, and hence to better addressing the needs of all segments of society. This, in turn, addresses both concerns of justice, fairness and equal opportunities for women and men and prevents economic losses from missed opportunities or negative consequences of gender-blind practices [5].

Vertical segregation persists across Europe, with women under-represented in both top academic research and academic management leadership and decision-making positions, although there are marked differences among countries.

- Proportion of women in grade A positions: the proportion of women in grade A positions has increased gradually by 8.5 percentage points in the EU: from 15 % in 2000, 16 % in

2002, 18 % in 2007, 20 % in 2010 and 21 % in 2013 to 23.5 % in 2014¹. Importantly, the highest proportion of women in grade A positions can be found in the under-35 age group, suggesting that the situation is improving amongst younger generations of scientists.

- Proportion of women as heads of institutions in the higher education sector: within the EU-28 in 2014, 20.1 % of the heads of institutions were women, up from 15.5 % in 2010 (in the EU-27).
- Proportion of women as heads of institutions accredited to deliver PhDs: the EU average was 15 % in 2014, 10 % in 2010 and 9 % in 2007.
- Proportion of women on boards: overall in the EU, women made up 28 % of board members in 2014. Eight countries (against four in 2010)² have at least 40 % of board members who are women, suggesting that women have been included in important decision-making processes in a growing number of countries.

2.2 Gender balance in decision making

As mentioned before, gender balance in decision-making roles [8] has been a long-term objective. A competitive global economy depends on involving female scientists also in leadership and decision-making positions. Excluding women from top positions in research may provoke social distrust, followed by reduced support for science and its institutions. The goal of having more women in decision-making positions addresses these problems and risks. Recommendations put forth in the European Technology Assessment Network (ETAN) report "Women and Science: Mobilising women to enrich European research" (2000) proposed, amongst other measures, legislative changes in order to request a minimum of 30% to 40% of each sex in national boards, including research councils. Following a decision of the European Commission [9], the EU framework programmes for research set targets for the under-represented sex in expert groups and evaluation panels.

This goal can be achieved by increasing the visibility of women who already work at the institutions, for example, by nominating women for prizes and awards to provide role models for students and other female staff. Moreover, holding a decision-making position means having the possibility to influence research agenda and careers of young (female) researchers, to design curricula and be visible, for example, by participating in conferences as a (keynote) speaker. Getting more women into leadership positions in RTDI goes along with structural changes – EU-wide, nationwide and, in particular, within research organisations and teams. For instance, gender-balancing committees and boards in RPOs and RFOs require that criteria, nominations and elections to committees and boards must become more transparent [10].

2.3 Integration of the gender dimension in research content

2.3.1 Gender imbalance in research

Gender equality is addressed in European Research and Innovation policy in two different ways: 1) through its main funding instrument Horizon 2020, and 2) within the European Research Area (ERA) in collaboration with Member States and research organisations.

¹ The 2014 figure is taken from the ERA's progress report of 2016 [6]. All other figures are taken from She Figures 2015 [7] and previous editions

² In [7] (p. 144), the definition of boards was slightly revised from previous years to include only national-level boards. Figures presented here are not directly comparable with previous editions.

The *She Figures 2018* report [11], which monitored the level of progress made towards gender equality in research and innovation in the European Union, highlights that women nowadays outnumber men at student and graduate levels and there is broad gender balance at PhD level. However, their distribution in the different scientific fields of study is uneven, which shows the persistence of gender stereotypes.

Only one third of European researchers are women and men still hold more than three quarters of the top academic positions. While the number of PhD candidates is almost at parity, gender disparity grows as research careers progress. The gender pay gap persists in research, while women make up only one third of entrepreneurs and less than 1 in 10 patent holders in Europe.

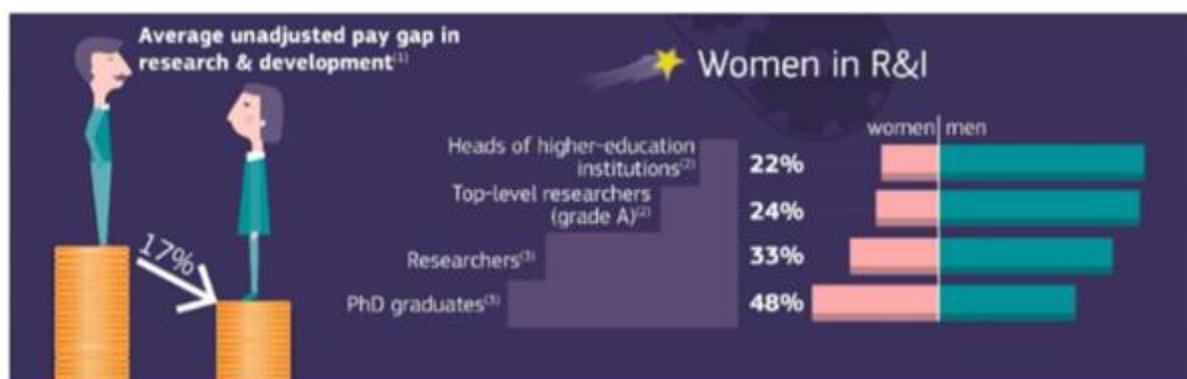


Figure 2. Women in Research and Innovation

The presence of stereotypes is especially strong in the field of science, technology, engineering and mathematics (STEM), where women remain underrepresented at all levels starting as students (32% at Bachelor, Master or equivalent level) up to top academic positions (15%). Furthermore, women still make up the minority of top academic positions.

On the positive side, the report confirms that the EU is integrating the gender dimension in the content of scientific literature better than the world average. This will significantly increase the quality and reliability of outcomes, as they will reflect the biological characteristics, needs and attitudes of both women and men [12].

A good example of confronting gender imbalance in research is the conference on gender equality in research and innovation on 23–24 October 2019 in Helsinki, organized by the Finnish Ministry of Education and Culture, with support from the European Commission through Horizon 2020. The aim of this event was to take stock of progress made, with a focus on institutional change, and discuss current challenges, with a view to reshaping the EU policy objectives on gender equality in R&I ahead of Horizon Europe and the future ERA.

2.3.2 Promoting Gender Equality in Research and Innovation projects

In Horizon 2020 Gender is a cross-cutting issue and is mainstreamed in each of the different parts of the Work Programme, ensuring a more integrated approach to research and innovation. As mentioned above, the Commission's guidance on gender equality in H2020 highlights three objectives which are in line with the ERA priority:

- 1) fostering gender balance in H2020 research teams (to address the gaps in the participation of women in the framework programme projects).
- 2) ensuring gender balance in decision-making (to reach the Commission's target of 40% of the under-represented sex in panels and groups)
- 3) integrating gender/sex analysis in R&I content (to improve the scientific quality and societal relevance of the produced knowledge, technology and/or innovation) [13].

The reasons behind these objectives reveal the necessity of reformation regarding gender equality in research and innovation:

1. Society could benefit from the full potential of all women and men in terms of skills, talents and resources. There are many highly skilled women in Europe who could contribute to Research and Innovation (R&I).
2. The inclusion of the gender dimension at all stages of research and innovations has an enormous potential to enrich results by making them relevant to women as well as men.
3. Gender equality and equal opportunities (non-discrimination) between women and men are fundamental principles in the EU Treaty [4].

In this context, and according to the 2015 Conclusions on Advancing Gender Equality in the ERA, the European Council called for institutional changes to address gender imbalances in research institutions, setting targets for gender balance among professors and in decision-making bodies, and for a better integration of the gender dimension in research content.



Figure 3. Horizon 2020 funds the prize and it will continue in Horizon Europe under the umbrella of the European Innovation Council

One of the initiatives towards the promotion of Women in Innovation is the EU Prize for Women Innovators. The European Commission awards an annual recognition prize to women innovators who have brought game changing innovations to market or had outstanding success running innovative companies. The prize is intended to encourage innovation potential in women and to provide role models for aspiring female innovators. Previous winners have included the founder of a biotech company producing pheromones as a safe, affordable alternative to pesticides, the inventor of the first ‘tactile tablet’ for blind people and a woman who created a solar powered water heating and purifying system that helps to prevent disease and greatly reduces the time that women in developing countries spend collecting and purifying water, thus allowing them to spend time on other, more productive, activities. The launch of the prize and the award ceremonies each year are popular events, attracting media coverage and drawing attention to European support for women innovators [2].

3 Gender equality in the EU Agricultural Sector

3.1 Women in EU

Gender equality is one of the European Union's founding values, dating back to 1957. Therefore, the Gender Equality Index has been developed by the EU which is a composite indicator that measures the complex concept of gender equality and, based on the EU policy framework, assists in monitoring progress of gender equality across the EU over time.

A few indicators are:

- **Health:** The domain of health measures gender equality in three health -related aspects: health status, health behaviour and access to health services.
- **Work:** The domain of work measures the extent to which women and men can benefit from equal access to employment and good working conditions.
- **Knowledge:** The domain of knowledge measures gender inequalities in educational attainment, participation in education and training over the life course and gender segregation.
- **Power:** The domain of power measures gender equality in decision-making positions across the political, economic and social spheres.

However, the European Union has been moving towards gender equality at a slow pace. In 2005, the EU's General Equality Index score was 62 while in 2019, it has only improved by 5.4 points, reaching a regional average of 67.4 points and leaving room for improvement. According to EIGE (European Institute for Gender Equality), the EU is moving in the right direction, but there is still potential for further progress. The Index developed by the EIGE, sets a benchmark for gender equality in the EU and shows that almost half of all Member States fall below the 60-point mark.

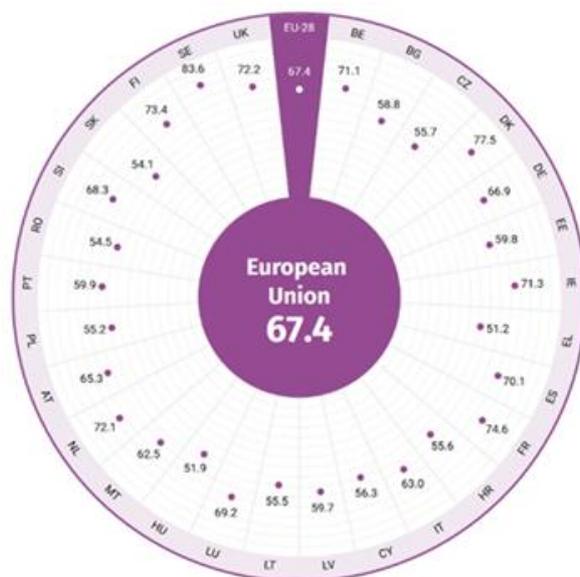


Figure 4. Gender equality index- Index Score for EU for 2019

It is evident that the EU is closest to gender equality in the domains of health (88.1 points) and money (80.4 points). Gender inequalities are most worrying in the domain of power (51.9 points). Nevertheless, the score in this domain has improved the most since 2005 (+ 13 points), due to progress in nearly every Member State.

Specifically, the highest scores in the sub-domain of political power (parliaments, ministries and regional assemblies) belong to Sweden (83.4), France (78.3) and Finland (66.7), and the lowest to Hungary (20.6), Cyprus (26.1) and Malta (32.2). Between 2005 and 2017, the scores in this sub-domain increased in 24 Member States, with the biggest improvements in Slovenia, France, Italy and Portugal.

In the sub-domain of economic power, which measures the proportion of women and men on corporate boards of the largest nationally registered companies listed on stock exchanges and national Central banks, the gender balance between members of boards in companies, supervisory boards or boards of directors is 25.0 % for women to 75.0 % for men. The share of board members of central banks is 20.3 % for women to 79,7 % for men. This sub-domain is of high importance since it depicts the gender-balance in economic decision-making processes.

Lastly, in the sub-domain of social power, which includes data on decision-making in research-funding organisations, media and sports the statistics depict that women are in this area underrepresented as well achieving a score for participating in boards of research/funding organisations of around 39.9%.

3.2 Women in Agricultural Sector

Since the Agricultural sector is facing several challenges the last decades ranging from growing urbanisation to an ageing population, the EU lawmakers have emphasized on the post-2020 Common Agricultural Policy (CAP) that agriculture *should take advantage of women's multifunctionality to boost the potential of rural areas* [14].

Although women are deeply involved in rural communities and economies, they remain underrepresented in farm ownership and agricultural decision-making.

Women are a driving force for the maintenance, conservation and development of rural areas, both in cultural and economic terms. They also represent a considerable proportion of the workforce in agriculture and contribute to the development of the rural sector.

According to the statistics of the World Bank, the percentage of female employment in agriculture from 1991 till 2019 follows a declining path, as shown in Chart 1.

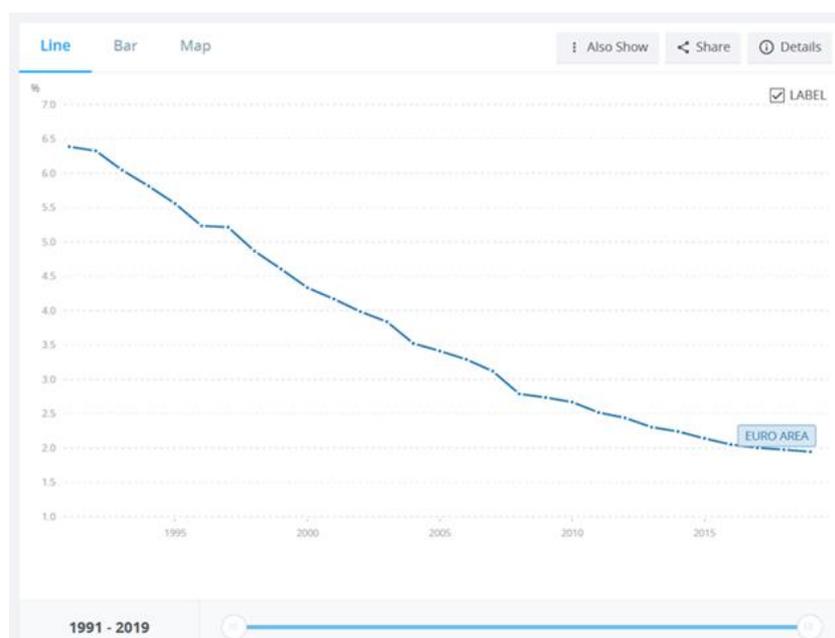


Chart 1. Employment in agriculture, female (% of female employment) (modelled ILO estimate) - Euro area

Unfortunately, women in rural areas are an invisible force as their presence and role are not accurately reflected in statistics. Many of those who are involved in agricultural work do not receive a separate income from their husband or other male members of the household [15]. Women are often not entitled to social security in their own right and often do not hold property rights to land or farms. To overcome this latter aspect, gender-sensitive initiatives such as shared ownership of farms and agricultural enterprises are being implemented in some European countries.

Nevertheless, according to the European Parliament, women contribute significantly to the farming sector. In 2014, women were responsible for about 35% of the total working time in agriculture, carrying out 53.8% of part-time work and 30.8% of full-time work. Still, only 30% of farm holdings in the EU are managed by women [14].

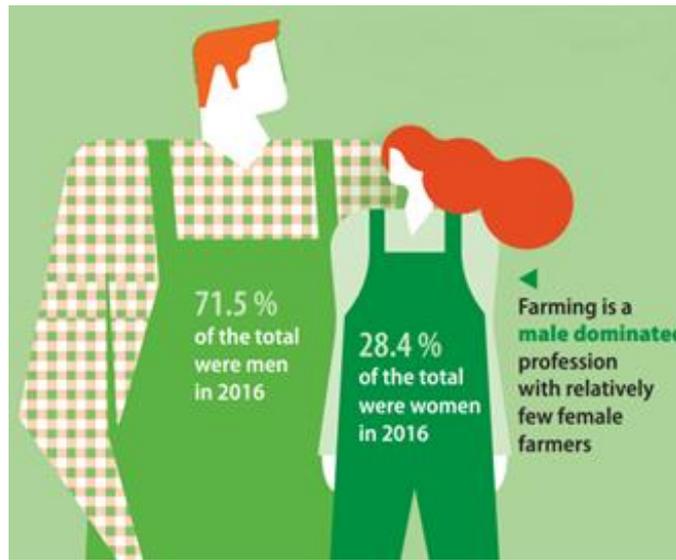


Figure 5. Infographic on gender imbalance in EU farming sector

According to EUROSTAT the gender imbalance among farmers is essentially strong in the Netherlands where only one in every twenty farmers (5.2 %) was female in 2016. Female farmers were also particularly uncommon in Malta (6.0 % of all farmers), Denmark (7.7 %) and Germany (9.6 %). However, the EU shows that in the last years the share of farm management has slightly increased from 26.3 % in 2005 to 28.4 % in 2016.

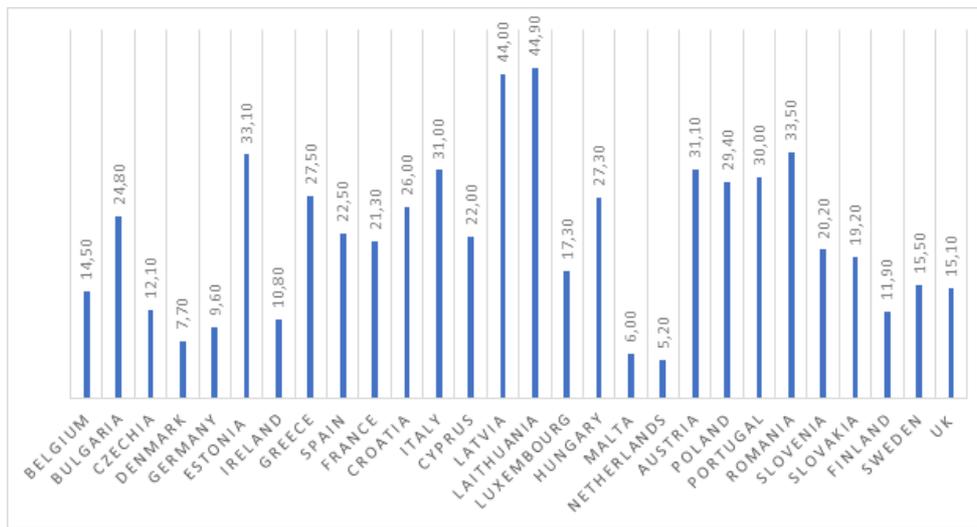


Chart 2. Female Farmers for EU-28 in 2016 (Source: Eurostat)

Women play a smaller role in the labour force of predominantly rural regions than in the whole economy. This pattern was observed for most EU Member States (Belgium and France, not available; Cyprus, Luxembourg and Malta, no predominantly rural regions) as only Bulgaria, the United Kingdom and the Czech Republic reported a higher share of women in the labour force within predominantly rural regions (than their respective national averages for the whole economy). In the other EU Member States, the differences between national averages and shares for predominantly rural regions were relatively small, only exceeding 1.0 percentage point in Estonia, Greece, Spain, Latvia, Lithuania, the Netherlands, Austria, Portugal, Poland and Romania. However, when compared with the other types of region the share of women in the economically active population in predominantly rural regions was generally lower. Figure 3 shows that only in Bulgaria, the Czech Republic, the United Kingdom and Slovakia was the share of women in the labour force in predominantly rural regions higher than in either of the other two types of region [16].

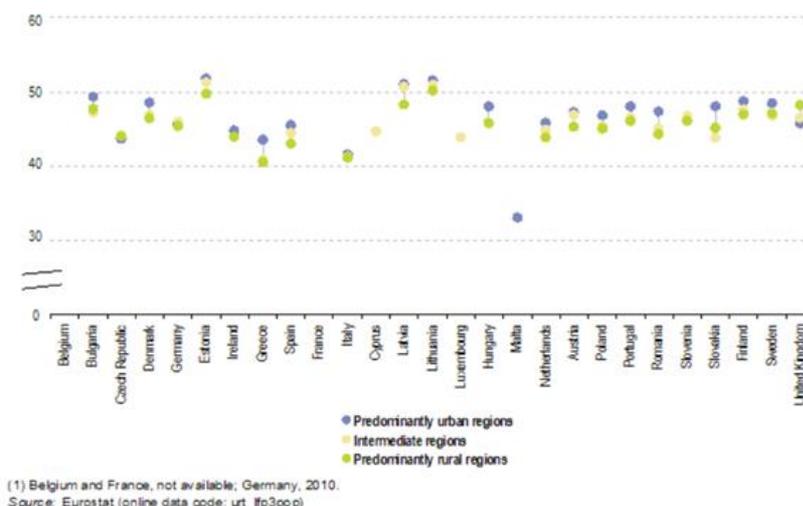


Chart 3. Share of women in the economically active population, persons aged 25 and over, by urban-rural typology, 2011 (1) (% of active population)

3.3 Under-representation of women in farm ownership

Women's contribution to local and community development is significant, but rural women are in a minority in decision-making and planning, particularly in the agricultural sector. This happens mainly due to their multiple roles and workload. For example, this is often observed in land ownership and control – in 2007, only 28.7% of farm holders were women.

One issue that occurs is that in general farms run by women are smaller than those run by men. In particular, the physical and economic size of the farms of men farm holders are more than twice the size of those of women farm holders. This underlines that women have been disproportionately under-represented in the agricultural sector. It is now widely recognised that ownership and control over assets such as land and housing provide direct and indirect benefits to individuals and households. These include a secure place to live, a livelihood, protection during emergencies and collateral for credit that can be used for investment or consumption. Due to the women's underrepresentation in farm ownership and decision making, a strong deprivation is observed which often worsens the position of women in general even more.

Furthermore, female farm holders are slightly older than the male farming population (46.1% of women working in agriculture were 55 years or older in 2005, compared to 43.6% of men). The low share of young women in the family-farm labour force can be taken as a sign of the low attractiveness of agricultural careers among women.

Another issue is the role of women in EU agriculture. Eurostat data from 2013 shows that on average around 30% of farms across the EU are managed by a woman. The differences among member states are remarkable, ranging from just over 5% in the Netherlands to around 47% in Lithuania [14].

Participation of women in employment and economic growth is crucial for reaching the EU 2020 strategy goals, and in this respect agricultural and rural areas could contribute. In 2014, in the EU-28, agriculture was the seventh largest employer of women (3.3%). For men, agriculture is slightly more important in terms of providing employment (5.2%). However, these data may be misleading as they do not cover the informal rural economy, in which women are still involved. Women play a key role in rural families, communities and economies, and they are also important as farmers. In addition to paid farm work, women still assume the main share of unpaid responsibilities involved in the running of families and communities [17].

3.4 Gender in policy making and agricultural decision-making process

Women ought to be adequately represented in all political, economic and social bodies in the agricultural sector, so that, decision-making processes are informed by both female and male perspectives. Women have little access to decision-making over agricultural inputs such as capital, market information, and new farm technologies, outputs, and product markets, compared to men. Improving their opportunities in the agricultural sector must, therefore, involve increase in women's decision-making control, influence, and benefits.

Women's participation in decision-making on land use and income expenditure depends on the dynamics within the household. Women are often excluded from decision-making processes related to natural resource management or to commercial activities.

Therefore, it is of high importance to introduce specific actions for the benefit of women in order to guarantee that women participate in decision-making processes on an equal basis and adopt them in the policy making process.

An improved access to resources and the promotion of women's participation on a decision-making level will increase the opportunities for women to have a powerful impact on productivity and agriculture-led growth.

New measures related to the empowerment of women shall include need-based efficient and cost-effective natural resource management techniques for women as well as strategies and plans for the improvement of women's direct access to land, production capacities, technology and technical information on new agricultural practices. These actions will ensure greater market access and market development for women in the agricultural sector by identifying the local bottlenecks and addressing them [18].

4 Gender dimension of AGRICORE

Within AGRICORE the target is to incorporate all the objectives and be in consonance with the KPIs set by the EC. Following this specific route, AGRICORE has integrated gender aspects within its research activities promoting equal opportunities between men and women in the implementation of the work within the project. The aim is to maintain gender balance in the research teams involved in the project and in the decision-making processes, including the configuration of the advisory groups.

Also, gender, as a determining factor, will be integrated in the research area of AGRICORE, including gender aspects in rural employment, the presence or absence of gender information on the datasets and the participatory research actions.

The AGRICORE consortium aims not only to ensure a proper, responsible and inclusive research within the project but also to promote the implementation of further gender sensitive research actions by including the required gender information in all the developments made during the project (shared as Open Source). Within the AGRICORE Project, the process leading to a sustainable Gender Equality Strategy involves 4 distinct steps (Figure 6), which are directly connected with the support of the top-level of management and is analysed in the sections below.

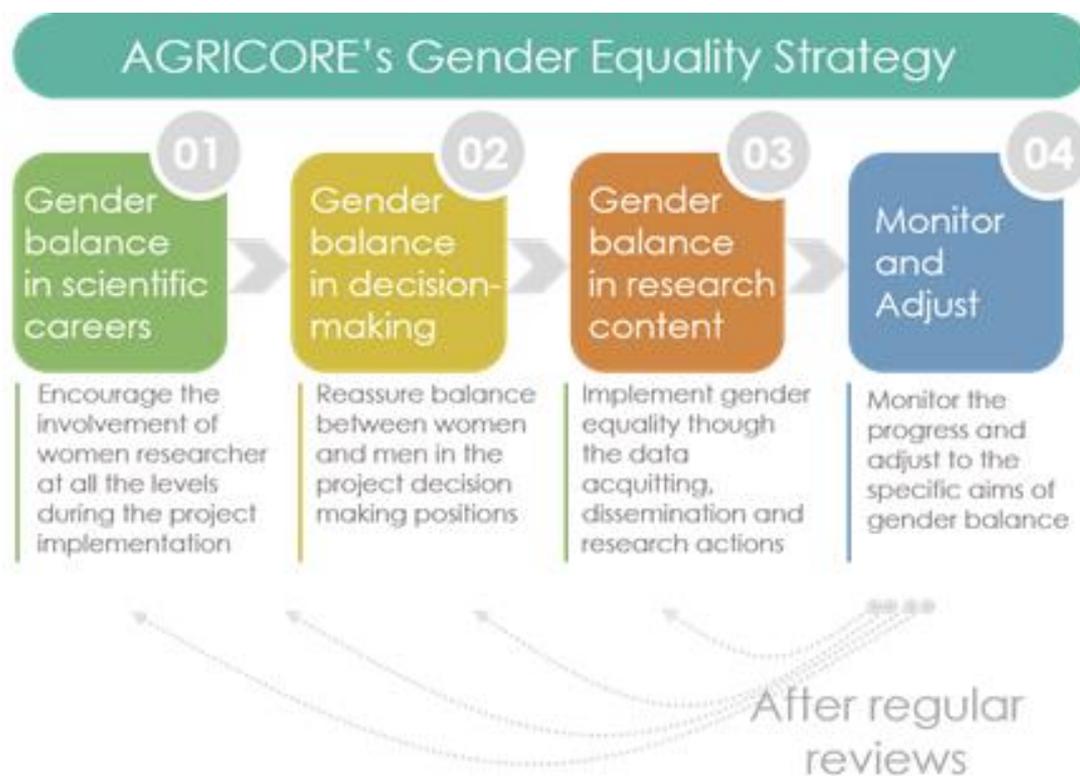


Figure 6. Gender Equality methodology in AGRICORE project

4.1 Gender balance in the AGRICORE consortium

The AGRICORE project consortium includes partners who are committed to addressing the general under-representation of women in science and who are already taking steps to improve this shortcoming. All participants have non-discrimination policies in terms of gender. The current gender representation within the AGRICORE consortium is presented in the table below.

Table 1: Gender representation in AGRICORE:

Partner	Female	Male
IDENER	1	3
UNIPR	1	7
AXIA Innovation	3	-
IAPAS	-	4
STAM	2	1
AYESA	1	1
AUTH	1	4
UTP	1	4
AKD	-	4
Total	10	28

Based on this, AGRICORE has achieved a 26% female representation within the research team.

4.2 Gender balance in decision-making

4.2.1 Gender balance in project management

As part of the detailed gender-neutral work plan of the individuals involved in AGRICORE, we have actively included women in the technical performance of the project WPs. Important roles of the project management team such as Innovation Management (Dr. Ioanna Deligkiozi) and Communication & Dissemination Management (Myrto Pelopyda) are led by women.

4.2.2 Gender balance in Advisory Board

The table below depicts the gender representation of the External Expert Advisory Board (EEAB) which will be composed of up to six independent international experts from the agricultural policy impact assessment area.

Representatives	Female	Male
Mindstep representative	0	1
BestMap representative	0	1
JRC representative	0	1
Use case of Andalusia representative	1	0
Use case of Greece representative	0	1
Use case of Poland representative	0	1
Italy representative	0	1
Global advisor	Reserved position to be filled after one year of the project.	
Total	1	6

So far, there have been 7 representatives appointed of which 1 is female. Since the project is in the first phase the target is to include more women as external experts in the advisory board.

4.3 Integration of the gender dimension in research content

Including a sex and gender analysis in research contents enhances the research quality and the societal relevance of the produced knowledge, technologies and innovations. Therefore, researchers across Europe and beyond should acquire adequate knowledge on gender equality and the gender dimension, in general and in their specific fields of research.

The AGRICORE project has entrenched gender aspects in all relevant work packages. Starting from measures regarding female rural employment, gender information in datasets and gender sensitive research to inclusion of biological, socio-cultural and psychological factors. Aiming to avoid stereotypes, a proper design team will be established within AGRICORE including women and gender experts. Moreover, unbiased analyses will be conducted using participatory research, surveys and interviews and including objective measures. At a general level, research and innovation within the project will be planned and evaluated considering all the above-mentioned aspects. The impact of these aspects will be also considered when performing the Transferability analysis of project results (*Task T8.6*), the drafting of the Conclusions towards better supported policy making (*Task T8.7*) and in the development of the handbook proposed in task *T9.4 (D9.9 Handbook on Practical Recommendations)*.

Gender aspects will be also considered when establishing the requirements for the AGRICORE tools in task *T4.1 Requirements analysis and fulfilment monitoring*, while they will also be generally considered in all research and implementation activities within the project. To fulfil a proper gendered innovation (also considering biological, socio-cultural and psychological factors) the partners will build upon previous research activities and in the analysis of the impact of these factors on them, including previous European results on gender impact on agriculture-related research and innovation.

Also, AGRICORE has also proven its accordance with the EC guidelines for gender equality and non-discrimination by including a whole task (*Task 10.9*) within *Work Package 10- Project Management*, which is dedicated to the Gender Dimension. The main outputs of this task are the present deliverable in the form of a report on gender equality and non-discrimination, as well as a seminar devoted to gender equality within H2020 research projects organized by M6.

4.3.1 Gender dimension in data collection

To integrate the gender dimension in research and innovation content corresponds with considering the biological characteristics of both females and males and the evolving social and cultural features of both women and men, girls and boys. The gender dimension invites researchers to conduct sex and gender analysis in the research process, when developing concepts and theories, formulating research questions, collecting and analysing data and using the analytical tools that are specific to each scientific area. Depending on the field of research, an analysis of gender, sex or both is needed.

The AGRICORE consortium is following the Responsive Research and Innovation (RRI) approach, including a proper evaluation of sex and gender implications on the project advances. Indeed, the gender dimension will be explicitly considered in all the tasks within WP1, including the characterisation of data sources (analysing the presence or absence of gender information on the datasets) and the participatory research actions (properly designing such initiatives so as to properly address the gender dimension). In the same line, associated with document Ref. Ares(2019)2398414 - 04/04/2019 AGRICORE: Agent-based support tool for the development of agricultural policies [816078] [AGRICORE] – Part B - 22 of 81, the data processing (extraction, data fusion) conducted under WP2 will be also made focusing on the gender dimension. This will enable the generation of synthetic populations that include the required data for conducting gender sensitive research. In addition, gender dimension will be especially relevant for the development of the Non-linear dynamic model of the farm agents (*Task T3.1*) and the AI-based

farmer's behavioural foundation (*Task T3.2*), considering the gender dimension when mimicking the farmer rationale.

4.3.2 Gender dimension in dissemination activities

Working towards the gender balance during the project implementation, the engagement of management and leadership is crucial. To achieve this within AGRICORE any action that is essential will be undertaken to ensure the dissemination of information about critical gender issues among researchers and at the top-level of management and leadership. Within this scope a twofold process is planned as described below:

- Share knowledge about gender equality: at the very first stages of the AGRICORE project AXIA is responsible to organise a training session on Gender Equality issues to achieve common understanding of gender equality and to raise gender awareness between members of the research team, as well as with other key representatives of management and leadership. This process will be enhanced by organizing a regular communication process to resolve any upcoming problem or/and enhance the gender balance within the consortium.
- The project's dissemination approach and activities will aim to maximize inclusion and gender balance. Findings will be presented in a gender-sensitive way and the gender dimension will be included in publication of results.

5 Conclusions and Actions

The more research is done on gender and science, the better the complexities of gender inequalities in science and innovation can be understood and therefore confronted.

For this reason, AGRICORE confronts the gender aspects through integrating the gender dimension in research while also maintaining a decent balance between male and female researchers and partners within the consortium.

In this context, the AGRICORE consortium supports the objectives of the European Commission to promote gender equality in research and innovation, as outlined in Article 16 of Horizon 2020. Women’s under-representation in science due to the lack of attention to gender aspects constitute a major concern in the EU. Within AGRICORE, gender aspects are carefully considered in order to ascertain that the promotion of gender equality is present in as many aspects of the project as possible.

In this report, we have presented the initial Gender Action Plan for the AGRICORE project. The cornerstones are an acceptance of the importance of gender diversity in science and technology, the implementation of best practices for the creation of a diverse and fair workplace and the ongoing monitoring of gender representation in the consortium and in the research content. The AGRICORE consortium is committed to maintain a working environment that is free from any discrimination and that fosters an equal representation of women. In addition, the partners will look out for any arising opportunities to increase the involvement of women in AGRICORE: The progress of any gender actions taken will be monitored throughout the project and reported where needed in the interim management reports and in particular in the final report at the end of the project.

AGRICORE recognises the need and importance of promoting gender balance and equality transversely throughout the planning and implementation of all tasks to stand out as an excellent example of a well-balanced working community.

For preparing this report, the following deliverables have been taken into consideration:

Deliverable Number	Deliverable Title	Lead beneficiary	Type	Dissemination Level	Due date

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