The role of women in the transformation of food systems: OECD background note

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February 2024

This background note was developed by the OECD Trade and Agriculture Directorate at the request of the Government of the Netherlands to identify relevant issues related to the role of women in the transformation of food systems. This note could serve as a background document for a high-level OECD workshop on the Role of Women in the Transformation of Food Systems, to possibly take place at the end of 2024 or the beginning of 2025 with the support of the Netherlands. It proposes possible research topics to help develop a better understanding of the role of women in food systems in the Netherlands based on the experience of other OECD countries.

This note treats gender aspects as binary, focusing on the roles of women and men across food systems and the policies that support gender equality. It does not cover evidence gaps related to the contribution and specific needs of sexual and gender minorities in food systems.

Related OECD resources

- Giner, C., M. Hobeika, and C. Fischetti (2022), "Gender and food systems: Overcoming evidence gaps", *OECD Food, Agriculture and Fisheries Papers*, No. 184, OECD Publishing, Paris, https://doi.org/10.1787/355ba4ee-en. This OECD report presents data gathering and policy efforts in ten OECD countries, namely Australia, Canada, Chile, Colombia, Germany, Japan, New Zealand, Spain, Switzerland, and the United Kingdom.
- Declaration on Transformative Solutions for Sustainable Agriculture and Food Systems, OECD/LEGAL/0483, https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0483 OECD Agriculture Ministerial declaration. The Declaration includes commitments to promote and measure progress towards inclusive food systems and to reinforce measures to foster greater opportunity for women in the agricultural sector. It also calls on the OECD to advance work on these issues.
- OECD Food Systems webinar, 18 April 2023: Making Better Policies for Women in Food Systems. This webinar examined policy and data collection experiences of Colombia, Japan, Germany, and Scotland.

Gender equality is a core value and a strategic priority for the OECD

1. Gender equality[1] is at the top of the OECD agenda. The organisation's vision statement for the next decade includes the commitment to accelerate the development of policies to help close gender gaps and to ensure that all OECD analysis and policy advice integrate a gender equality perspective (OECD, 2021[1]). Achieving gender equality and empowerment of women is also part of OECD countries' commitments to the 2030 Agenda for Sustainable Development.[2]

2. In 2023, the OECD Council developed the first OECD gender strategy, which sets out actions to step up the level of ambition of the Organisation's work on gender equality. It identified opportunities according to four main pillars: data to measure gender gaps; gender mainstreaming; addressing long-standing and emerging policy challenges; and outreach (OECD, 2023[2]).

3. In addition, the OECD has developed a set of sectoral recommendations, i.e. Recommendations on Gender Equality in Education, Employment and Entrepreneurship, on Gender Equality in Public Life, and on Improving the Gender Balance in the Nuclear Sector (OECD, 2013[3]; OECD, 2015[4]; OECD, 2023[5]).

4. In November 2022, OECD Agriculture Ministers adopted the OECD Declaration on Transformative Solutions for Sustainable Agriculture and Food Systems. This declaration includes commitments to promote and measure progress towards inclusive food systems, and to reinforce measures that foster greater opportunities for women in the agricultural sector. It also calls on the OECD to advance work on these issues (OECD, 2022[6]).

Fostering gender inclusion could be a key lever to make progress on the triple challenge faced by food systems

5. Food systems face a triple challenge of ensuring food security and nutrition for a growing population, supporting the livelihoods of millions of people working in the food supply chain, and doing so in an environmentally sustainable way (OECD, 2021[7]; Giner, Hobeika and Fischetti, 2022[8]). Eliminating gender discrimination and promoting women's engagement in sustainable agriculture would also contribute to the achievement of the Sustainable Development Goals (SDGs), including all relevant targets under SDG 2, creating a word free of hunger by 2030 (OECD, 2021[9])

Livelihood challenge

6. Lowering barriers faced by women to access productive agricultural resources could steadily increase the yields and economic viability of farms. The United Nation Food and Agriculture Organisation (FAO) estimates that closing the gender gap of farms' productivity and wages could result in a 1% increase in global GDP (or nearly USD 1 trillion) (FAO, 2023[10]). Higher gender diversity can also contribute to innovation and diversification of the agricultural sector (European Institute for Gender Equality, 2017[11])

[1] The glossary in Annex A defines the terms related to gender as used in this background note.

[2] In particular:

- SDG Goal #5: *Achieve gender equality and empower all women and girls*.
- SDG Target #5. a *Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance, and natural resources, in accordance with national laws.*

(Riley, 2009[12]) (Mc Fadden and Gorman, 2016[13])[3]. Audette et al. (2018[14]) found that promoting gender equality and improving women's representation in public and private organisations can significantly improve the well-being and the quality of life for everyone. For example, the empowerment of rural women could improve livelihoods in rural communities (IFAD, 2020[15]) (European Parliament, 2019[16]) and contribute to the revitalisation of rural areas (ILO, 2019[17]). Overall, using the full potential of women would benefit farms, agri-food companies, and countries' economic efficiency and wellbeing.

Food security and nutrition challenge

7. Gender inclusion could also yield positive outcomes for food security and nutrition. The FAO estimates that closing the gender gap of farms' productivity and the wages in agrifood systems could increase global gross domestic product by 1% and reduce global food insecurity by 2 percentage points, reducing the number of food insecure people by 45 million (FAO, 2023[10]).[4]

Sustainability challenge

8. Importantly, greater gender diversity could help promote sustainable agriculture and the transition to more sustainable food systems. Indeed, research points to the benefits of greater gender diversity in companies' decision-making roles; this can translate into more environmentally-conscious policies and decisions (Cook, Grillos and Andersson, 2019[18]) (Nadeem et al., 2020[19]) (Kassinis et al., 2016[20]) (Krivkovich et al., 2017[21]) (Leisher et al., 2016[22]). According to the European Investment Bank (AIB), women tend to support the green transition more than do men, and women-led companies often have higher environmental, social and governance scores, which improve how firms are perceived by investors and clients (EIB, 2022[23]) (EIB, 2023[24]). Achieving greater gender diversity in the agricultural sector could enable the use of more environmentally-friendly techniques when it comes to the management of rural areas and their natural resources (IFAD, 2020[25]) (European Parliament, 2019[16]).There is also growing evidence that women have more environmentally sustainable consumption patterns (OECD, 2021[9]; OECD, 2023[26]). Overall, gender inclusion tends to translate into more environmentally conscious decisions and policies.

Research on women-led innovations indicate their potential to contribute to more sustainable food systems and thriving rural areas

9. The role of women-led innovations in rural areas is underexplored in literature. Despite this, the few available sources suggest that rural women-led innovations are more likely to involve local communities, adopt green and sustainable practices, and promote economic diversification. According to Van der Meulen et al. (2014[27]), based on research undertaken in the Netherlands, women-led innovations tend to have a greater focus on sustainability and environmentally friendly practices, including organic farming and renewable energy. Vilké et al. (2018[28]) argue that female farmers are more willing to change agriculture practices, which is important in the context of climate change and other global concerns. Papaleo (2021[29]) mentions how women in rural areas are developing new ways of farming that promote community well-being and better environmental practices and how women can contribute to diversify farm

[3] According to OECD STI Micro-data Lab data, women inventors are underrepresented in agricultural and food-related innovation. Over the period 2016-18, the share of women inventors of agriculture-related patents was lower than 40% in most OECD countries and below the share of women inventors for all technologies in about half of the countries. The data can be accessed at http://oe.cd/ipstats.

[4] The FAO estimated the gender gaps in farm productivity and wage gaps in agriculture. It then calculated income gains from reducing those gaps and simulated the potential impact on food insecurity.

production and improve ecological resilience. Copa Cogeca (2020[30]) points out that women-led innovations in rural areas are often farm-based and involve social entrepreneurship in local contexts.

10. Various ongoing EU-wide initiatives aim to tackle the knowledge gap on the role of women-led innovations for more sustainable food systems, including:

- *Supporting Women-Led Innovations in Farming Territories (SWIFT):* SWIFT is a four-year, EU-funded research initiative seeking to engage with, challenge, and disrupt the underlying social, political, and economic frameworks and institutions in rural regions that generate and sustain forms of exclusion based on gender. Simultaneously, it aims to showcase how innovations led by women can promote inclusive, transformative, and sustainable practices in agriculture and rural development. SWIFT has 14 partners from nine countries (Spain, Austria, the Netherlands, France, Belgium, Poland, Portugal, Italy, Switzerland) and engages with 21 Women-Led Initiatives across 12 countries across Europe, but also five initiatives in Brazil and the United States.
- *Gender Equality in Rural and Agricultural Innovation Systems (GRASS CEILING):* Grass Ceiling is a multi-actor (29 partners covering nine countries including the Netherlands) three-year EU-funded project aimed at empowering rural women and increasing the number of socio-ecological innovations led by women in agriculture, the rural economy, and rural communities. An innovative aspect of this project is the use of Living Labs, which are spaces for co-creation of knowledge between science, policy, business & industry, and women innovators. Besides looking at policy drivers and enablers, the project is expected to provide a clearer picture of existing successful stories of women-led innovations in Europe and the contribution they make to the environment and to more sustainable rural areas.
- *Female-Led Innovation in Agriculture and Rural Areas (FLIARA):* FLIARA proposes a transdisciplinary, innovative methodology to improve understanding, awareness, and recognition of women's role in a more sustainable rural future. It combines interdisciplinary methods, such as foresight, case studies, and policy benchmarking, underpinned by a collaborative framework. The project focuses on women-led innovations in agriculture and rural areas, fostering a Community of Practice and a Visibility Campaign to underscore women as key innovators. The expected outputs include policy proposals and tools designed to support female-driven innovation, underscoring FLIARA's commitment to enhancing the sustainability and inclusivity of rural development. The FLIARA project is a collaborative effort that brings together a consortium of partners from across Europe. The consortium is made up of universities, European Networks, the Irish national agricultural state agency and extension advisory body (Teagasc), a Community Organisation and Social Enterprise and an SME.

The OECD roadmap is designed to close evidence gaps on gender and food systems

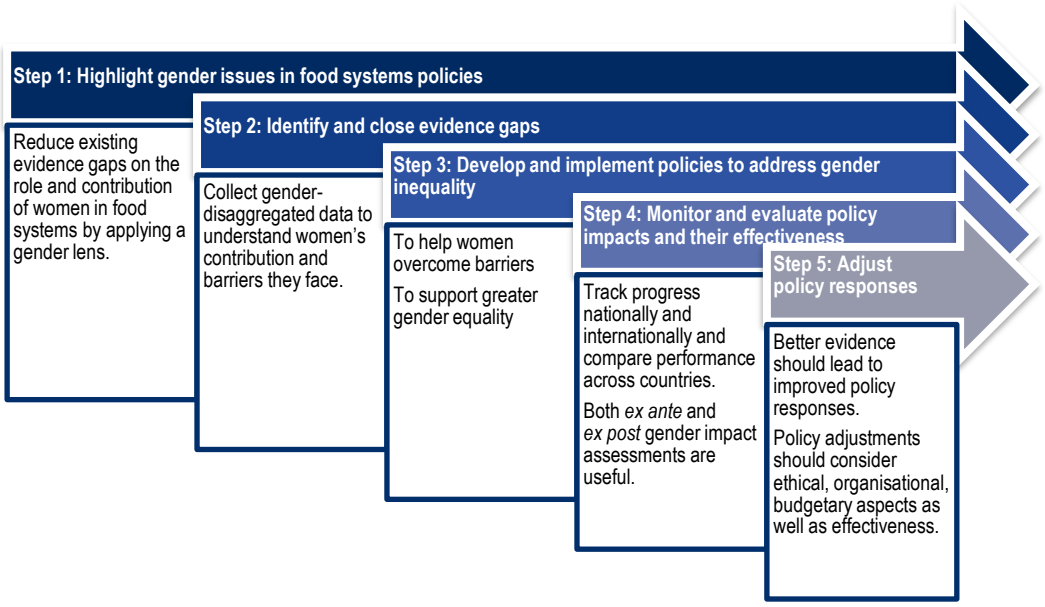
11. In 2022, the OECD developed a roadmap (Figure 1) to help its members transition towards gender inclusive food systems and to create positive synergies with other food systems objectives (Giner, Hobeika and Fischetti, 2022[8]). The roadmap identified five steps to be undertaken by policy makers.

Step 1: Apply a gender-lens in food systems policy making

12. The first step is to recognise gender inequality as an issue and to thus apply a gender lens when developing food systems policies. Subsequent efforts made by several OECD countries in gender mainstreaming in the area of agriculture and food systems policies were presented in the OECD gender and food systems report (Giner, Hobeika and Fischetti, 2022[8]; [31]) and in the OECD webinar on *Better Policies for Women in Food Systems* ([8]; OECD, 2023[31]).

13. For example, in the context of a national plan to mainstream equal gender participation, Colombia created a Rural Women Directorate in 2010 as part of the Colombian Ministry of Agriculture and Rural Development to co-ordinate, design, and evaluate all plans, projects, and policies in agriculture, fishing and rural development with a gender equality focus. In 2017, gender mainstreaming of the national budget was undertaken by the Spanish Ministry of Agriculture and Fisheries (MAPA) (FAO, 2018[32]). Since then, 20 gender-specific activities focusing on the empowerment of women in food systems and on strengthening gender equality within MAPA have been implemented and a set of indicators has been defined to measure the impact of each activity (Spanish ministry of health, 2017[33]). Annex B provides information on the role of women in Spanish agriculture.

Figure 1. The OECD roadmap



Source: Giner, Hobeika and Fischetti (2022[8]).

Step 2: Collect sex-disaggregated food systems data

14. Step 2 is to identify and close evidence gaps on gender and food systems. With proper research funding, this can be done by collecting sex-disaggregated data to better understand women's contributions to food systems and the potential synergies and trade-offs across the multiple dimensions of the food systems' triple challenge. Indeed, the availability of reliable, sex-disaggregated data appears as necessary to ensure decisions taken by policy makers reduce, rather than widen, existing gender inequalities (Larsen, 2021[34]). Table 1 summarises the type of data needed to better understand the contribution of women as entrepreneurs and workers in food systems and provides examples of such databases developed across several OECD countries.

15. Collecting comparable sex-disaggregated labour statistics along the food value chain would enable the identification of job and business opportunities for women beyond the farm gate, and the development of measures that foster employment and leadership in segments of the food systems where women are underrepresented. Similarly, gathering comparable evidence on the contribution of women managers in family farms could help identify the barriers to their further contribution. Moreover, collecting detailed sex-disaggregated data on skills and wages for workers in the food supply chain would allow to track progress on national and international gender equality goals, including the Sustainable Development Goals.

Table 1. Collection of sex-disaggregated data across food systems

Research question	Type of data collected	Example of databases
Women entrepreneurs		
Do women have access to agricultural land and other resources?	Land ownership by sex, share of female farm successors, inventory of cattle by sex	Germany: Living conditions of women on agricultural holdings in rural areas Colombia: Situacion de las mujeres rurales 2010-18
Do women have access to social security?	Share of women with pension rights, membership in the pension system by sex, affiliation with health system by sex	Germany: Living conditions of women on agricultural holdings in rural areas Colombia: Situacion de las mujeres rurales 2010-18
What is the representation of women in farm leadership positions?	Share of farms run by women, farm managers characteristics (e.g. age, sex, education level, skills, earnings, and farm size)	European Union: Agriculture, forestry, and fishery statistics (Eurostat) United States: Census of Agriculture Germany: Living conditions of women on agricultural holdings in rural areas
What is the contribution of women to farms' decision-making?	Female producers' decision making	United States: Census of Agriculture Germany: Living conditions of women on agricultural holdings in rural areas Colombia: Situacion de las mujeres rurales 2010-18
Do women have access to finance and markets?	Number of women beneficiaries of line of credit, gender gap in the average amount of credit granted, number of women beneficiaries of productive projects and technical assistance	Colombia: Situacion de las mujeres rurales 2010-18
What is the representation of women in leadership positions in other food systems activities (e.g. food manufacturing, services)?	Share of firms with women's participation in ownership and with majority women ownership, share of firms with a woman as top manager	World Bank Enterprise Survey
Women entrepreneurs and workers		
What is the representation of women workers in agriculture?	Total employment, share of employment	European Union: Labour Force Survey Switzerland: Labour Force Survey United States: Women in the labor force: a databook Germany: Living conditions of women on agricultural holdings in rural areas
What are the working conditions of women on farms?	Share of women pursuing off farm employment, days of leave per year, share of women at risk of burnout; Average daily time spent in activities of care by sex, labor informality by sex, Agricultural production practices by sex	Germany: Living conditions of women on agricultural holdings in rural areas; Colombia: Situacion de las mujeres rurales 2010-18; United States: Agricultural Resource Management Survey
What are the risks in agriculture that are specific to women?	Awareness and education regarding the dangers women are faced with when pursuing farm activities	Germany: Living conditions of women on agricultural holdings in rural areas
What is the gender pay gap in agriculture?	Wage, gender wage gap	United Kingdom: Annual Survey of Hours and Earnings
To what extent are women contributing to agricultural innovation?	Patenting activities by women inventors	OECD Intellectual Property Database
What is the representation of women in rural areas?	Number and share of women living in rural areas	Germany: Living conditions of women on agricultural holdings in rural areas Colombia: Situacion de las mujeres rurales 2010-18
What is the level of provision of essential services in rural areas?	Distance to general practitioners, connection to public transport	Germany: Living conditions of women on agricultural holdings in rural areas
What are the working conditions of women in other food systems jobs?	Share of women working as permanent full-time workers	World Bank Enterprise Survey
What is the gender pay gap in other food system activities?	Wage, gender wage gap	United Kingdom: Annual Survey of Hours and Earnings
Agri-food companies		

Research question	Type of data collected	Example of databases
How are leading agri-food companies performing in terms of gender equality and women empowerment?	Proportion of total direct operations workforce for each employee category by gender and other attributes, public commitments/targets, disclosure of salary by gender	Food and Agriculture Benchmark (WBA), Behind the Brands (Oxfam), Behind the Barcodes (Oxfam UK)

Source: Giner, Hobeika and Fischetti (2022[8]).

16. An important lesson from the experience of Colombia in mainstreaming gender policy is that policy makers and civil servants need to be trained to understand why and how such information must be collected. This effort is more efficient if it is not restricted to a single sector, which is why Colombia is developing an intersectional information platform on gender (DANE, 2020[35]).

Step 3: Develop policy instruments to support women entrepreneurs and workers in food systems

17. Once Steps 1 and 2 have been completed, the third step is to develop and implement a mix of policy instruments that address the problems and barriers that have been identified, with the aim to improve gender equality and to support women in food systems. These instruments should be selected according to their capacity to overcome identified barriers or to support identified benefits. Synergies and trade-offs with other policy areas need to be evaluated.

18. Table 2 highlights policy instruments used by several OECD countries to support women entrepreneurs and workers in food systems. Policy efforts include a combination of specific food systems policy tools (e.g. shared ownership policies, extending social welfare to spouses in family farms) and economy-wide policy tools (e.g. provision of childcare facilities and of essential services in rural areas) to support women entrepreneurs and workers across food systems. These policies aim to address several barriers to women's participation across food systems, including unequal access to lands and assets, education, entrepreneurial and digital skills, and professional networks. Addressing these barriers is essential to allow women to increase agricultural productivity and promote more sustainable farming practices (OECD, 2021[9]).

19. Gender impact assessments need to be undertaken *ex ante* and *ex post* to understand how policy initiatives can drive changes towards gender equality (Downes, von Trapp and Nicol, 2017[36]). The results of these assessments can be used to evaluate the cost-effectiveness of measures introduced and to reevaluate resource allocations. Table 2 presents evidence needs to inform or to monitor the impacts of policies that support women entrepreneurs and workers across food systems. These evidence needs and the development of related comparable specific indicators should be prioritised when countries invest in closing evidence gaps on gender aspects related to food systems.

20. Since 1995, the Government of Canada uses the Gender-Based Analysis Plus (GBA+)[5] analytical tool to support the development of inclusive policies and to assess the impacts of policy initiatives on specific subgroups, including women, before making a decision (Downes and Nicol, 2020[37]) (OECD, 2018[38]). The "plus" in GBA+ acknowledges that GBA goes beyond biological (sex) and socio-cultural (gender) differences. GBA+ is a process for understanding who is impacted by the issue being addressed by the initiative; identifying how the initiative could be tailored to meet diverse needs of the people most impacted; and anticipating and mitigating any barriers to accessing or benefitting from the initiative (Government of Canada, 2024[39]). Since 2017, GBA+ assessments are mandatory in new budget proposals. GBA+ has been applied to evaluate, anticipate and prevent potential adverse effects on women when developing the Food Policy for Canada (The Government of Canada, 2021[40]).

[5] More information on GBA+ is available at https://women-gender-equality.canada.ca/en/gender-based-analysis-plus/what-gender-based-analysis-plus.html.

21. Agriculture and Agri-Food Canada (AAFC) is committed to integrating GBA+ considerations into day-to-day processes and decision-making (AAFC, 2024[41]). For example, the GBA+ Responsibility Centre is meant to ensure that detailed GBA+ assessments are completed and that key considerations are incorporated in the development of all policy, programme, and budget proposals at AAFC. The GBA+ Data and Analysis Working Group aims to enhance the range of gender- and diversity-disaggregated data that is collected and reported to support GBA+.

Step 4: Monitor and evaluate policy impacts and their effectiveness

22. The fourth step is to monitor and evaluate policy impacts and their effectiveness. This can be done at the national and international levels to track progress on commitments and to compare the performance of countries, e.g. by collecting information on the 14 SDGs indicators linked to food and agriculture that are disaggregated by sex. The OECD report by Giner, Hobeika and Fischetti (2022[8]) shows that on average OECD countries are still far from achieving SDG targets on malnutrition and moderate food insecurity among women. At the national level, *ex post* gender impact assessments are rare and are not yet available for recently implemented food systems-related policies, except in Colombia.

Step 5: Adjust policy responses in place and how they are managed

23. The final step is to adjust policy responses that deal with gender aspects related to food systems. The adjustment of the set of policy instruments needs to consider ethical considerations, organisational and budgetary aspects, as well as effectiveness. For instance, the Rural Women Directorate in Colombia is developing an awareness-raising toolbox for policy makers and civil servants. This toolbox will address the situation of women and other population groups that are vulnerable, such as persons with disabilities and sexual minorities. The Directorate also participates in the development of an intersectional information system on women in Colombia to inform policy makers in all fields (DANE, 2020[35]).

How do OECD countries stand with respect to the OECD roadmap?

24. Most analysis of OECD countries indicate that they are only applying *Steps 2* and *3* of the OECD roadmap i.e. they are trying to quantify the role of women in food systems and/or implementing policies to improve the situation. A few OECD countries are also applying a gender lens when developing food systems policies (*Step 1*) and are assessing the actual impacts of their food systems policies on gender (*Step 4*). Canada, Colombia, and Spain, for instance, are performing *ex ante* gender impact assessment of their food systems policies. Only Colombia has performed an *ex post* gender impact assessment of its agricultural policy. Annex C shows the indicative position of OECD countries on the OECD roadmap developed by Giner, Hobeika and Fischetti (2022[8]).

In addition, several OECD countries are developing and implementing policies (*Step 3*) without having first identified and closed key evidence gaps (*Step 2*). As a result, many policies that are in place today to address gender aspects in food systems are not evidence-based.

Table 2. Policy tools to support women workers and entrepreneurs in food systems

Policy type	Policy objective	Policy tool	Evidence needs	Examples in OECD countries
Women entrepreneurs				
Food systems tools	Recognising the rights and needs of women in family farms	Extending social welfare to spouses in family farms	Identify spouses in family farms	Iceland: Reform of the Agricultural Products Act
		Raising awareness on risks specific to women in food systems	Identifying these risks	United Kingdom: DEFRA research and the Big Farming Survey
	Supporting access to land	Introducing shared ownership policies and facilitating information sharing about land ownership	Develop databases that match people willing to get out of the farming sector with people willing to get in	Spain: Shared ownership policy; Scotland: Land Matching Service
	Promoting access to finance and markets	Offering payments targeted at women or designed with a gender lens	Identifying areas where women entrepreneurs lack access to finance and/or where the contribution of women could be beneficial	Canada: Women Entrepreneur Program; Chile: Credit financing programmes for rural women; Spain: Rural Women Programme
Women entrepreneurs and workers				
Economy-wide tools	Reducing the time spent on unpaid care work	Provide childcare facilities	Evaluation of needs for childcare	Japan: 2020-25 policy project “for the promotion of future agriculture changed by women”
		Financial support / App to promote the equal distribution of unpaid domestic work	Evaluation of paid/unpaid working time	Switzerland: Training provided by the association for agricultural and rural development + LabourScope app
	Improving the representation of women in leadership positions and fostering equal pay	Gender quotas	Share of women in leadership positions	Voluntary self-reporting targets by industry stakeholders
		Mandatory gender gap reporting	Information on gender pay gap across firms in the sector	United Kingdom: Mandatory gender pay gap reporting
		Promoting leadership programmes for women	Overview of the target population	Canada: AgriDiversity Programme
	Improving women visibility	Encouraging women networks	Identifying areas where the visibility of women should be improved	New Zealand: Rural Woman New Zealand Australia: National Rural Women's Coalition
		Promoting ad campaigns that highlight the contribution of women in food systems		International Day of Rural Women Spain: Excellence Rural Women Awards Australia: AgriFutures Rural Women's awar New Zealand: Dairy Women's Network (industry initiative); these awards distinguish women who innovate in the agricultural sector
	Providing tailored education and training	Encouraging the participation of women in training programmes	Identify areas and methods of training that fit women needs and aspirations	Chile: Rural Women Programme Switzerland: Training programme for women migrant workers Scotland: "Be Your Best self" training programme
	Making rural areas more attractive	Provision of essential services (health, education, mobility, and digital connectivity, childcare)	Evaluation of pre-existing facilities/services	Latin America: Training programmes provided by the Alliance for Affordable Internet and the Rural Women's Alliance; United States: DreamBuilder programme
		Investments in infrastructures		

Source: Giner, Hobeika and Fischetti (2022[8]).

Closing evidence gaps would enable more effective and targeted food system policies to be developed

25. Evidence gaps exist with respect to the role and contribution of women across food systems:

- Many sex-disaggregated data are not collected on the contribution of women as entrepreneurs, workers, and consumers. Key data needs to include female representation in agriculture and other food systems activities, female representation in leadership positions and contribution to decision making; female access to productive resources (e.g. land, finance), and female working conditions (e.g. wage, off farm employment, time spent on activities of care) (Table 1).
- Data could also be collected on women's contribution to advance sustainable agricultural methods (OECD, 2021[9]).

26. Evidence gaps also exist on the effectiveness and impacts of policy instruments (Table 2).

- There is a lack of policy-specific sex-disaggregated indicators, which prevents undertaking *ex ante* and *ex post* gender impact analysis of policies.
- There are knowledge gaps with respect to methodologies to measure the effectiveness of policy instruments designed to advance gender equality in food systems.

27. Closing these gaps would improve the effectiveness of policy instruments that are designed to advance gender equality in food systems, as well as to assess the gender implications of all food systems policies, irrespective of their primary objectives. Governments and international organisations must start to work together to overcome these gaps on gender and food systems, and to ensure that data is consistent and comparable.

Recommendations to develop a better understanding of the role of women in food systems in the Netherlands

28. The OECD recommends undertaking further research to help develop a better understanding of how women could contribute to the transformation of food systems in the Netherlands based on the experience of other OECD countries as presented in Giner, Hobeika and Fischetti (2022[8]).

29. The **first recommendation** is to develop an understanding of how policy makers, civil servants, and major food systems stakeholders in the Netherlands situate the role of women in the ongoing policy debate on the transformation of food systems. This could be done via a survey sent to policy makers and civil servants in the Ministry of Agriculture, Nature, and Food Quality and to major food systems stakeholders organisations across the country. The results of such a survey could help raise awareness on the need to foster gender equality in food systems.

30. The **second recommendation** is to further develop the information base on the contribution of women to food systems in the Netherlands.

31. Information is needed on the role of women as entrepreneurs and workers on farms. Most agricultural statistics collected in the Netherlands via the agricultural census do not provide a good overview of the situation of women. The latest Agricultural Census published by Statistics Netherlands (CBS) does not provide sex-disaggregated information on the agriculture labour force, agricultural practices, nor on agriculture income.[6] According to Eurostat data collected in 2016,[7] the Netherlands had

[6] More information on the Dutch Agricultural census is available at https://www.cbs.nl/en-gb/economy/agriculture.

[7] More information is available at: https://agriculture.ec.europa.eu/news/females-field-2021-03-08_en.

the smallest proportion of farm managers who were women in the European Union (5% compared to an EU average of 29%).

32. In 2023, the Ministry of Agriculture, Nature and Food Quality asked the Business Information Network (BIN) to investigate sampling data among 1 500 farms. The Ministry suspected that the 2016 Eurostat statistic did not accurately reflect the real situation. Indeed, for registration purposes, in the Netherlands the oldest farm head is always automatically identified as "upper" head of the holding. In many farms with multiple holders, the oldest holder is often a man. The BIN data showed that 43% are female holders, of whom 37% are in charge of the daily management.

33. In 2014, van der Meulen et al. (2014[27]) analysed the role of women on Dutch farms using a sample of participants in the Dutch farm Accountancy Data Network (FADN). In total, 195 women who were the partner of a farmer and/or business head participated in the study. The study revealed that over 40% of women on Dutch farms had jobs off-farm in 2014 (compared to 5% in the 1980s), reflecting a certain distribution of tasks within the farm households. Almost 60% of farm households that responded were legally organised as partnerships. Women seemed to be more involved in strategic decision making (71%) than in operational decision making (37%).

34. Information is also needed on the role of women as business starters or innovators in the agro-food chain. In 2018, the proportion of women holding agricultural doctorates in the Netherlands in the field of agriculture, forestry, fisheries, and veterinary was 49%, below the EU average of 57% (European Commission, 2021[42]). The Global Entrepreneurship Monitor (GEM) 2022/23 Women's Entrepreneurship survey (GEM, 2023[43]) provides information on total early-stage entrepreneurial activity (TEA)[8] for all economic sectors , and on the aspirations of business starters. Interesting results are presented in Table 3.

Table 3. Insights from the GEM 2022/23 Women's Entrepreneurship survey

			Netherlands	World	High-income countries
%TEA	All sectors	Women	**9.6%**	10.1%	7.5%
		Men	15.3%	12.7%	10.3%
		Ratio	0.63	0.8	0.73
%TEA	Agriculture and mining	Women	**3.3%**	4.3%	**4.3%**
		Men	**11.0%**	11.8%	**8.6%**
		Ratio	0.3	0.36	0.5
Aspirations of business starters	Prioritises sustainability over economic goals	Women	**53%**	68%	**72%**
		Men	47%	64%	72%
		Ratio	1.13	1.07	1.00
	Considers environmental sustainability	Women	**70%**	80%	72%
		Men	64%	78%	71%
		Ratio	1.09	1.02	1.01
	Practices environmental sustainability	Women	43%	56%	54%
		Men	47%	56%	52%
		Ratio	0.92	1.01	1.03

Source: GEM survey

[8] TEA is defined as the percentage of adult population who are either a nascent entrepreneur or owner-manager of a new business

35. The GEM survey reveals that women are three times less likely than men to start a business in the agricultural sector in the Netherlands. They engage less in new entrepreneurial activities in the agricultural sector than in other economic sectors. Interestingly, for all sectors, environmental sustainability seems to be less important as a driver compared to economic goals in the Netherlands.

36. The Netherlands could replicate the *approach of Germany* in developing a better information base on women as entrepreneurs and workers across food systems. Detailed sex-disaggregated data on farm employment could be collected at the national and provincial levels via the Dutch annual agricultural census or other research tools. In addition, information on the living conditions of women on agricultural farms could be collected. In Germany, the Federal Ministry of Food and Agriculture (BMEL) funded a national research project[9] carried out by the Federal Research Institute for Rural Areas, Forestry and Fisheries and the University of Göttingen. The rural women's organisation (*Deutscher Landfrauen Verband*) was instrumental in advocating for this nationwide study. Two reports by Davier et al. (2023[44]) and Pieper et al. (2023[45]), and a policy brief by Davier et al. (2023[46]) were published in 2023 to present the findings of qualitative (interviews and workshops) and quantitative (online survey with over 7 000 participants) studies that were conducted between 2019 and 2022. The reports include policy recommendations to improve the situation of women, with a particular focus on the legal status of women, pension schemes, the review and expansion of advisory services for women in agriculture, improving public infrastructure in rural areas, access to land, and support schemes.

37. The Netherlands could also apply the *approach of the United Kingdom and Scotland*. To design more inclusive policies for a resilient and sustainable farming sector[10] and in the context of the Future Farming & Countryside Programme, in 2021 the Department for Environment, Food and Rural Affairs (DEFRA) explored the role and needs of women entrepreneurs in agriculture (CCRI, 2021[47]). They conducted a literature review and a survey, developed focus groups, and undertook interviews and an inventory of women farming networks. The outcomes of this research will soon be published.[11]This research builds on previous evidence collected to inform the Women in Agriculture (WIA) programme in Scotland.[12] One of the outcomes of the WIA programme in Scotland was the "Be Your Best Self" training programme established for women. This leadership and entrepreneurship programme was evaluated via interviews and questionnaires, with researchers finding that it had positive impacts. Participants felt more optimistic about their future in the industry and acquired knowledge on the benefits of diversity (Scottish Government, 2021[48]).

38. The Netherlands could also explore the *use of Micro-Data Linking[13] practices* to better understand the extent and characteristics of the participation of women along the food value chain and the performance of women-owned enterprises. This was done in *Canada* with the analysis of the Canadian Employer-Employee Dynamics Database (CEEDD) (Grekou, Li and Liu, 2018[49]) and in *New Zealand* with the analysis of the Integrated Data Infrastructure (IDI). IDI is a large research database providing detailed

[9] More information is available at https://www.studie-frauen-landwirtschaft.de/.

[10] In 2016, 85% of farm holders were male in the UK (DEFRA, 2022[56]).

[11] More information is available at: Women entrepreneurs in farm businesses and their role in sustainable agriculture. - ePrints - Newcastle University (ncl.ac.uk).

[12] The Scottish Government first commissioned research in 2017, which highlighted issues impacting women and resulted in the establishment of the Women in Agriculture Taskforce. In 2019, the Taskforce published a final report with recommendations (Scottish Government, 2019[54]). Consequently, additional research led by Sally Shortall explored the challenges of rural childcare, unconscious biases, and the training needs of women in agriculture in more depth (Scottish Government, 2021[48]).

[13] Micro-data linking (MDL) is an important cornerstone in the development of statistical insights, including the characteristics of female employment and entrepreneurship in food systems. It is particularly useful in limiting additional respondent burden (Luppes and Nielsen, 2020[55]).

industry and occupation microdata on business owners, people and households, through tax data (StatsNZ, 2020[50]).

39. According to discussions with an expert in gender equality at the Ministry of Education, Culture and Science, the Netherlands will announce a gender equality strategy in the third quarter of 2024. The Ministry of Agriculture, Nature and Food Quality could use the newly collected information base to develop accompanying policy measures to achieve greater gender equality in food systems in the Netherlands.

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Annex A. Glossary

Empowerment	The expansion of assets and capabilities of individuals to participate in, negotiate with, influence, control, and hold accountable the institutions that affect their lives (OECD, 2018[51])
Food systems	The food system includes all the elements, such as the environment, people, inputs, processes, infrastructures, institutions, markets, and activities, that are related to producing, processing, distributing, retailing, and consuming food, and to their effects, including socioeconomic, health-related and environmental outcomes (OECD, 2021[52]).
Gender	Socially constructed and socially learned behaviours and expectations associated with females and males. All cultures interpret and elaborate the biological differences between women and men into a set of social expectations about what behaviours and activities are appropriate and what rights, resources, and power women and men possess. Like race, ethnicity, and class, gender is a social category that largely establishes one's life chances and participation in society and in the economy (OECD, 2018[51]).
Gender impact assessment / Analysis	Assists policy makers to incorporate a gender perspective into policies through taking account of the different needs, characteristics, and behaviours of the affected groups. Gender analysis can be applied to legislation, policy plans and programmes, budgets, reports, and existing policies and services. Ideally, it should be done at an early stage in the decision-making process so that policies can be changed or abandoned if necessary. Although there are some policies where gender plays a central role, there are other policies where the relevance of gender is less obvious. These are as a result sometimes labelled gender-neutral, e.g. health and safety and regional or town planning. In these examples, it may be tempting to see such policies, goals and outcomes affecting people as a homogeneous group. If policies are mistakenly perceived as gender-neutral, opportunities will be missed to include the views of different groups of women and men in policy formation and delivery and, in turn, to misjudge the different effects on each group, and the systems and organisations that support them (OECD, 2018[51]).
Gender equality	Equality under the law, equality of opportunity, and equality of voice (the ability to influence and contribute to policy making). This encompasses the concept of gender equity in terms of women's and men's fair and equal access to information, services, justice, resources, benefits, and responsibilities (OECD, 2018[51]).
Gender mainstreaming	The process of assessing the implications for women and men of any planned action, including legislation, regulations, policies, or programmes, in all areas and at all levels. It is a strategy for making women's as well as men's concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of policies and programmes in all political, economic, and societal spheres so that women and men benefit equally, and inequality is not perpetuated. The goal is to achieve gender equality (OECD, 2018[51]).

Annex B. The role of women in Spanish agriculture and the policy tools in place

The Spanish agricultural sector has been traditionally dominated by men. In 2016, women accounted for only 30% of the total agricultural workforce, but their presence has become more visible in recent years. While the total number of farm managers in Spain has decreased by 8% since 2009, the number of female managers rose by 22% (in contrast to male managers, which decreased by 16%). Yet, only 29% of all farm managers were female in 2020, possibly indicating that agricultural careers are not attractive for women; only 3% of female farm managers are younger than 35, compared to 5% for men.

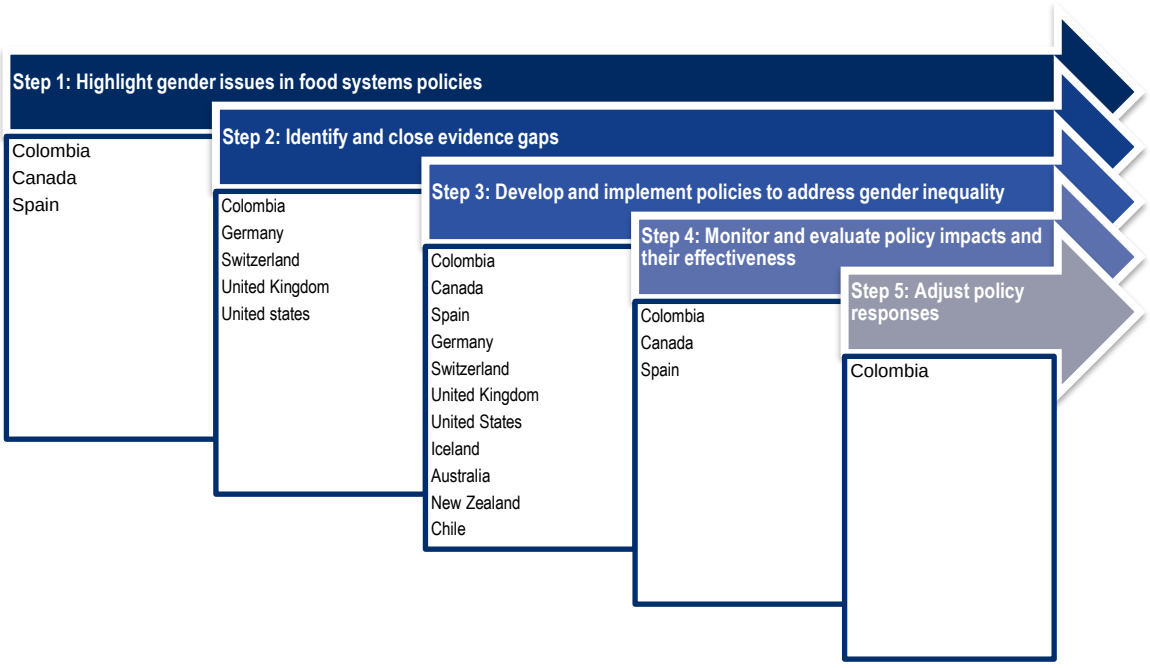
Spain has taken steps to acknowledge women's work in agriculture, including through Law 35/2011 on Shared Ownership of Agricultural Enterprises. This law aims to give legal and economic recognition to female work and to remedy the gender imbalance between holders of farm property titles. It allows couples to manage a farm jointly, sharing the work but also the farm's profits and entitlements (such as the CAP payments). However, a 2015 assessment showed that very few farms had registered as jointly owned due to lack of knowledge, unequal implementation at the regional level, and compliance difficulties. To remedy this, the Spanish authorities undertook information and awareness-raising actions and, since 2021, grant specific direct payments to shared-ownership farms.

Spain is one of only two EU Member States that address in their new CAP Strategic Plan the objective of improving the participation of women in farming (the other is Ireland). The Spanish CSP increases by 15% the complementary direct payment for young farmers (40 years or less) if the beneficiary is female and owns or co-owns the farm.

Together with four other EU Member States, Spain also proposes measures supporting rural women in the new CSP. Rural development interventions include in some cases positive discrimination measures in favour of women. For example, women are prioritised in grants for investments in the processing, commercialisation, and development of agricultural products. Furthermore, farms owned by women or that are under shared ownership are prioritised in support programmes such as the 2019-2023 National Support Program for vineyard restructuring and reconversion.

Source: OECD (2023[53])

Annex C. Position of selected countries on the OECD Roadmap



Source: Giner, Hobeika and Fischetti (2022[8]).