Food and Agriculture Organization of the United Nations
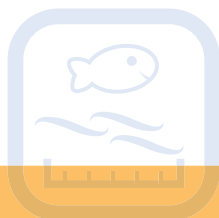
Agri-Gender Statistics Toolkit

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Preface

The Agri-Gender Statistics Toolkit was written by Elisabeth Duban under the guidance of Dono Abdurazakova, Gender and Social Protection Specialist, and Giorgi Kvinikadze, Statistician, of the FAO Regional Office for Europe and Central Asia (REU). Aroa Santiago Bautista, Gender Mainstreaming Specialist of FAO REU, and Marya Hillesland, Statistician in FAO's Social Protection Division, both provided important recommendations on the content of this toolkit.

This resource was prepared under the "Strengthening national capacities for production and analysis of sex-disaggregated data through the implementation of the FAO Gender and Agriculture Framework (GASF)" project, funded by the FAO / Turkey Partnership Programme (FTTP). The overall objective of the project was to assist beneficiary countries in developing gender-sensitive and sex-disaggregated datasets on the agricultural and rural sector, to assess the current status of the rural population – both women and men – and to ensure evidence-based and informed policy-making processes. The project was conducted in Kyrgyzstan, Tajikistan and Turkey and was managed by the FAO REU.

Within the scope of this project, three validation workshops were conducted in order to receive feedback from groups of experts – both data producers and users – on an earlier draft of this toolkit, in Dushanbe, Tajikistan (17-18 November 2015), Bishkek, Kyrgyzstan (18-19 February 2016) and Ankara, Turkey (6 April 2016). Special thanks are extended to the participants of all three workshops, which included statisticians of the national statistical offices, representatives of several ministries, including the ministries of agriculture and labour, agriculture experts, gender experts from the civil society sector, academics, and representatives of international development organizations that support projects dedicated to rural women. The recommendations from the workshops were addressed as comprehensively as possible in the final draft.

In the scope of the larger GASF project, national gender profiles for the three participant countries were also drafted in parallel with this toolkit. In addition to recommendations on the agri-gender toolkit, the validation workshops also generated suggestions and insights relevant to the national reports, some of which are included here as examples of some of the challenging aspects of producing gender statistics.

Tables, figures and boxes

Acronyms

CEDAW	UN Convention on the Elimination of All Forms of Discrimination against Women
FAO	Food and Agriculture Organization of the United Nations
FHH	female-headed household
FTTP	FAO / Turkey Partnership Programme
GASF	Gender and Agricultural Statistics Framework
GII	Gender Inequality Index
MDD-W	Minimum Dietary Diversity – Women
MDG	Millennium Development Goal
MHH	male-headed household
NGO	non-governmental organization
NSO	national statistical office
REU	FAO Regional Office for Europe and Central Asia
SDG	Sustainable Development Goal
SEAGA	Socio-Economic and Gender Analysis approach
UNECE	United Nations Economic Commission for Europe
WCA 2020	World Programme for the Census of Agriculture 2020
WEAI	Women's Empowerment in Agriculture Index

Glossary of terms

The following terms relevant to gender statistics in agriculture are used in this toolkit. Some terms are defined in FAO documents and can be accessed from the FAO term portal. Where FAO definitions are not available, those of the United Nations Statistics Division, or sources, are provided. The definitions below have been extracted from these sources. Note that definitions used in national statistics may differ from those below, and therefore metadata provided by the national statistical office should be consulted.

Additional terms and definitions can be found in the FAO term portal (available at http://www.fao.org/faoterm/en/) and in the online Gender Statistics Manual developed by UNStats (available at http://unstats.un.org/unsd/genderstatmanual/Glossary.ashx).

Agricultural holder is a civil or judicial person who exercises management control over the agricultural holding operation and takes major decisions regarding resource use. The holder has technical and economic responsibility for the holding and may undertake all responsibilities directly, or delegate responsibilities related to day-to-day work management to a hired manager.*

Agricultural holding when used for statistical purposes, refers to the economic unit of agricultural production under single management, comprising all livestock kept and all land used wholly or partly for agricultural production purposes, without regard to title, legal form or size.*

Agricultural household refers to a household whose largest source of income consists of income derived from agricultural production.*

[Sex/Gender] **Bias in data collection** refers to the underreporting or misreporting of demographic, social or economic characteristics associated with one of the sexes.**

Female-headed household (FHH) is a household in which adult males either are not present (owing to divorce, separation, migration, non-marriage, widowhood) or do not contribute to the household income (owing to illness, alcoholism, drug addiction and so forth).*

De facto **FHH** is a household in which an adult male partner is working away from the household, but remains involved through remittances and other economic and social ties.*

De jure **FHH** is a household which has no male partner, such as women who are widowed, divorced or never married.*

Feminization of agriculture refers to the increased concentration of agricultural tasks in the hands of rural women in developing countries.*

Feminization of poverty refers to the fact that women are overrepresented among the world poor, especially the rural poor.*

Gender refers to socially constructed differences in attributes and opportunities associated with being female or male and to the social interactions and relations between women and men. Gender determines what is expected, allowed and valued in a woman or a man in a given context. In most societies, there are differences and inequalities between women and men in roles and responsibilities assigned, activities undertaken and access to and control over resources, as well as in decision-making opportunities. These differences and inequalities between the sexes are shaped by the history of social relations and change over time and across cultures.**

Gender analysis is the study of the different roles of women and men in order to understand what they do, what resources they have, and what their needs and priorities are in a specific context.*

Gender blind refers to a study, project or approach that lacks attention to the differential roles, responsibilities, resources, or experiences of men and women.***

Gender equality is the state in which women and men enjoy equal rights, opportunities and entitlements in civil and political life.*

Gender mainstreaming is the process of assessing the implications for women and men of any planned action, including legislation, policies or programmes, in all areas and at all levels.*

Gender roles are social and behavioural norms that, within a specific culture, are widely considered to be socially appropriate for individuals of a specific sex. These often determine differences in the responsibilities and tasks assigned to women, men, girls and boys within and outside the private sphere of their household.**

Gender sensitivity is an awareness of the ways in which men and women will be differentially impacted by policies, programmes, and so on.***

Gender-sensitive indicators measure gender-related changes over time. They can refer to *quantitative* indicators based on sex disaggregated data - which provides separate measures for men and women, [and they] can also capture *qualitative* changes - for example, increases in women's empowerment.*

Gender statistics are statistics that adequately reflect differences and inequalities in the situation of women and men in all areas of life. Gender statistics are defined by the sum of the following characteristics: (a) data are collected and presented disaggregated by sex as a primary and overall classification; (b) data reflect gender issues; (c) data are based on concepts and definitions that adequately reflect the diversity of women and men and capture all aspects of their lives; and (d) data collection methods take into account stereotypes and social and cultural factors that may induce gender biases.**

Household is a basic unit for socio-cultural and economic analysis. It includes all persons, kin and non-kin, who live in the same dwelling and share income, expenses and daily subsistence tasks.*

Intra-household (for example, relations / labour / decision-making / allocation of resources / inequality / dynamics) refers to relations, including power relations, roles and processes, that take place within the household and are affected by existing gender inequalities.*

Metadata refers to any data used to aid identification, description and location of information resources.*

National machinery [for the advancement of women] is the central policy- coordinating unit inside government that has the primary task of supporting government- wide mainstreaming of a gender-equality perspective in all policy areas.[1]

Peri-urban area refers to a transition or interaction zone, where urban and rural activities are juxtaposed, and landscape features are subject to rapid modifications, induced by human activities. Peri-urban areas, which might include valuable protected areas, forested hills, preserved woodlands, prime agricultural lands and important wetlands, can provide essential life support services for urban residents.*

Sex refers to individual biological differences between women and men that are fixed and unchangeable. Unlike gender, sex differences do not vary across culture or over time. Sex (female or male) is recorded during data collection in censuses, surveys or administrative records.**

Sex-disaggregated data are data separated by sex in order to allow differential impacts on men and women to be measured. Sex-disaggregated data is quantitative statistical information on differences and inequalities between women and men.*

Value chain is a chain of activities. Products pass through all activities of the chain in order and at each activity the product gains some value. The chain of activities gives the products more added value than the sum of added values of all activities. It is important not to mix the concept of the value chain with the costs occurring throughout the activities. A diamond cutter can be used as an example of the difference.*

Women's empowerment is defined by its core components: (1) women's sense of self-worth; (2) their right to have and to determine choices; (3) their right to have access to opportunities and resources; (4) their right to have the power to control their own lives, both within and outside the home; and (5) their ability to influence the direction of social change to create a more just social and economic order, nationally and internationally.*[2]

Sources:

* FAO Term Portal.

** UNStats. Gender Statistics Manual.

*** International Food Policy Research Institute. 2011. Engendering Agricultural Research,

  Development, and Extension. p. 3 (Key gender terms and concepts).

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1 Beijing Platform for Action (1995), para. 201.
2 United Nations Population Information Network. Guidelines on Women's Empowerment. See also "Women's Empowerment in Agriculture Index" in the FAO Term Portal.

Introduction

This *Agri-Gender Statistics Toolkit* supports the enhanced production and use of sex-disaggregated agricultural data. This resource builds upon earlier initiatives by the Food and Agriculture Organization of the United Nations (FAO) to provide technical guidance on gender statistics in various regions. For instance, working jointly with statisticians in Africa, FAO developed an Agri-Gender database with instructions on incorporating gender-sensitive approaches into routine agricultural data collection. FAO also developed and piloted the Gender and Agricultural Statistics Framework (GASF) to improve the production of sex-disaggregated data and indicators in the Asia-Pacific region. Finally, the FAO Regional Office for Europe and Central Asia (REU) has developed a core set of gender indicators to guide countries in the collection of comparable data on the socio-economic status of rural and agricultural populations. The key messages and approaches from all of these resources are synthesised and incorporated into this toolkit, and links to further guidance are provided in Annex 2.

Note
This toolkit was developed under a project conducted in Kyrgyzstan, Tajikistan and Turkey and was originally conceived as guidance for the five Central Asian countries.[3] For this reason, there is particular emphasis on the Central Asian context (especially in Chapter 1 and in the examples provided). However, it is hoped that the toolkit will benefit a wider audience .

This toolkit has been designed primarily to assist statisticians working in national statistical offices (NSOs) and statistical units of relevant ministries and government agencies (such as ministries of agriculture, natural resources management and economic development). Specifically, it provides guidance on (1) identifying priority topics relevant to gender, agriculture and rural development for which data are lacking; (2) producing gender statistics using targeted indicators to measure gender disparities, identify data sources and re-tabulate data; and (3) analysing and interpreting statistics and presenting and disseminating data for use by policy-makers and other stakeholders.

Data users, especially policy-makers and development planners (for example, gender focal points working in ministries, staff of national agencies for the advancement of women or parliamentary committees), as well as non-governmental organizations (NGOs), international development organizations, advocates and researchers working on gender and agriculture issues, can also benefit from this toolkit.

Data producers may need support to improve their understanding of gender issues and to build their skills in gender analysis. Conversely, data users may have a sound understanding of gender issues within a particular country but lack insights into the steps required to produce reliable gender statistics and the limitations inherent in data collection. When piloting the Gender and Agricultural Statistics Framework (GASF), which forms the structure of this toolkit, FAO found that the methodology provides both data producers and users with a common understanding of the process of producing gender statistics.[4] With this understanding, data users can refine their requests for the production of specific statistics or collection of data.

Sustainable production of gender statistics relies on four interrelated conditions: (1) there is demand for data (political will and a culture of evidence-based policy-making exist); (2) data are available because there is regular data collection; (3) data are analysed and disseminated; and (4) data are used and there is regular dialogue between data users and producers.[5] This toolkit aims to address each of the components and to encourage greater cooperation and collaboration between data producers and users.

Chapter 1 provides brief contextual information that explains the need for this toolkit. The chapter includes an overview of the key gender issues that are common for Central Asia and a review of the capacities of the region's NSOs and the challenges they face.

Chapter 2 is a review of core concepts with which toolkit users should be familiar. The characteristics of gender statistics, as well as the rationale for producing them, are explained.

Chapter 3 is the core of the toolkit, and it outlines a five-step methodology for producing gender statistics, based on the GASF. Each step, or stage, entails several tasks and requires decisions that depend on the issue and data availability. Several examples of good practices from the region are provided.

Finally, *Chapter 4* provides additional advice on how statistical production can be more responsive to gender, considering measures such as training and increasing the capacity of the NSO.

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3 Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan.
4 Curry, J., Wiegers, E., Perez, J. & Mayo, R. 2010. Developing a Gender and Agricultural Statistics Framework for the Asia-Pacific Region. FAO. Asia and Pacific Commission on Agriculture Statistics, 23rd Session. p. 11.
5 Abdurazakova, D. & Gardner, J. 2013. Gender Statistics in the Southern Caucasus and Central and West Asia. Manila, ADB. p. 10.

1. Context for the toolkit

The *Agri-Gender Statistics Toolkit* is one of many initiatives that can improve our understanding of how women and men contribute to agriculture and rural economies. Other initiatives include guidance on conducting gender-sensitive qualitative research, standardizing indices and indicators to measure women's empowerment in agriculture, and compiling innovative practices that respond to gender disparities across many sub-sectors of agriculture. These efforts are all responses to the challenges that were outlined by the Millennium Development Goals (MDGs) for 2015 and to the commitments made by world leaders under the Sustainable Development Goals (SDGs) for 2030, in particular goals to eradicate extreme poverty, to increase agricultural production to end hunger and to ensure equality and empowerment for women and girls.

Agriculture is central to the achievement of many of the SDGs as it is a key economic driver and plays a vital role in reducing food insecurity. Although eliminating gender disparities in the agricultural sector is a goal in its own right, increasing women's access to critical resources, such as land, water for irrigation, extension services and credit, leads to more sustainable growth and increased productivity for the benefit of all. When national governments undertake economic and agricultural reforms without adopting a gender perspective, there is a risk that the differential impact of new policies and programmes on women and men will be overlooked or inadequately understood. In order to ensure that government planning and reform processes are targeted, effective and sustainable, they should be grounded in empirical information that accurately reflects the differing realities of women and men, in other words, in gender statistics.

A. Gender Issues in Central Asia

The five Central Asian countries are distinct, yet they also share many of the same challenges related to the achievement of gender equality. Foremost, each country recognizes gender equality as a development goal and has adopted national strategies and action plans with clear objectives relevant to eliminating gender inequalities and for the advancement of women. These plans and policies highlight critical areas of concern, such as higher poverty rates among women compared with men, and rural women's unpaid and informal contribution to agricultural production. National machinery for women's empowerment operate within each country and the key institution takes the form of specialized state committees on women's affairs. However, full implementation of international commitments and national strategies remains elusive. For many women, gender equality is not yet a reality but remains "on paper".

The Gender Inequality Index (GII) developed by the United Nations Development Programme is an example of a global index that measures progress towards gender equality based on indicators in several spheres (reproductive health, literacy, political representation and labour market participation).[6] The GII does not take into account other important dimensions, such as the tendency for women to work in informal and unpaid labour, including agricultural work. However, the 2015 Human Development Report, which contains GII values and rankings, notes that that while agriculture has declined in importance to economies around the world, the importance of agriculture to individual workers in terms of employment opportunities remains high.[7]

The most recent GII ratings for the Central Asian countries using available data indicate that the region experiences a loss in potential human development equivalent to between 30 and 35 percent due to disparities between female and male achievements, empowerment and economic status.[8] More careful analysis of the sub-index scores reveals some common trends, namely that women have not yet reached 30 percent representation in any national parliament in the region (the minimum level that is considered critical to have an effective voice in decision-making), but they have made important progress in entering political office in Kyrgyzstan and Kazakhstan.

In all countries, indicators for women's economic empowerment are relatively low and they have slightly worsened in Tajikistan and Kazakhstan. Across the region, women spend less time in the formal labour market and make up a larger share of the officially unemployed, due to factors such as job losses in sectors that were once female dominated (for example, the textile industry), child care responsibilities (and a lack of accessible preschools), and limited jobs in local markets. Women and men tend to enter distinct spheres of employment, and women are over-represented in low wage jobs, such as teaching and health care. Additionally, women hold

6 A GII value of zero indicates full equality and a value of 1.00 represents the highest level of inequalities.
7 UNDP. 2015. Human Development Report 2015, Work for Human Development. New York. p. 64.
8 Ibid. Statistical Annex, table 5: Gender Inequality Index. pp. 224-227

fewer managerial positions. These forms of labour market stratification contribute to a pronounced gender wage gap. The United Nations Development Programme estimates that women's gross national income in the Central Asian countries ranges from as high as 67 percent to as low as 50 percent of men's estimated gross national income.[9]

Central Asia exhibits positive indicators in the areas of education and health. The countries have historically had high literacy and educational attainment rates for both women and men and, with some exceptions, they have maintained universal literary and near gender parity in access to primary and secondary education. However, concern has been raised about the decline in the levels of female educational attainment in Tajikistan and Uzbekistan, where increasingly, girls are not progressing beyond compulsory education. In every country, women are underrepresented in technical and vocational education, especially in technical fields that are associated with higher-paid industries. Reproductive health indicators for each country in the region have improved (for example, maternal mortality and abortion rates have decreased, and access to modern methods of contraception have increased) and reflect national commitments to safe birth outcomes for mothers and children.

Despite increased urbanization, Central Asia remains a region still characterized by its large rural population. Each country exhibits marked differences between their rural and urban populations, and positive developments, such as the creation of employment opportunities for women, scholarships for girls to enter higher education, the provision of health care and social services, are slower to reach women in rural locations. Populations in rural and remote areas also face daily difficulties such as deteriorating infrastructure (for example, limited access to safe drinking water, energy deficiencies and poor quality roads and transport), but women are particularly affected by the burden of collecting water and fuel, adding to their responsibilities for household management and child care. These time constraints limit women's opportunities to engage in formal employment, to undertake entrepreneurial activities, to pursue education or to gain adequate rest.

High poverty levels among women, the increase in female-headed households and a lack of employment opportunities for women in non-agriculture sectors are pressing issues for rural populations. These emerging trends are also linked to the high level of labour migration, which predominantly remains a male phenomenon (men migrate internally from rural to urban areas and abroad, mainly to Russia. Note that Kazakhstan is unique among the five countries. It is primarily a recipient country for labour migrants but it is also a sending country). The impact of labour migration on both men and the women that stay behind has not been comprehensively studied, but it is clear that household and gender dynamics are affected. When migrant men abandon farming and are absent from their communities, women are left to undertake the burden of agricultural work. For many households with successful migrants, remittance income has improved their living standards, but women who are considered abandoned by migrant husbands are at risk of extreme poverty and have had to assume many non-traditional roles, such as running family businesses or farms.

Women in Central Asia play a significant role in agriculture, forming nearly half of the agricultural labour force (the FAO estimates that women represent 41 percent of this labour force).[10] Both women and men working in rural settings undertake many different activities, including seasonal work, work on family plots and part-time jobs. However, women are less likely than men to be either self-employed or to earn wages from their work.[11] Women's work contributes significantly to agricultural production overall, but because it is often informal or unpaid (or paid in-kind), it remains largely invisible. As is the case in other regions of the world, female farmers in Central Asia have limited ownership of land and livestock and make less use than men of key inputs (for example, fertilizers and machinery), extension services or financial services.

While difficult to capture in statistics, gender stereotypes and patriarchal traditions are influential in Central Asia. These norms underpin many gender disparities, such as traditions of registering land and moveable property in men's names, an increase in underage[12] and unregistered marriages among girls, women's limited role in formal decision-making, and notions about "appropriate" roles for women and men. It is commonly thought that gender stereotypes are more influential in rural areas in Central Asia and that empowerment projects should target rural women in particular. At the same time, initiatives to improve rural livelihoods have shown that women, no less than men, have the motivation and desire to learn new skills, undertake small business ventures and adopt new technologies, such as green energy. In order to enhance the effectiveness of such initiatives, and overall national policy, greater understanding and improved analysis of rural women's capacities, as well as the impediments they face, are also needed.

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9 Ibid. Statistical Annex, table 4: Gender Development Index. pp. 218-223.
10 Rocca, V., Bossanyi, Z. & Di Giuseppe, S. 2014. Rural Women in Eastern Europe and Central Asia-A Focus on the Gender Gap in Agriculture. Rome, FAO Regional Office for Europe and Central Asia. p. 16.
11 Ibid. p. 18.
12 Defined as a marriage in which at least one of the spouses is under the age of 18.

B. National Statistical Offices in Central Asia: Capacities, Progress and Challenges

The Central Asian countries inherited the statistical systems that were in place during the Soviet period, but since independence, each national system has undergone significant reformulation. As part of larger gender mainstreaming strategies, some national governments have introduced legislation on gender statistics (Kazakhstan and Kyrgyzstan) and some NSOs have adopted internal programmes or mandates (Tajikistan). Each NSO has assigned a staff member as a gender focal point and / or has designated responsibility for producing gender statistics to an existing division.[13]

National and regional training initiatives on statistics have improved the general awareness of gender issues and capacity to produce gender statistics within NSOs. For example, the countries of this region regularly publish *Women and Men* compilations, maintain databases of gender statistics and publish some analytical materials, the majority of which are accessible online (Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan).[14] NSOs have conducted several rounds of demographic and health surveys, labour force surveys and living standards surveys that provide useful data disaggregated by sex and cross-tabulated with residence (rural and urban). In most of the countries, NSOs also compile and publish gender statistics collected by other government bodies, for example, data about female and male entrepreneurs operating licensed businesses and female and male land owners.

Despite substantial progress, the Central Asia region still faces challenges to developing gender statistics. Improving the gender sensitivity of data production remains a low priority for national governments, "particularly when compared with the demands for other types of statistical capacity building."[15] Moreover, NSOs in Central Asia lack influence and autonomy in their work. They are "reactive" agencies, meaning that "they can develop gender statistics only when given a specific order, or instruction (*zakaz*), from their governments."[16] When governments are not active in requesting gender statistics, these types of data are not produced. Improving this situation requires both raising the status of NSOs and also educating policy-makers and other data users about the possibilities of gathering gender relevant data.

Within the structure of the NSOs, the departments that are responsible for gender statistics lack clear mandates and have not received the necessary financial, technical or staff resources that the work of producing gender statistics requires. The task of producing such statistics is often assigned to a single gender focal point who has additional responsibilities and, therefore, can only play a limited coordination role within the NSO. Capacity building in gender statistics has not been widespread throughout national statistical systems. Training projects have focused to a greater extent on the central offices of NSOs, and statisticians at the regional and municipal levels have not benefitted to the same extent from capacity building in gender statistics. While data is collected by other state institutions, the government units that are responsible for gender statistics, for example within ministries of agriculture, are understaffed and experience a high rotation of specialists. In some cases, administrative data is sex-disaggregated (for example, land registries), but the responsible agency lacks an understanding of gender statistics and does not disseminate this data. In general, coordination and data-sharing between an NSO and other state agencies that collect data could be improved in countries across the region.

As a result of these limitations, gender statistics are most often contained in dedicated publications that are disseminated annually or less frequently than this. Time lags between the production of gender statistics and their publication and dissemination are common. (In several countries, the publication of *Women and Men* compilations has been supported by international donor funding, and continuity of resources has been an issue). Despite the availability of relevant data, "there has been only limited success in ensuring that sex-disaggregated data and gender perspectives are reflected in mainstream statistical publishing"[17] or in key sectors such as agriculture, labour, health and education. Limited attention has been given to tailoring gender statistics to different groups of users or to providing gender analysis. Data are seldom presented in a manner that facilitates comparison between women and men or that highlights the relevant gender issues (data are usually presented in table format rather than graphical presentation), and too often, sex-disaggregated data are presented without interpretation.

13 Abdurazakova & Gardner, 2013, p. viii.
14 See Kazakhstan: http://stat.gov.kz/faces/wcnav_externalId/homeGender?_adf.ctrl-state=dxmq7dw3i_50&_afrLoop=16557276319250965
Kyrgyzstan: http://www.stat.kg/ru/statistics/gendernaya-statistika/
Tajikistan: http://www.stat.tj/ru/gender/genderdoc4 and Uzbekistan: http://gender.stat.uz/ .
15 Abdurazakova & Gardner, 2013, p. ix.
16 Ibid. p. 64.
17 Ibid. p. ix.

2. Review of basic concepts

Before exploring the steps required for producing gender statistics, it is useful to review basic terminology and identify the distinctions between gender statistics and other statistics. This chapter responds to some common misconceptions about gender statistics and also reviews the different ways that gender statistics are used. This will provide data producers with useful insights concerning the selection of indicators and methods of presenting gender data.

A. What Are Gender Statistics?

We begin with a review of several core terms and concepts. Firstly, you will recall that the terms "sex" and "gender" are both used when describing the production of gender statistics because they are closely linked concepts. Nevertheless, it is important to have a clear understanding of how "sex" and "gender" differ because these terms are often confused, even by producers and users of statistics.

You may encounter the phrases "gender-disaggregated statistics" or "data disaggregated by gender", but these terms are, in fact, inaccurate and should not be used. Data, recorded in censuses, surveys or administrative records, can only be classified by the individual characteristics of the respondent – whether they are female or male – in other words, their sex.

Sex-disaggregated data is the accurate term used to refer to data that are tabulated and presented separately for women and men, or girls and boys. They are an essential part of gender statistics. When sex-disaggregated data are analysed, they provide information about gender disparities and the gender roles of women and men in a given context.

Keep in mind that neither women nor men are homogenous groups. Further disaggregation (for example, by age, level of education, place of residence, income, ethnicity, religion, disability status and sexual orientation) provides an even clearer picture of the relative status of women and men and is useful for identifying vulnerable groups.

Gender statistics are statistics that reflect differences and inequalities in the situation of women and men in all areas of life. Gender statistics are defined by their characteristics, discussed in Table 1 below:

> **Reminder!**
>
> *"Sex" refers to the classification of people as female or male based on biological differences that are fixed and unchangeable.*
>
> *"Gender" refers to socially constructed differences in attributes and opportunities associated with being female or male and the social interactions and relationships between women and men. These change over time and across cultures.*

Table 1. Characteristics of Gender Statistics[18]

Characteristic	Examples
(1) Data are collected and presented **disaggregated by sex** as a primary and overall classification;	Percentage of female farmers and male farmers that own tractors, mechanical ploughs and / or threshing equipment.
(2) Data reflect gender differences and issues;	A specialized survey on violence against women. Data on men's access to paid paternity leave.
(3) Data are based on concepts and definitions that adequately reflect the diversity of women and men and capture all aspects of their lives;	A time use survey that captures information about women's and men's specific roles in unpaid work (that would not be covered in a labour force survey).
(4) Data collection tools and methods take into account stereotypes and social and cultural factors that may induce gender biases in the data.	Ensuring that an agricultural census collects data not only at the holding but also at individual level, so that women's role in farming is accurately reflected.
(5) Data capture intra-household or intra-holding differences in ownership of assets, resource allocation, decision-making, and so on.	An agricultural census that collects data on both ownership and management of agricultural resources at individual level. A household survey with questions for women and men about who usually makes specific decisions within the household.

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18 FAO. 2014. E-learning course: Gender in Food and Nutrition Security and Policy and Legislation. Gender Statistics for Informing Policy and Legislation.

The FAO provides the following simplified, two-part definition of gender statistics:[19]

Producing gender statistics requires the systematic incorporation of a gender perspective at all stages of data production, analysis and dissemination, therefore, the NSO must be prepared to coordinate its work across and within departments. Even when an NSO has a dedicated gender focal point or gender unit, other departments will also be required to consider gender in their regular work. The production of gender statistics is part of a larger process of "engendering" statistical production and "mainstreaming" a gender perspective throughout national statistical production.

Gender mainstreaming refers to a process of assessing the implications for women and men of any planned action in all areas and at all levels. In this context, we are referring not only to producing specific data relevant to gender issues but applying a gender perspective throughout the stages of statistical production. This process means reflecting gender issues in *all* statistics and ensuring that *all* statistics on individuals are collected by sex so that disparities and variations can be analysed.

Gender statistics

- Sex-disaggregated data
- Gender-specific indicators
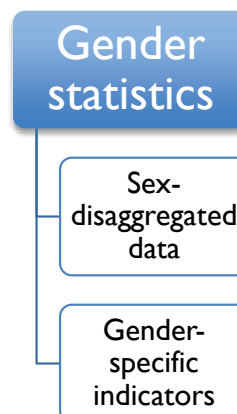
The concepts of gender mainstreaming and using a gender perspective are not new, but they can often seem abstract and difficult to apply in practice. Furthermore, the terms themselves may be unfamiliar to many people, and it is not uncommon for statisticians and data producers to have misconceptions about the requirements for developing gender statistics. Users of this toolkit may be asked to explain key terms or to justify the production of gender statistics to colleagues and others. Box 1 summarizes some common misconceptions about gender statistics and provides suggested responses.[20]

Box 1. Common Misconceptions about Producing Gender Statistics and Responses

All the data are sex-disaggregated, so we already have gender statistics.

> The production of sex-disaggregated data is only one component of gender statistics. To be more effective, the NSO should also produce statistics relevant to key gender issues in the country and that might affect only one sex (for example, data on the prevalence of early marriage among adolescent girls).

Adding a category for "sex" and changing our data-collection methods will be too expensive.

> Generally, producing gender statistics using existing instruments does not involve much additional cost. Often an extra question or a column indicating sex can be added to an existing survey. The main cost is incurred in producing additional tabulations, but in the digital era this cost is minimal. Furthermore, if a gender perspective is properly integrated across the work of the NSO and addressed from the early stages of planning, additional or unexpected costs can be avoided.

There are no gender specialists / focal points, and the NSO has too few staff to undertake gender analysis or produce gender statistics.

> Gender specialists and focal points are great asset to an NSO as they provide expertise and guidance. However, all staff should be trained in the core competencies of conducting gender analysis and producing gender statistics. In addition, the skills and knowledge needed to produce gender statistics are transferable to all statistical operations and will benefit the national statistical system as a whole.

Disaggregating data by sex will adversely affect the quality of the data.

> In fact, sex-disaggregated data are richer and more comprehensive than non-disaggregated data. Sex-disaggregated data can reveal critical information that would otherwise remain hidden. When data are produced from a sample survey the argument can be made that that sex-disaggregated data are less accurate because of increased sampling errors. However, the sampling error will increase less than 1.5 times, and in most cases, this potential increase of error will be far outweighed by the benefits obtained from the disaggregation.

Gender differences in agricultural labour (for example, women harvest crops but do not transport produce to markets) are normal because women are physically weaker and stay at home to care for children.

> The process of producing gender statistics does not require making value judgements about the roles of women and men in society. The tasks of the NSO are to produce data that accurately reflect the situation within the country, to compare data under relevant indicators and to highlight statistically significant disparities between the sexes. Policy-makers, researchers, gender advocates and other specialists will make decisions about whether any gender differences that are revealed through statistics are undesirable or problematic.

The ways in which gender statistics are conceptualized have changed over time, and there continues to be some misunderstanding about whether gender statistics are equivalent to "statistics about women" or whether they also require accurately capturing data relevant to men. Historically, demand for gender-sensitive statistics came from women's organizations and was part of a Women in Development approach. Thus, early efforts did consist of compiling data about women and presenting it in dedicated publications. However, today we understand that gender statistics cut across all fields and provide comparisons between the experiences of women and men.

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19 FAO. No date. Gender Equality in Agriculture: A Toolkit. Film 2: The Importance of Gender Statistics. (available at https://www.youtube.com/play-list?list=PLzp5NgJ2-dK4Ei-CY1kLCQwzuA5_iXbKo).
20 This information is adapted from United Nations Economic Commission for Europe (UNECE) and the World Bank Institute. 2010. Developing Gender Statistics: A Practical Tool. Geneva. p. 2.

B. Why Do We Need Gender Statistics in Agriculture?

Within the broader framework of international commitments on women's rights and gender equality, states are mandated to produce gender statistics. The UN Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) references the need for statistical information and sex-disaggregated data both in general and in relation to specific topics (for example, on women's unremunerated work in rural family enterprises).[21] Under a strategic objective to generate and disseminate gender data for planning and evaluation, the Beijing Platform for Action calls on national and regional statistical services to, "ensure that statistics related to individuals are collected, compiled, analysed and presented by sex and age and reflect problems, issues and questions related to women and men in society."[22] Producing sex-disaggregated data is itself a commitment, but, more importantly, gender-sensitive data are critical for the accurate monitoring of and reporting on progress towards other international commitments, such as those outlined in CEDAW, and development targets within the MDGs and in line with the SDGs.

The gender gap in agriculture is one of the more significant areas of gender disparity worldwide, but it is also one that has not been well documented. Traditional data-collection methods (for example, agricultural and population censuses, demographic surveys and labour force surveys) have been ineffective at capturing gender differences in access to key agricultural resources and services, in uncovering women's role in unpaid agricultural labour and household management, and in generating information about the particular constraints faced by rural women and men. In the agricultural sector, more emphasis has been placed on generating macro-level data. We do know, however, that despite the central role that women play in agricultural production, they face far more severe constraints than men. On average, women represent close to half of the agricultural labour force in developing countries (the FAO estimates this to be 43 percent), yet in all regions, female farmers, "control less land and livestock, make far less use of improved seed varieties and purchased inputs such as fertilizers, are much less likely to use credit or insurance, have lower education levels and are less likely to have access to extension services."[24] Gender statistics can help to make these gender imbalances visible.

For more information ...

FAO has produced three short films about gender equality in the agriculture sector. They can be accessed in English and Russian from the FAO YouTube site under the "Gender Equality in Agriculture toolkit" link.[23]

- *Gender in Agriculture and Rural Development (7 minutes)*

- *The Importance of Gender Statistics (5 minutes)*

- *Gender Indicators to Better Understand the Status of Rural Men and Women (8 minutes)*

FAO also hosts several e-learning courses.[25] FAO's course on Gender in Food and Nutrition Security Policy and Legislation includes two lessons on gender statistics: "Gender Statistics for Informing Policy and Legislation" and "Producing Gender Statistics".

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21 General Recommendations numbers 9, 12, 16 and 17 to CEDAW pertain to gender statistics.
22 Strategic Objective H.3.
23 https://www.youtube.com/user/FAOoftheUN/videos. Direct link: https://www.youtube.com/playlist?list=PLzp5NgJ2-dK4Ei-CY1kLCQwzuA5_iXbKo. Also http://www.fao.org/gender/gender-home/gender-resources/gender-videos/en/.
24 FAO. 2011. The State of Food and Agriculture. Women in Agriculture. Closing the Gender Gap for Development. Rome. p. 8.
25 Online courses are available at http://www.fao.org/elearning/#/elc/en/course/FG.

At the national, regional and local levels, responsive development strategies (for example, on agriculture, rural development, living standards improvement or food and nutritional security) must be based on evidence of the most pressing problems faced by the population. Because they expose critical gaps, gender statistics provide this evidence base. When gender analysis is applied, the repercussions of these gaps (for example, differences in productivity) are revealed. This information, in turn, should also inform the specific priorities and objectives outlined in national development strategies. Additionally, gender statistics are vital in the monitoring and evaluation of the differential impacts and the effectiveness of interventions, and they provide the evidence that is needed for reformulating or expanding national strategies and programmes over time.

Gender statistics function as a tool for gender mainstreaming, and they can assist governments and organizations in the development of gender-aware programmes and policies relevant to agriculture, rural development and poverty reduction. If initiatives remain gender blind, they can perpetuate or even exacerbate inequalities.

When a gender perspective is incorporated into statistical programmes, it enhances the overall quality of the data and provides important information that can be used to target persistent gender inequalities. FAO estimates that closing the gender gap in agriculture, by ensuring women have the same access to productive resources as men, could increase yields on women's farms by 20 to 30 percent, and that this could raise the total agricultural output in developing countries by 2.5 to 4 percent. Furthermore, "[i]ncreasing production by this amount could reduce the number of undernourished people in the world in the order of 12–17 percent."[26]

C. Who Are the Users of Gender Statistics?

Because gender statistics help to illuminate gender disparities, government policy-makers and planners in various fields are the primary audience. However, there is also a wider range of potential gender statistics users. Service providers rely on these statistics to identify gender-related issues to ensure the effective allocation of resources. Gender statistics also provide important quantitative information for analysts and researchers working in government bodies and state-supported think tanks, academic institutions and private sector organizations and associations (for example, business associations). Advocacy groups, especially women's organizations, rely on gender statistics to shed light on problems that are not readily apparent and to lobby for reform. (The case of domestic violence is a powerful illustration of the importance of gender statistics. Because it is a latent problem, law-makers in many countries have been slow to respond to the issue of domestic violence. By presenting data about victims of violence, women's rights groups have influenced legal change). For the general public, gender statistics help to dispel stereotypes and encourage debate on topics such as the changing roles of women and men.

D. Who Are the Producers of Gender Statistics?

It might appear obvious that statisticians working in the NSO are the primary producers of gender statistics in agriculture. Indeed, agricultural censuses and household surveys are some of the most important sources of data concerning the ownership of agricultural resources. However, other state institutions that collect data, generally in the form of administrative records, are also vital sources of information on agriculture and often have more up-to-date figures than a census that is typically conducted once every ten years. A range of administrative data, including the records of water users association membership, information on farmers who receive government subsidies from ministries of agriculture, land management and cadastre registers, the records of tax authorities and annual reports from microfinance institutions, can all illuminate issues such as access to irrigation, land ownership, farming enterprises and farmers' access to credit, providing they are disaggregated by sex. Validation workshops that were conducted to review an earlier draft of this toolkit, revealed that this type of administrative data is often not analysed, not usually publicly available to data users, nor is it routinely shared with the NSO.

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26 FAO, 2011, p. vi.

3. Producing gender statistics in agriculture: step by step

The core of this toolkit consists of guidance and recommendations on producing gender statistics, using methodologies and frameworks developed and piloted by FAO. The steps, or stages, are not rigid, and it may be necessary to revisit earlier stages later in the process. The methods described here are not intended to be undertaken by statisticians working in isolation. Producing gender statistics requires the engagement of the whole national statistics system and entails both consultations between data producers and users and collaboration within the NSO.

A. The Gender and Agricultural Statistical Framework

The Gender and Agricultural Statistics Framework (GASF) is a methodology to assist NSOs, and other data producers, in the generation of gender statistics for agricultural and rural policy analysis. It is a series of five distinct steps that we will explore in more detail in the following sections of the toolkit.

Figure 1. Stages of the Gender and Agricultural Statistical Framework

Identify relevant gender and agriculture issues

List relevant statistics and indicators

Identify and assess data sources

Produce and analyse data

Presentation and dissemination
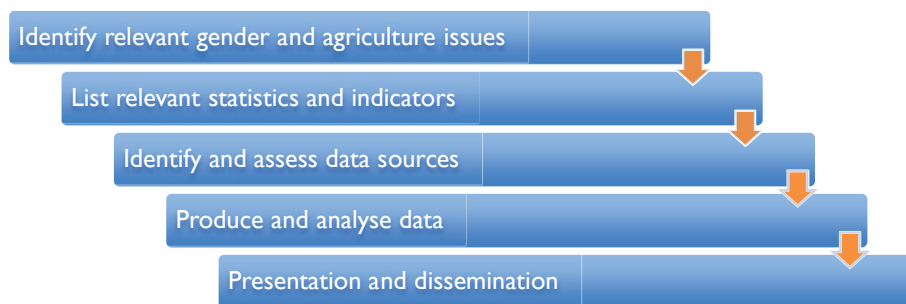
Each step of the GASF entails considerable coordination and effort, and so appropriate time and resources should be allocated. For example, gender analysis is usually conducted at an early stage, when identifying critical gender issues, and again when analysing the data in preparation for dissemination. Therefore, gender analysis is itself a multi-step process. In addition, because a single framework is insufficient for capturing the range of data needed to understand issues such as rural poverty and food insecurity, the GASF draws upon other frameworks and tools that are designed for gender and poverty analysis and agricultural statistics. These supplementary frameworks are referenced in this toolkit where relevant.

B. Preparing Your "Toolbox"

Producing gender statistics relies on many skills and approaches with which statisticians will already be familiar. However, several specialized "tools" are also required to ensure that a gender perspective is applied. Because data producers may have less experience applying these concepts, and because they are integral to the entire process of producing gender statistics, they are highlighted here as a preparatory stage.

Considerations when Getting Started

In order to produce relevant and accurate gender statistics in the area of agriculture, it is important that both data producers and data users have a clear understanding of core concepts, such as the meaning of specific terms and the units of analysis that are commonly used in statistical production. This toolkit makes use of specific terms relevant to gender mainstreaming and gender analysis, many of which are defined in the text. However, some readers may not be familiar with some important concepts and might find it helpful to review the definitions of these terms that are included in a glossary at the beginning of the toolkit.

In addition to terminology relevant to gender, generating statistics in agriculture requires the careful consideration of the appropriate unit of analysis and ensuring that there is a common understanding of its meaning. More complete definitions are included in the glossary publication, but several important concepts are discussed here.

Holding or household: These are standard units of enumeration in censuses and surveys. FAO recommends using the agricultural holding as the statistical unit but also acknowledges that in some cases data are most likely be recorded for rural households. Agricultural holdings and agricultural households are not equivalent: the holding refers to an economic unit, while the agricultural household refers to a group of people whose main income is derived from agricultural production. Agricultural households are both producers and consumers.27 It is important to differentiate between these two units of analysis because household members, especially women and children, contribute agricultural labour without being identified as the formal holder who manages agricultural operations.

The household head / agricultural holder: The household head or head of an agricultural holding is identified in statistics in order to capture information about who owns key assets and who makes decisions for the family (for example, about household purchases and investments, nutrition, health care, education, labour migration and how remittance income is used) or for the holding. Historically, surveys and censuses used the head of the household or the agricultural holder as the statistical unit, a method that can be problematic because it requires the selection of a single person. The concept of a household head assumes that there is a single decision-maker who represents the interests of the whole household. The primary decision-maker is presumed to be male, unless an adult male is not present. This approach may reinforce gender hierarchies, and there is a risk that households that do not fit this model will not be adequately represented in statistics. In many countries, survey respondents are still asked to identify a single household head, and this process can obscure the fact that various members of the household are responsible for decision-making or that there are multiple economic providers.

One alternative is to differentiate between **female and male-headed households**. FAO defines a female-headed household as one in which adult males either are not present or do not contribute to the household income. It is worth noting that not all female-headed households are equivalent: for example, they can include women with no male partner, divorcees and widows, women who have never married and multigenerational families. In countries, where data disaggregated by household head exist, male-headed households operate larger agricultural land holdings, on average, than female-headed households. Female-headed households are more labour and resource constrained than male-headed households because they have fewer members or include more children (and other dependants) than adults.28 Because such households cannot be directly compared, we should not attribute any disparities between female and male-headed households to the sex of the household head. Additionally, definitions of female- and male-headship differ across surveys and countries, therefore we cannot presume that comparisons will be accurate.

Several new concepts have been recommended in order to improve the gender responsiveness of household-level data collection, for instance, measuring **intra-household distribution** of asset ownership and decision-making and recording the relationships between each household member (the reference person approach and the relationship matrix approach).29 FAO endorses the intra-household distribution approach for the 2020 World Programme for the Census of Agriculture (WCA 2020).30 Intra-household analysis "does not treat the household as a single unit, but seeks to understand how multiple individuals within the household interact and affect outcomes."31 FAO also promotes the practice of co-registering property between spouses and thus recommends ensuring that statistics reflect the possibility of **co-registration**. Similarly, rather than collecting data for a single agricultural holder, it is also useful to identify **joint holders**, who could be a husband and a wife who share farm management.

There may also be instances when the **individual** is the appropriate unit of analysis. For example, collecting data through interviews with a farmer or a worker along a value chain would be a useful means of capturing information about individual choices, preferences or decisions.32

Agricultural research overlaps with analysis of rural livelihoods, and data about rural women and men can also shed light on gender differences relevant to agriculture (for example, educational levels of the rural population compared with the urban population, and demographic data about urban and rural areas). Agricultural assessments should also take into consideration farming activities that are not conducted in rural areas. In

27 Doss, C. & Kieran, C. 2014. Standards for Collecting Sex-Disaggregated Data for Gender Analysis: A Guide for CGIAR Researchers. CGIAR Gender and Agriculture Research Network. p. 3.
28 FAO. 2011. The State of Food and Agriculture, Women in Agriculture, closing the gender gap for development. Rome. pp. 24, 27.
29 See UNECE & World Bank Institute, 2010, p. 16.
30 See FAO. 2015. World Programme for the Census of Agriculture 2020 (WCA 2020). Volume 1. Programme, concepts and definitions. Rome.
31 Doss & Kieran, 2014, p. 3.
32 Ibid.

Central Asia, in particular, residents in both urban and peri-urban areas undertake small-scale farming for household consumption and also to sell for additional income. Therefore, the definitions of **rural, urban** and **peri-urban populations** are an important initial consideration in the production of gender statistics concerning agriculture.

The UN Statistics Division states that, "[b]ecause of national differences in the characteristics that distinguish urban from rural areas, the distinction between the urban and the rural population is not yet amenable to a single definition that would be applicable to all countries or, for the most part, even to the countries within a region. Where there are no regional recommendations on the matter, countries must establish their own definitions in accordance with their own needs."[33] Increasingly, the distinction between urban and rural areas, based on the assumption that urban areas provide a higher standard of living, has become blurred, especially as migration to cities and the development of informal urban settlements continues. Therefore, it is recommended that in censuses and surveys, the classifications used under the "traditional urban-rural dichotomy" (population density) be supplemented with other criteria, such as "the percentage of the economically active population employed in agriculture, the general availability of electricity and / or piped water in living quarters and the ease of access to medical care, schools and recreation facilities."[34]

The Challenge of Measuring Gender (In)Equality

One of the most challenging aspects of producing gender statistics is the fact that measuring gender equality and inequality, changes in women's empowerment and levels of women's and men's poverty, is particularly complex.[35] When producing gender-sensitive data, you will most likely be responding to an immediate demand, such as determining whether there have been improvements in rural women's access to credit. However, it is worth bearing in mind that gender statistics are also used to measure progress toward long-term goals, such as women's and men's access to economic resources on an equal basis. Gender statistics are used to improve our understanding of the different ways in which women and men are affected by issues such as poverty, food security and climate change, so that the respective policies can be made more effective and strategic.

Terms such as "women's empowerment," the "feminization of agriculture" and the "feminization of poverty"[36] are used by development specialists and gender experts to describe complex phenomena that require a multidimensional range of gender-sensitive indicators. For statisticians, such terms can appear imprecise and challenging. Regular dialogue between data producers and users can help to clarify the elements included in these concepts related to gender equality and, thus, precisely what should be measured. Such an exchange of information will assist in selecting indicators and the planning of appropriate data-collection methods. In all stages of the Gender and Agricultural Statistics Framework, we should ask ourselves whether definitions, statistical concepts, indicators or interpretation of the data are adequate for measuring the complex aspects of progress toward gender equality.

Eliminating Gender-Based Bias

You might recall that one of the characteristics of gender statistics is that they address the factors that can produce **bias in data collection**, because bias compromises the quality and relevance of the data. Gender bias in data collection refers to the underreporting or misreporting of demographic, social or economic characteristics associated with one of the sexes. Many of the frameworks and approaches that have historically been used in official statistics are based on assumptions about the activities that women and men typically undertake, or they are "blind" to the gender roles and specific experiences of women and girls, and men and boys. In the context of agriculture, gender bias means that women's contributions are often undervalued or even missing. For example, even though women undertake income-generating activities, such as gathering and selling local plants, processing dairy products or producing handicrafts, rural women typically refer to themselves as "unemployed," because employment is defined against a male norm of monetized and formal work. When we speak about eliminating gender bias, we often mean making women's contributions visible. However, attention should also be given to addressing any bias that could exclude information about men's experiences (for example, use of the term "housewife" or collecting information about fertility and contraceptive practices from women only).

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33 UN Statistics Division. Population density and urbanization. (available at http://unstats.un.org/unsd/demographic/sconcerns/densurb/densurbmeth-ods.htm).
34 Ibid.
35 Moser, A. 2007. Gender and Indicators Overview Report. BRIDGE Cutting Edge Pack. Brighton, Institute of Development Studies. p. 24.
36 Definitions for these terms are included in the Glossary for this toolkit.

Gender bias is almost never the result of deliberate efforts to obscure the data. Gender bias stems from cultural factors and commonly-held stereotypes that exist in every society. At times, we all unconsciously make decisions based on gender stereotypes, and so the challenge for data producers is to be vigilant about potential gender bias and to be proactive in addressing it, even if this means revising processes and procedures that have become standard in national statistical systems.

Gender bias can occur at any point in the process of producing statistics (from inadequate definitions to enumerators that have not been properly trained) and so reminders and guidance about ways of eliminating bias are included in the relevant steps described in this toolkit.

Gender Analysis

Gender analysis is one of the most important tools in the production of gender statistics. **Gender analysis** is a method which encompasses:

Critically examining the different roles of women and men (and girls and boys) in order to understand what they do, the resources they have and their needs and priorities in a specific context;

Searching for the underlying causes of gender inequalities; and Highlighting gender-specific variables in order to achieve positive change for disadvantaged groups.[37]

Gender analysis is commonly used by development planners and policy-makers at the early stages of policy and project design, and as part of monitoring and evaluation. A number of organizations have developed frameworks for conducting gender analysis, and data producers should choose a methodology that suits their purposes and is comprehensive. The Socio-Economic and Gender Analysis approach (SEAGA)[38] is one example of a methodology that guides users in their analysis of the socio-economic factors that determine women's and men's priorities and potential in order to better understand women's and men's capacities, vulnerabilities, resources and livelihoods. While the SEAGA approach is primarily used by development specialists in programme design and the delivery of humanitarian assistance, this methodology can also be applied to the process of identifying relevant gender issues, topics for investigation and gender-sensitive indicators. [39]

Notwithstanding the selected methodology, all gender analysis frameworks guide the user to consider a set of questions, divided by category (sometimes referred to as "domains"). Within each domain, a number of issues, which can be framed as sub-questions, are explored. The typical gender analysis categories, and what they entail, are described below:[40]

✓ Roles and Responsibilities (Who does what?)

This category refers to the ways in which men and women behave and spend their time, with a focus on where and when (for example, daily and seasonal patterns). This domain concerns the gender division of labour and distinguishes between **productive roles** (activities that produce goods, services and economic resources, such as paid work, self-employment or subsistence farming) and **reproductive** (non-market) **roles** (unpaid activities that take place at household level, such as child care and fuel and water collection). Women's and men's **community participation** (voluntary work at community level that contributes to the overall well-being of the community) should also be taken into consideration.

✓ Assets, Resources and Opportunities (Who owns what?)

This domain refers to access to livelihood assets and resources and the capacity to use them without constraint. The concept of "assets" broadly includes: **natural assets** (for example, land, forests and waterways); **physical**

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37 UNFPA. 2002. Methodological Guidelines for the Gender Analysis of National Population and Housing Census Data. p. 27.
38 The SEAGA approach was developed by FAO, the International Labour Organization (ILO), the World Bank and the United Nations Development Programme (UNDP).
39 FAO has produced a series of handbooks to assist specialists in operationalizing the SEAGA framework (available at http://www.fao.org/gender/sea-ga/seaga-home/en/). The Macro level handbook includes information on gender statistics.
40 Further discussion of the key concepts contained in the common domains of gender analysis can be found in resources such as, Derbyshire, H. 2002. Gender Manual: A Practical Guide for Development Policy Makers and Practitioners, London, Department for International Development (DFID) and Duban, E. 2012. Toward Gender Equality in Europe and Eurasia: A Toolkit for Analysis. Washington, DC, United States Agency for International Development (USAID).

assets (for example, housing, equipment and communications technologies); **financial assets** (for example, capital, income and credit.); **public services** (health, education and transportation); and **social benefits** (for example, social networks and value chains).

Access to key resources and assets can involve assessing ownership arrangements, as well as the ability to use them, as two separate areas of inquiry. On the one hand, there is a great deal of evidence that supports the connections between women's property ownership and social protection in providing, for example, the ability to weather economic shocks, protection from domestic violence and a means to enhance influence in the community. On the other hand, gender analysis in the agriculture sector should also be flexible enough to take into account women's use of important assets, even when they lack formal legal control over those resources. Central Asia offers a useful context here. In rural areas with high levels of labour migration, women have taken on much of the day-to-day management of smallholder farms. Yet, even in their absence, men retain the legal rights to agricultural property.

Gender analysis should also consider the **inter-relationships between women and men**, and careful analysis can provide insights not only into who has access to assets and resources, but also who exercises control over resources or decides how they will be used. Taking intra-household or intra-holding decision-making processes into consideration is especially important in the context of agriculture, where there are not only disparities in ownership of resources, such as land, livestock and machinery, but women and men perform different tasks (for example, women own and raise cattle and are usually responsible for milking cows, but men transport and sell milk at the market) and, therefore, manage such resources in different ways (for example, men may be the primary decision-makers about how income from the sale of milk will be spent or invested).

✓ Patterns of Power and Decision-Making (Who exercises control over which decisions?)

This category is closely linked with the previous one because it requires an understanding of whether women or men make decisions about, and have influence over, assets and resources. Gender analysis requires separate inquiries about access to assets and the exercise of control over their use. For example, in some Central Asian families, the extra income that women earn from selling home-produced goods is added to the household budget, and the head of the household (most often a male elder) makes decisions about how it will be used. Analysis should begin at the family / household level but should also consider the extent to which women and men are represented in decision-making at community and national levels.

✓ Knowledge, Beliefs and Cultural Norms (Who knows or believes what?)

In some gender analysis frameworks, this category concerns gender differences in formal knowledge (such as education, training or extension services) and also requires consideration of the ways in which women and men access information (for example, do women have access to the internet? Do men receive information by radio when working?). Within different methodologies, this area of inquiry also considers perceptions of gender identity and examines the beliefs and stereotypes about women and men, that is, what are considered "appropriate" male and female roles, qualities and goals.

You will have noticed that there is considerable overlap between gender analysis domains. For example, we could analyse whether women have access to extension services and training as an "asset", or whether they understand and use specific veterinary practices as "knowledge". When conducting gender analysis, we do not need to be overly concerned about the category of inquiry. The categories are general because they are used for gender analysis in any setting. Consequently, examples of areas for further inquiry that are relevant to gender analysis in agriculture, and that could be generated from the categories above, are listed below.

Table 2. Using Gender Analysis to Identify Priority Issues in Agriculture	
Core question	**Sample further questions**
Roles and Responsibilities *Who does what?*	• What is the share of women / men in the agricultural labour force? • How much time do women / men spend in agricultural labour, disaggregated by crop? • To what extent do female and male agricultural holders use hired labour? • How much time do women and men spend collecting and preparing water / firewood / other solid fuels for the household? • How is labour divided between women and men in fisheries value chains?
Assets and Resources *Who owns what?*	• What is the share of female and male agricultural holders by region? • How are women's property rights protected? • What assets do rural female-headed households and male-headed households have? • What kinds of remuneration do women and men receive, by labour status and by activity? • What is the average number of livestock by species for female and male agricultural holders? • What access rights do women and men have to forests and to non-wood products of forests (for example, honey or mushrooms)?
Power and Decision-Making *Who controls what?*	• What are the female and male membership rates in water users associations, and how are women and men represented in WUA decision-making positions? • How do women and men make decisions about using fertilizers? • What are the patterns of credit use in female- and male-headed households? • What impact do gender norms have on the ability of women to travel from rural villages to urban markets?
Knowledge, Beliefs and Norms *Who knows what?*	• What is the average educational level of female and male rural household heads? • How are women represented in agriculture departments in higher education? • What are the enrolment and completion rates of women and men in technical and vocational education in agriculture? • To what extent do female and male agricultural holders receive extension services? On what topics? • What kinds of knowledge do women and men have about the treatment of common livestock diseases?

Cooperation between Data Producers and Users

It is a general good practice to institutionalise regular cooperation and dialogue between data producers and users. Consultations can be useful both in the early planning stages and also when devising strategies for disseminating gender statistics. Regular meetings that include gender experts and policy-makers will increase understanding of critical gender issues in agriculture, while targeted focus groups can be used to test specific data collection methods.

Stakeholders can include: statisticians; representatives of relevant ministries and other policy-makers; representatives of civil society organizations (especially gender experts); researchers; academics; and staff of international development organizations working on agriculture or rural development.

With these basic tools in our "toolbox," we can now examine the process of producing gender statistics in stages.

C. Identify Relevant Gender and Agriculture Issues and Topics (Step 1)

The first step in producing gender statistics is the planning stage, during which critical gender issues relevant to agriculture and rural livelihoods and gaps in information are identified. Gender statistics should respond to the goals, objectives and targets of national policies and plans, including those that concern rural development and agricultural production, as well as those devoted to gender equality. Gender statistics should also be produced

in order to shed light on specific problems that are not adequately addressed in national policy. Both data users (for example, policy-makers and planners in relevant ministries) and data producers (statisticians) are involved at this stage because they need to reach consensus about priority areas and the objectives behind the production of gender statistics.

✓ Review national policies, plans and commitments

A starting point for identifying critical gender issues is to review and consult national policy and international commitments and targets, such as those contained in CEDAW, the Beijing Platform for Action and the SDGs. These documents can serve as road maps that highlight gender gaps in agriculture and for rural women. All of the Central Asian countries have national machinery for the promotion of gender equality and improving the status of women, headed by a dedicated state agency. Data users in other government bodies and NSOs should engage directly with these national mechanisms to improve awareness of emerging gender issues and to refine demands for gender statistics.

✓ Review current research, data and studies on gender topics

Global studies, such as FAO's 2011 *State of Food and Agriculture* report, can illuminate important gender gaps in agriculture that may not be clear from a review of national policy (or which may be insufficiently addressed in national plans and programmes). Studies at national and regional level are often more instructive in identifying issues that are too specific or localised to be covered by international human rights and development instruments. For instance, in Tajikistan, small-scale assessment projects are underway to improve the identification of gender issues in the pastoral and livestock sector. Notably, national gender machinery may serve as a bridge to organizations that are conducting research and projects to advance gender equality.

✓ Conduct gender analysis to identify key issues

Gender analysis should be used when identifying relevant research questions because it provides a structure in which to consider gender differences and gaps across agricultural subsectors and relevant to rural livelihoods generally. You will recall that gender analysis requires asking questions that are specific to the dynamics of rural farming households and agricultural holdings. At this stage, gender analysis questions are used to reveal where information and data are lacking. At a later stage, they will assist with decisions about what kinds of data are needed and what measurement instruments are appropriate.

Box 3. The Value Chain Approach

In addition to gender analysis, a value chain approach is increasingly being used to broaden our perspective on the gendered division of labour and to identify the nuances in access to resources that occur at different points along agricultural value chains, as well as the bottlenecks and constraints that women and men face. For instance, studies of grape / raisin and almond value chains in Afghanistan reveal that women are primarily involved in crop production in home orchards and as labourers for processing companies in peri-urban areas. They undertake watering, weeding, harvesting and post-harvest production (labour concentrated in the least valued parts of the chain), but they are almost absent at higher levels of the chain, for example, among traders, wholesalers, retailers and exporters.[41]

Statistics that focus on the measurement of labour at the end of the value chain (for example, the number of females and males heading processing enterprises) omit the subtleties of women's engagement in the sector. Similarly, in industries that are traditionally male-dominated, such as forestry or fisheries and aquaculture, women provide valuable labour at specific points in the value chain and this can be overlooked.

Analysis of agricultural value chains by itself may not necessarily incorporate a gender perspective. However, some regions have built up a substantial amount of useful experience conducting gender-sensitive value chain analysis. For example, the AgriProFocus network has produced several videos about their value chain work in Africa.

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41 See generally, World Bank (Agriculture and Rural Development Unit, Sustainable Development Department, South Asia Region). 2011. Understanding Gender in Agricultural Value Chains: The Cases of Grapes / Raisins, Almonds and Saffron in Afghanistan.
42 Videos can be accessed from the AgriProFocus website, available at http://agriprofocus.com/video-gender-in-value-chains.

✓ Hold consultations with stakeholders representing data producers and data users

Consultations, or workshops, offer valuable opportunities for data users and data producers to engage in dialogue about the results of gender analysis (or value chain analysis) and to come to a consensus on the priority gender issues in agriculture that require further investigation. Topics are generally selected for their policy implications and the extent to which they further the goals within national plans on gender equality.

It should also be kept in mind that not all stakeholders will be sensitive to gender issues. FAO practice has shown that dedicated training can be beneficial to stakeholders, either before or as part of such consultations. Additionally, training and moderation of consultations should include basic guidance on conducting gender analysis.

> *Reminder!*
>
> *Gender statistics should not be limited to issues of the family or other topics typically associated with women. Keep in mind that topics that may appear to be neutral, such as economic development, the environment or armed conflict, can actually have important gender dimensions.*

D. List Relevant Statistics and Indicators (Step 2)

Once you have identified priority gender issues, the next step in the process is to determine which data are needed to understand and measure the issues more effectively. Firstly, it is critical to ensure that there is agreement on central concepts and definitions and that they are free from bias.

> *Reminder!*
>
> *Dialogue between data producers and users can help to improve the accuracy of definitions and concepts. This type of dialogue also helps to strengthen the analytical capabilities of public officials, so that they can define their information needs and relevant indicators more accurately. Dialogue between NSOs and gender experts can improve the identification of inadequacies in standard definitions and statistical concepts.[43]*

✓ Evaluate the measurement of definitions and statistical concepts and address bias

Producing accurate gender statistics requires the use of concepts and definitions that "capture the diverse realities of women and men in the agriculture sector".[44] Therefore, we must evaluate existing statistical concepts and definitions in order to ensure that they do not inadvertently contain gender biases. Keep in mind that in order to eliminate bias, it may be necessary to develop new definitions or re-write existing questionnaires. Because the selection of data sources is closely connected to choices about measurement instruments, further information and guidance about addressing gender bias is provided in the next section (step 3) of the toolkit.

Once priority gender issues have been identified and statistical concepts developed, the question of what is to be measured can be answered. We can begin by reviewing and listing relevant statistics and indicators for production. FAO has proposed a set of nine groups of essential data items for gender-specific analysis of the agricultural sector:[45]

1. Agricultural population and households
2. Access to productive resources
3. Production and productivity
4. Destination of agricultural produce
5. Labour and time-use
6. Income and expenditures
7. Membership of agricultural / farmer organizations
8. Food security
9. Poverty indicators

Data items included in these groups cover issues regarding female and male roles, food security and women's empowerment. It is worth noting that the list of items included in these groups is not exhaustive.

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43 GTZ. 2008. Gender-differentiated Statistics and Indicators. p. 2. (available at http://www.oecd.org/dac/gender-development/44896238.pdf).
44 FAO, 2014.
45 The nine groups of data items form the basis of the FAO Agri-gender database, which is a compilation of questionnaire components and sample tables, corresponding to each group. The database is available at http://www.fao.org/gender/agrigender/agri-gender-toolkit/en/.

Because gender neutral indicators are often not sufficient to provide information about differences in the status of women and men in agriculture, FAO recommends the use of gender-sensitive and women-specific indicators. **Gender-sensitive indicators** include both *quantitative indicators* based on sex- disaggregated data – separate measures for men and women – and indicators that capture *qualitative* changes, for example, an improvement in female empowerment. There are a large number of sample datasets and gender indicators that have been developed by international organizations, and it can be useful to review these types of information to identify existing indicators and generate ideas about new ones. Some of the resources that are most relevant to agricultural statistics are reviewed here.

Core Set of Gender Indicators in Agriculture

Working in partnership with NSOs, Ministry of Agriculture Statistical Units, UN Women and UNECE, the FAO Regional Office for Europe and Central Asia has compiled a core set of 18 gender indicators in agriculture that responds to the data needs of this specific region. This set of indicators aims to standardize the collection of sex-disaggregated data so that countries in the region have comparable information in order to conduct gender analysis of the agricultural and rural sector.[46] The full set of indicators is provided in Annex 1 of this toolkit.

The core set of indicators represents the most essential and inclusive variables, that respond to the data needs identified by the countries in the Europe and Central Asia region. Of course, different countries and regions will also have different needs and requirements in terms of data items relevant to gender and agriculture. In fact, during the validation workshops, experts in each of the three countries identified areas in which additional information is needed and where the core indicators could be further refined for their national contexts. For example, in the Kyrgyz Republic, statisticians noted the need for additional indicators to core indicator 9 ("average area of holding by land use type and sex of the holder") to determine the area of any *uncultivated* land. Adding one or more sub-indicators on the size and causes of unused land within the holding is especially relevant in Central Asia, where a lack of access to irrigation, as well as other crucial inputs, limits farmers' ability to farm their land.

FAO recommends that supplementary indicators be used to provide more information about specific areas of agriculture.[47] Supplementary first and secondary-level indicators have been generated for several of the core recommended indicators and are available online.[48] Figure 2 is a simplified depiction of the way in which several sub-indicators can be generated to elaborate one of the core gender indicators.

Figure 2. Illustration of Supplementary Gender Indicators
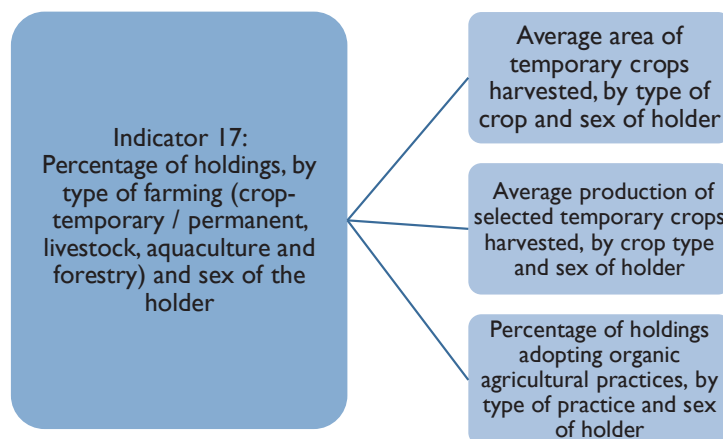
FAO, and many other international organizations, have developed specific databases and indicators that address particular aspects of gender and rural livelihoods. Reviewing these resources – several of which are summarized below – can aid the process of identifying and selecting relevant indicators when others are inadequate.

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46 Tayyib, S., Rocca, V., & Bossanyi, Z. 2012. Core Gender Indicators for Assessing the Socio-Economic Status of the Agricultural and Rural Population. FAO REU. (available at http://www.fao.org/fileadmin/user_upload/Europe/documents/WPW/gender_files/Gender_Indicators_en.pdf).
47 Ibid. p. 19.
48 See Ibid, pp. 27-32.

✓ Review other recommended indicators

The following suggested sources of indicators are useful for producing gender statistics in agriculture.

The Gender and Land Rights Database (GLRD)[49] uses five core indicators on land and agricultural ownership, disaggregated by sex. Further disaggregation is recommended for type of ownership and land tenure status, among others. Indicators on land value are included, and planned indicators will address distribution of plot ownership, by sex. The GLRD also incorporates *legal indicators* for gender-equitable land tenure through a specific Legislation Assessment Tool (LAT). The LAT is a useful resource for generating *qualitative* indicators about gender-based discrimination within national legal frameworks in relation to land rights.

The **Rural Livelihoods Monitor (RLM)**[50] is a FAO project to create a repository of indicators on livelihoods, welfare and well-being in rural areas according to standard templates. Indicators are organized along the following dimensions: social capital; natural capital; knowledge capital; access to rural infrastructure; human development; and access to social protection. Although not all of the statistics are disaggregated by sex at the individual level, to date the RLM contains around 40 indicators disaggregated by sex and, in some cases, also by age (for example: "the ratio of females to males in agricultural cooperatives (real number)" and "female (male) child labour for cropping activities, share of family labour for cropping activities, ages 5-17").

FAO has updated the Women's Dietary Diversity Score (WDDS) with a new indicator: the **Minimum Dietary Diversity – Women (MDD-W)**.[51] This indicator is a simple yet valid indicator on the quality of women's diets, with a specific focus on measuring how women are meeting their micronutrient needs in resource-poor areas. The MDD-W indicator has a threshold of at least five food groups out of ten, based on the assumption that women who are consuming foods from five or more food groups have a greater likelihood of meeting their micronutrient needs than women consuming foods from fewer food groups.[52] FAO and NSOs are currently piloting the MDD-W in several countries, including Tajikistan.[53]

FAO has drafted guidance on how to develop effective and relevant gender-sensitive indicators for monitoring gender-related changes in **natural resources management**.[54] Information is provided about the factors to consider when selecting indicators, along with six sample indicator domains from which gender-sensitive indicators can be developed (for example: Indicator 5: "women's and men's [indigenous] knowledge associated with the management of natural resources").

The United Nations Statistical Commission has identified a minimum set of **quantitative gender indicators** in five fields (economic participation, educational, health and related services, human rights of women and girls, public life and decision-making).[55] These indicators could be made more relevant to the production of gender statistics in agriculture if they were further disaggregated by location, for rural and urban women and men.

The **Women's Empowerment in Agriculture Index** (WEAI) is a tool for measuring the empowerment, agency and inclusion of women in the agriculture sector, in an effort to identify ways of overcoming persistent obstacles and economic constraints. The WEAI is a survey-based index, developed in 2012 by the U.S. government Feed the Future initiative on global hunger and food security. It has been used extensively since its creation. The index consists of 10 equally weighted indicators, grouped into five domains (production, resources, income, leadership and time). This tool measures women's empowerment relative to men's within the household. Because it generates "scores" that can be compared over time, the WEAI was used in the Feed the Future initiative to monitor programme performance and to assess impact.[56] More recently, practitioners have revised the WEAI in order to respond to challenges encountered in the field and to streamline the tool. This has resulted in the new **Abbreviated WEAI** (A-WEAI). The A-WEAI retains the five domains on empowerment but reduces the number of indicators, making it faster to administer than the original version. The full A-WEAI survey module is accessible online, alongside an instructional guide, training materials and an enumerator manual.[57]

49 Available at http://www.fao.org/gender-landrights-database/data-map/statistics/en/.
50 A more detailed description of the RLM project is available at http://www.fao.org/documents/card/en/c/ef407a41-5fc3-457d-9794-57088c049be9/.
51 At the time of writing this report, standalone guidelines for the MDD-W have not yet been completed. Guidance on the assessment of the Household Dietary Diversity Score remain valid and is available at http://www.fao.org/3/a-i1983e/index.html. Further information about the MDD-W indicator prepared by experts is available at http://www.fantaproject.org/monitoring-and-evaluation/minimum-dietary-diversity-women-indicator-mddw.
52 Briefing paper, Introducing the Minimum Dietary Diversity – Women (MDD-W) Global Dietary Diversity Indicator for Women, Washington, DC, 15-16 July 2014.
53 See TajStat, 06 May 2015 (available at http://www.stat.tj/en/news/280/).
54 The guidance is available at ftp://ftp.fao.org/docrep/fao/010/a0521e/a0521e00.pdf.
55 The minimum set of gender indicators is available at http://genderstats.org/.
56 Guidance, training materials, datasets and a manual are available at http://feedthefuture.gov/lp/womens-empowerment-agriculture-index. International Food Policy Research Institute. 2012. Women's Empowerment in Agriculture Index. Washington, DC.
57 Materials are available at http://www.ifpri.org/topic/weai-resource-center.

It may be the case that consultations between data users and producers will reveal that there is a need for country-specific indicators that are responsive to a particular or a local gender issue (for example, in the Kyrgyz Republic, the NSO compiles data on the number of women and men applying to crisis centres and *aksakal* courts - community councils of elders in rural areas.) Stakeholder workshops can also be an effective means of drafting appropriate gender indicators.[58]

Good practice example

Girls' early marriage has been identified as a particular concern in Turkey, and girls from poor families and who work in seasonal agriculture are significantly more likely to marry before the age of 18. The Turkish 2013 Demographic and Health Survey included several indicators to measure women's status, such as differences in age and education levels between spouses, further disaggregated by urban and rural residence, region and wealth quintile (expressed as "% distribution of currently married women by interspousal age and education differences").[58] Findings relating to large differences in age and education levels between spouses suggest that there may be differences in relative power.

In contrast, countries in Central Asia measure the average ages of females and males when they marry. This type of sex-disaggregated data indicates that, on average, women marry at a younger age than men. However, unlike the indicator used in Turkey, the data do not show the relationship between female and male marital ages, therefore no inferences can be made about women's status within the family.

E. Identify and Assess Data Sources (Step 3)

Once the relevant indicators have been listed, the next stage in producing gender statistics involves the assessment of national sources of data. This process can be envisaged as two discrete steps: (1) an inventory to identify available data sources and (2) an evaluation to assess the quality of the existing data sources, including whether they are applicable to the gender issues being studied and whether there are any data gaps. In terms of step (1), whether the relevant data are available or accessible will depend on sex-disaggregated data having originally been "a) collected, b) tabulated, and / or c) published at the time of the census or survey."[59] Assessing the quality of the data will require the consideration of factors such as whether there was any bias in how the survey or census was designed and conducted.

Figure 3 below illustrates the possible outcomes, including what steps to take when data are available from existing sources and when they are not.

Figure 3. Possible Outcomes when Identifying Data Sources

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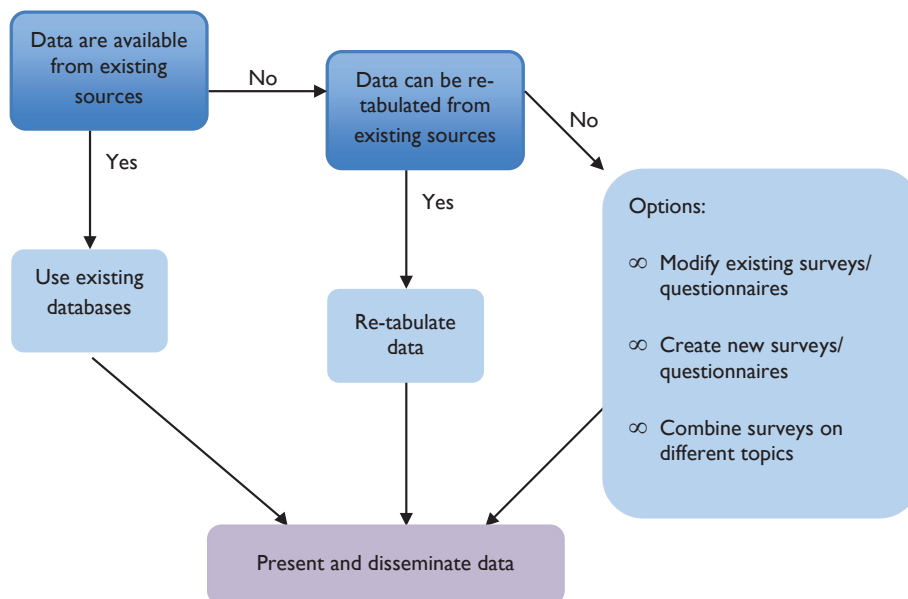
58 Hacettepe University Institute of Population Studies. 2014. 2013 Turkey Demographic and Health Survey. Ankara, Hacettepe University Institute of Population Studies, T.R. Ministry of Development and TÜBİTAK. p. 178.
59 FAO. No date. Developing a Gender and Agricultural Statistics Framework for the Asia-Pacific Region. Asia and Pacific Commission on Agriculture Statistics, 23rd Session. p. 5.

It is quite likely that you will uncover gaps in the data. Therefore, when compiling an inventory of data sources, you should also keep in mind the ways in which existing sources could be improved and made more gender relevant.

Inventory of Data Sources

The inventory of data sources relevant to agriculture and rural livelihoods should begin with **agricultural censuses and surveys**. There are many ways that an agricultural census can be made more gender sensitive. FAO has developed detailed methodological guidance on introducing gender considerations in agricultural censuses, as well as other types of surveys.[60] Some of the basic concepts are included in this toolkit, for example, choices about the statistical unit, addressing gender bias and the provision of training for staff.

Data from other sources will also be useful and, in many cases, will be necessary to fill gaps in information. Other data sources to consider include:

- Population and housing censuses

- Living Standards Measurement surveys

- Demographic and Health surveys

- Labour force surveys

- Household budget surveys

- Business / enterprise surveys (especially when private farms / enterprises and individual

  entrepreneurs in agriculture are included)

- Food consumption surveys

- Time use surveys

- Administrative records

- Specially-designed surveys

Each of these data sources use specific methodologies and indicators, and while some produce sex-disaggregated data and gender-relevant information more readily, none are inherently more or less gender sensitive than others. The degree to which a particular data source provides gender relevant information largely depends on effective planning, design and data collection methods. Table 3 summarizes some key points to consider when assessing whether particular data sources can produce gender-relevant data, or ways that they could be improved.[61]

It is important to keep in mind that defining some gender indicators may require combining data from more than one source. It is especially important to be aware of the possible links between agricultural surveys and other surveys, so that data can be cross-referenced and statistical analysis can be conducted.

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60 For example, FAO. 2001. Agricultural Censuses and Gender Considerations - Concept and Methodology. (available at http://www.fao.org/do-crep/003/X2919E/x2919e00.htm)
61 See also, Manual on Integrating a Gender Perspective in Statistics http://unstats.un.org/unsd/genderstatmanual/Default.aspx and UNECE & The World Bank, 2010, pp. 24-32.

Table 3. Overview of Data Sources and Relevance to Measuring Gender Inequalities

Data source	Relevance
Agricultural census/survey	• An important source of data about various aspects of agricultural production, such as composition of farm labour and gender differences in management of agricultural holdings, ownership of agricultural assets, access to services and agricultural practices. • Because they are usually conducted once every decade, agricultural censuses are more suitable for providing baseline data than for monitoring purposes. However, if properly designed, they can provide good sampling frames for subsequent agricultural surveys which can be used on a more regular basis to collect detailed and subtle information (for example, agricultural work at secondary and tertiary levels, seasonal work or thematic surveys with a gender focus). • The new WCA 2020 recommends a specific theme of items - "Intra-household distribution of managerial decisions and ownership on the holding" - for exploring gender roles in the management of holdings and ownership of agricultural assets such as land and livestock.[62]
Population / housing census[63]	• Provides a set of basic data on population and living conditions in rural areas disaggregated by sex. • Can be used to study particular subgroups from a gender perspective (for example, elderly men or adolescent girls in rural areas) or issues (for example, labour migration patterns). • Census data can be combined with other data sources to improve gender analysis. • Should be specially designed to avoid gender bias and to ensure that questions include gender-relevant concepts.
Population-based/ household surveys (demographic and health, labour force participation, etc.)	• Can cover multiple or discrete topics. • Because they are often conducted on a recurring basis, they can be useful to show trends over time or differences within and between population groups. • Generally flexible to allow the addition of short modules of specific questions to obtain gender-relevant information (for example, adding a module on domestic violence to a demographic and health survey, or asking about parental leave or gender-specific barriers to employment in a labour force survey).
Business / enterprise survey (when agricultural enterprises are included)	• Can be a specially designed survey or based on business records. • Most useful when sex-disaggregated data are collected about business owners, managers and employees in enterprises of all sizes and as individual entrepreneurs. • Can provide information about the types of agricultural businesses women and men operate, their success rates and working conditions for female and male employees. • Should cover agricultural enterprises, by type, size, location and value (and include micro businesses where women are usually overrepresented).
Time use survey	• Essential for estimating women's and men's participation in unpaid work and informal labour, as well as the distribution of household responsibilities and child care, and the balance of work and free time, among others. • Provides insights into the quantity and type of labour for household production by crop, location and type of management. • Critical that data are disaggregated by sex and also by, for example, age, education, labour force status, location and household composition. • Important that definitions of activities be sufficiently precise to support gender analysis (for example, time dedicated to "domestic chores" is too vague; instead it could include cooking and laundry, work typically performed by women, or home and car repairs, work that men usually undertake). • Methodologies should consider measuring how children and older people spend their time, as well as seasonal variations in time use. • A well-designed survey can be standalone and sufficient for gender analysis. On the other hand, time use surveys can also be used to complement population surveys.
Administrative records	• Effectiveness of administrative records depends on how data are collected at national, regional or sub-regional levels and recording the sex of the individual. • Can produce information relevant to women's economic empowerment (for example, records on social benefits, pensions, taxes, business and land registration). • Can produce information about sex and status (for example, birth and marriage registration, school enrolment and registered unemployed). • Law enforcement and justice system records can provide information about protection of the rights of women and girls. • Because their primary purpose is administration, they may be insufficient for gender statistics.

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62 See FAO, 2015.
63 UNFPA, 2002, has further guidance.

Assess Data Quality

After determining the availability of data, the next step requires ensuring that data sources are appropriately gender sensitive and reliable. Assessing data quality refers to considering whether and how the data may have been affected by bias inherent in survey concepts, definitions, methods of measurement and collection or coverage.

✓ Address gender biases

Both key concepts and methodologies should be carefully examined, even if they are ones that have been used for a number of years. Using inaccurate concepts risks producing data that are not reflective of the real situation of either women or men. This process is equally important when *designing* new and specific surveys to address data gaps.

At this point it can be useful to test yourself by considering the following statistical concepts that are "standard" in many censuses and surveys. *Are they adequate for fully representing women's role in agriculture? In what ways could concepts be redefined to better address women's experiences? What kinds of data-collection methods or instruments should be used?*

In addition to relying on internal analysis of data sources, the United Nations Economic Commission for Europe (UNECE) recommends using **focus groups** as a low-cost method to test "whether data item concepts and terminology are appropriate and relevant for both females and males (or other subgroups of respondents)".[64]

Focus groups, comprising both men and women, are most effective when held at an early stage in the process of devising (or revising) a survey, in order to determine how participants understand the selected concepts, whether the concepts are appropriate for their different experiences, and to test the definitions and phrasing used in the questionnaire. Feedback from focus groups "can assist collection designers in developing questions that will work effectively and minimize gender bias."[65]

Box 4. Test yourself

Identifying Bias in Statistical Concepts and Methodologies[66]

"Economic contribution", "Employment"

These are very common concepts used in statistics, but do they exhibit gender bias? Traditionally, economic contributions and employment are defined in connection to the monetized and formal work sectors (for example, contributions to GDP). Can these definitions accurately capture women's and men's unpaid domestic work, child care activities, care for the elderly, household repairs, community or volunteer work?

- **How could such concepts be defined to capture the full provision of goods and services in a country?**
- **What kinds of methods or instruments could be used to gather comprehensive data about all kinds of work that women and men perform?**

"Female share in agricultural work"

Is this definition gender relevant? Consider how the definition would be used to measure women's work in agriculture. What activities can be defined as "agricultural work"? Would women's activities in kitchen gardens that produce food for household consumption be included in this concept?

- **How could this concept be defined to avoid confusion and misrepresentation of the type of work that women typically carry out?**
- **What kinds of methods or instruments could be used to measure the kinds of agricultural work that women undertake (including informal and unpaid work)?**

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64 Ibid. p. 18.
65 Ibid. p. 19.
66 The information is adapted from the FAO's E-Learning Course (FAO, 2014).

"Agricultural holding", "Household"

Consider how households vary and how the type of household will impact on women's access to resources, their rights to and decision-making about resources and the role they play in agricultural production. Does the concept of "household" assume that all members have the same rights and that there is an equitable distribution of resources?

- **Is the agricultural holding or the household the appropriate unit of measurement for the gender issue that is being addressed?**
- **How could data collection be improved to better understand the gender differences in access to productive resources within households? Could data be collected at the level of individual women and men within the household?**

"Head of household"

How is the head of household defined? Is it the oldest man in the household? The oldest employed man?

- **Would this definition be adequate for capturing households where the woman is the main earner and the man is the main carer? Or multi-generational households living together?**

Data about male-headed households (MHH) and female-headed households (FHH) are more useful measurements, but they can also obscure important gender differences. Consider what constitutes a "MHH" in a particular country? Does it include all households in which women are married to men and may also be wage earners? What about a "FHH" - are these households that are lacking in adult men / male wage earners?

- **How could these concepts be defined to take into consideration data about women within MHH?**
- **Could data be collected at the level of individual women and men within the household in MHH, FHH and also joint households?**

"Decision-making"

Indicators about decision-making can be a useful means of measuring women's and men's empowerment within the household. Consider the ways in which a particular person is defined as a "decision-maker." Identifying which person in the household functions as the decision-maker is based on a range of factors (including gender discrimination, and also, for example, custom and socio-cultural attitudes) but households rarely make this kind of formal designation.

- **Would the concept of a single household decision-maker accurately reflect the different decisions that women and men make within a household or those which are taken jointly?**

Research shows that what household members say about decision-making does not always reflect what happens in practice. For example, male heads of households tend to report that they are the sole decision maker concerning agricultural production (due to gender norms and societal expectations) and they may overlook the decisions that are made entirely by their wives (for example, in relation to selling small quantities of home-produced goods) or jointly with other family members.

- **Can the concept of decision-making be expanded to include indicators on decision-making about specific activities (for example, types of crops to be planted and care of poultry) rather than general decision-making for the household or the holding?**

F. Produce and Analyse Data (Step 4)

The fourth stage of the Gender and Agricultural Statistical Framework requires translating "raw data" (meaning basic information about women and men contained in databases) to produce gender statistics that can be more easily understood by data users. Stage 4 can be conceptualized as two separate steps: (1) producing data and (2) analysing the data.

Depending on the results of assessment carried out earlier, the production of data may entail the re-tabulation and re-processing of data from previous censuses and surveys. Re-tabulation is the simplest means of producing sex-disaggregated data, but it should only be undertaken if the data sources are unbiased, or if the resulting statistics can be presented with a clear discussion of potential biases within the data and how this might affect their accuracy.

Alternatively, new data collection processes may need to be planned, designed and implemented (which could entail adding modules or questions to existing survey instruments or the creation of entirely new instruments). It may be possible to combine surveys on different topics to address more complex gender issues, but the surveys must cover the same time period and context.

Developing new data collection methods for gender statistics does not differ from the process of producing any other statistics, with the exception that a gender perspective should be incorporated throughout.

Planning New Data Collection Methods

At this point in the process of producing gender statistics, you will have identified gaps in data and will be aware of the problems, errors or weaknesses in previous data collection processes. Therefore, addressing these deficiencies should be the focus of the new design. Careful attention should be given to the following steps:

✓ Developing (or modifying) gender-specific statistical concepts and definitions that reflect the diversities of women and men and the gender issues in question

✓ Choosing the measurement instrument, sample size and defining the units of enumeration (for example, individual[67], household or holding) and the units of analysis

Keep in mind the gender-related information that is needed when selecting the population group, economic unit and sample size, as these factors will affect the type of gender analysis that can be undertaken at a later stage.

✓ Determining the design and data item content of the questionnaire

Developing the conceptual framework is one of the most important steps in the questionnaire design process. Traditional questionnaires may not be adequate for capturing information about the range of activities that female and male agricultural holders undertake. For example, in validation workshops conducted in both the Kyrgyz Republic and Tajikistan, experts noted that handicraft production is a supplemental source of income for many rural women (and some women also process agricultural products, such as wool or silk, to use in making handicrafts). However, economic data do not capture this contribution to rural livelihoods, and there are no official registries of women and men engaged in handicraft production that are used to generate gender statistics. Adding questions about these types of activities to an agricultural census is one method for obtaining such information, as demonstrated in the most recent agricultural census of Sweden. When Sweden conducted the census in 2010, questions were included about a range of other gainful activities undertaken by the holding including: tourism, handicraft production, processing of farm products, renewable energy production, wood processing, aquaculture and contractual work.[68]

This example also illustrates how dialogue between data producers and users, especially data users that work with rural populations or on gender issues, can focus attention on important gaps in existing data collection methods. **Advisory groups** can provide recommendations on the design (or re-design) and content of survey questionnaires. **Pilot tests** and **field tests** can be conducted prior to the survey launch in order to assess the appropriateness of the selected questions and the questionnaire design. Field testing will help to confirm that key definitions and terms are clear for both female and male respondents, and this process will also assist in estimating response rates, sample error, sample sizes and population variability.

✓ Selecting and training data collectors, enumerators and field staff

Effective data collection relies on skilled enumerators and interviewers, and so staff should be carefully recruited. Enumerators, interviewers and supervisors should all receive training on the gender-related issues that they may encounter in the field (including, ways of asking questions, understanding the different responses of women and men, avoiding gender stereotypes and specific data collection methods that should be employed, such as how

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67 In the WCA 2020, FAO recommends collecting data at the individual level to elicit information about the role of women and men in agricultural production, decision-making and ownership of assets and information.
68 See EuroStat Statistics Explained, Agricultural Census in Sweden, available at http://ec.europa.eu/eurostat/statistics-explained/index.php/Agricultural_census_in_Sweden.

to record household members / the household head). Some types of surveys, for example those focusing on gender-based violence, require particular sensitivities and more extensive training. In addition to training, staff should receive comprehensive manuals with relevant guidance and information.

✓ Choosing methods for data collection and processing

The choice of data collection mode should take into consideration the fact that methods vary in their effectiveness in reaching women and men (for example, telephone interviews using landlines would not reach households relying solely on mobile phones and could exclude working men and young adults who are less likely to be in the home).[69] Likewise, the suitability of specific topics and survey questions should be considered (for example, there are privacy and confidentiality concerns when asking sensitive questions).

✓ Screening for potential gender bias in questionnaires or during the survey process

Remember that the kinds of gender-specific deficiencies that exist in previous surveys and censuses are very often the result of either gender bias in data collection or the use of gender blind approaches (which can also introduce bias). In the same way that we need to be aware of potential gender bias within data sources, we also need to be aware of how bias may appear in re-drafted questions or the development of new surveys. Table 4 describes some of the typical causes of gender bias, related to each of the considerations listed above, and, in response, suggests measures that can be taken.

Table 4. Common Causes of Gender Bias and Solutions	
Causes of gender bias	Measures to avoid gender bias
Questions are worded vaguely, ambiguously or they reinforce stereotypes	• For example, an agricultural census / survey may use unclear questions about work on the holding so that "work" is construed to mean only remunerated employment. • Questions should be simple, clear and use everyday terms. • Key words that apply only to one sex (for example, "housewife", "shepherd", "fisherman", "husbandry", "man hours") should not be used.
Communication problems	• Occur when respondents do not understand a questionnaire because the terminology is too technical or complex. • The impact may be greater on female interviewees than on males. • Field testing of draft questionnaires and use of focus groups can help to gauge how questions will be understood so that they can then be adjusted. • Interviewers / enumerators should be given explanatory notes to help with terminology.
The wrong respondent is selected	• Occurs when the selected respondent is not in the position to report correctly on household members and employees in a business or agricultural holding. • For example, male respondents may report that women are economically inactive, even though they engage in informal or unpaid work on an agricultural holding. • Skilled enumerators should be selected and they should receive comprehensive training and guidance in gender issues that they may encounter in the field.
The household (holder) head is inaccurately used to represent decision-making	• Refers to identifying the person who has the dominant position in the household / holding in making decisions relating to the family / holding. • Use as an indicator for decision-making can be misleading and may not represent how decisions are actually made.[13] • Some methods for selecting the head or decision-maker can introduce bias if they are based on assumptions that the household (holding) has a hierarchical structure. • Other methods may be inadequate for capturing information about how decisions are actually made in the household (holding), for example, is there a primary decision-maker, or are decisions shared?
Problems with enumerators / interviewers	• Enumerators can introduce bias in the way that they ask questions (due to personal prejudices, poor training, carelessness). • The sex of the interviewer can be critical, because women are more likely to disclose certain types of private information to female interviewers and men to male interviewers (for example, about sexual health or family planning practices). • Both women and men should be recruited as staff.
Obscuring the truth; under-reporting	• In some cases, respondents deliberately give incorrect information because of societal gender norms or for other reasons including, fear of disclosing the truth or suspicion about the survey itself (for example, a man may deny that his wife works on an agricultural holding; or a woman may deny that she has experienced domestic violence). • Some respondents under-report because they do not fully understand the questions or do not remember information. • Women's domestic chores and work in household plots (kitchen gardens) is frequently underreported due to widespread conceptions that these activities do not constitute "work" (see above, regarding the wording of questions). • Enumerators should be trained in the use of probing questions and prompts to assist respondents.

69 UNECE & The World Bank, 2010, p. 22, p. 24.
70 Information adapted from UNECE & The World Bank, 2010, p. 18 and materials from
   World Bank Gender Statistics Training Workshops, Session 4 (Rwanda 2014).
71 UNECE & The World Bank, 2010, p. 73.

Good practice example

Many household surveys collect asset data, but it is uncommon for this type of data to be collected at the individual level. Without individual-level data, however, gendered patterns of asset ownership and the gender gap in wealth are obscured. The Gender Asset Gap Project (initiated in 2009 and conducted in Ecuador, Ghana and India) is a response to this problem. Through field work, the project demonstrates that it is possible to avoid some of the bias inherent in household surveys and to collect asset data at the individual level. The good practices developed under the project involve four basic interventions that can be used within household surveys:[72]

Including at least one additional question in existing surveys, such as, "who are the owners of agricultural lands?" or "whose names are listed on ownership documents?"

Interviewing two respondents. Adding an additional respondent provides a fuller picture of asset ownership in the household and addresses the possibility that household members may not agree about ownership.

Asking about specific and additional assets based on the policy issues being addressed (for example, it could be useful to track ownership of "female" assets, such as jewelry, when determining women's access to collateral for loans).

Carefully defining ownership and asking questions about specific rights over the asset. For example, in Tajikistan, there is no private land ownership, and individuals have the right to use land through land tenure. Therefore, questions about women's and men's rights to sell or lease rights to land plots are an important inclusion in a survey.

Processing Data

Consideration needs to be given to potential gender bias that can arise at the stage of **data editing** and **imputation**. It is recommended that subject matter specialists, who are also trained in gender issues, formulate rules for data editing and data imputation to avoid assumptions based on gender stereotypes.

Data Analysis

The level of data processing and analysis required depends on the type of statistical products that the NSO is preparing. For instance, disseminating data from single sources, such as a census, would typically use a table format that requires minimal processing and analysis beyond disaggregating the data by sex and ensuring that gender topics are represented in the collection. When presented in this way, specialists can access these basic data and undertake their own analysis. In contrast, analytical reports or articles, especially those concerning narrower gender topics or those aimed at a specific audience, require much more detailed analysis and planning.

Data analysis is a critical part of producing gender statistics. Here, attention is usually focused on the use of particular measures to present the data in a way that illustrates critical gender disparities and conveys a particular message. In contrast to the presentation of statistical information, data analysis is a means of "telling the story" about the data that are presented.

When initially analysing the data, you can consider the following measures:

- Cross-tabulation
- Basic descriptive analysis

Sex-disaggregated data should be **cross-tabulated** with other variables (such as age, rural / urban residence, educational attainment and labour force participation) in order to produce gender statistics that illustrate the differences between females and males and among various sub-groups, especially those that are particularly vulnerable or not visible in general statistics. The United Nations Statistics Division points out that while data are increasingly disaggregated by sex, this breakdown often remains the *only* variable presented,[73] and the complexities of gender equality are obscured. For example, gender gaps in the labour market (such as the segregation of women and men in specific fields and the low numbers of women in management positions) are partially determined by the gender gap in education. However, this phenomenon would only become clear if data on occupation were disaggregated by both sex and level of educational attainment.

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72 Doss, C., Deere, C. D., Oduro, A. B. & Swaminathan, H. 2013. Collecting Sex-Disaggregated Asset Data. The Gender Asset Gap Project Policy Brief Series: No. 4. Bangalore.
73 Information available at http://unstats.un.org/unsd/genderstatmanual/Descriptive-analysis-of-data.ashx.

It is important to be aware, however, that your analysis may not necessarily be well served "by disaggregating the largest possible number of cross-tabulated data by sex."[74] Not every disaggregation will yield useful data. There is a risk that an excess of information will be generated, and users will have difficulty interpreting it. A particular disaggregation should be chosen with a "definite purpose" in mind and the disaggregation should address a hypothesis or theoretical question.[75] It is important to choose variables based on the specific context and gender issues under consideration (for example, does the issue concern adolescent girls, girls in rural locations or girls in rural locations from a minority ethnic group or with disabilities?).

Descriptive analysis of data involves, "the calculation of simple measures of composition and distribution of variables by sex, and for each sex, that facilitate straightforward gender-focused comparisons", between different groups in the population.[76] Consider the following simplified example from Kazakhstan on the way in which data can be presented in various ways. *Which data are the most useful in terms of gender analysis?*

Example			
Data on the number of small and medium-sized enterprises (SMEs) in Kazakhstan as of January 1, 2015.[77]			
Number of SMEs - total	Including Household (private) farms	Number of SMEs headed by women - total	Including Household (private) farms
926 844	**15 2697**	**378 855**	**28 258**
Presented in another way: Women head almost half (41 percent) of all SMEs, but they are underrepresented in commercial farming. While 16 percent of all SMEs are farms, only 7 percent of women-owned SMEs are farms. Women-headed farms represent less than a quarter (18 percent) of all household farms.			

Gender experts can be valuable in the data analysis process by assisting in the interpretation of data, especially when the differences observed between women and men are statistically significant.

Measures of **composition or distribution** include: **proportions and percentages; ratios; rates; medians and quintiles; and means and standard deviation**. Each measure serves a specific purpose in terms of data analysis. These measures should only be calculated for large datasets (for small numbers of observations, actual numbers are preferred).

Proportions and percentages are used to compare women and men, and to indicate the ways in which women and men are distributed across a category (for example, the proportion of women compared with the proportion of men in rural employment), or sex distributions within a single category (for example, the percentage of parliamentarians who are female or male, indicating a gender gap). Because the sum of percentages of women and men always equals 100, only one indicator is typically presented in a table or graph (in the case of gender statistics, this is usually the share of women).

Ratio is a single number that expresses the relative size of two numbers (for example, the sex at birth ratio is a common measure that expresses the number of male births per 100 female births; in other words, the ratio demonstrates the degree to which one sex outnumbers the other).

Rates measure the dynamics of change or depict incidence: the number of events that occur within a given time interval, divided by the number of members of the population who were exposed to the risk of the event during that time interval (for example, fertility rates and maternal mortality rates are common measures used in gender statistics. The rural outmigration rate, disaggregated by sex and age, is another example).

Median and **mean** are measures of central tendency, while **quintiles** and **standard deviation** are measures of dispersion. They are not often presented in gender statistics concerning agriculture but can be useful in illustrating concepts such as the distribution (median or quintile) of wealth across a specific population, the average (mean) time women spend on unpaid domestic work and the average (mean) size of land owned by women and men. Sex-disaggregated data across distributions (for example, quintile distribution of income) can reveal very specific patterns and areas of inequality, and can also help to differentiate between women and men in different groups (here, different income levels).

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74 UNFPA, 2002, p. 43.
75 Ibid.
76 Information available at http://unstats.un.org/unsd/genderstatmanual/Descriptive-analysis-of-data.ashx.
77 Data from the Committee on Statistics of Kazakhstan, available at www.stat.gov.kz, "Гендерное равенство в экономике."

Combining data from different sources can be an effective tool in producing gender statistics. In the example from Kazakhstan above, the full dataset compiled by the NSO included data from three sources: the Statistical Business Register, the Tax Committee of the Ministry of Finance and the Agricultural Statistical Register. When combining data sources, it is essential to determine whether the data are comparable in terms of coverage, time period, definitions and concepts. Although data may appear to be comparable, classifications could have been adjusted or data-processing practices may have changed over time. Such variations are especially problematic when different sources are combined (for example, if data are missing for certain years) but variation can also occur within the same source over different years. For instance, in several Central Asian countries, the average wages for men and women are calculated from enterprise surveys. Due to methodological changes, data for the agriculture sector may also include wages in forestry and fisheries / aquaculture in a particular year, while in another year the data may not be aggregated. Although it could be possible to draw some general conclusions about wage gaps when there are significant changes in remuneration, the data from different years cannot be directly compared or combined.

It is best to carefully check the documentation and metadata for each data source and, where possible, consult with specialists in the field as they may have additional information about the availability and comparability of the data, as well as any special considerations.[78]

Using Gender Analysis to Interpret Data

The data analysis processes described above result in sex-disaggregated statistics. This level of analysis is the typical stopping point for many statistical publications, in which data are presented in tables, as percentages or ratios, with little or no interpretation or contextual information. This kind of presentation may be sufficient for gender specialists, but most data users, especially if they are not familiar with statistics, will have difficulty fully understanding "women's and men's different needs and aspirations as well as the power differentials and relational factors that explain women's and men's access to resources and services."[79]

In order to produce *gender-relevant statistics*, gender analysis must be applied. This is a deeper level of multivariate analysis that refers to uncovering patterns and associations between and among the variables, and interpreting the relations that might not be visible when using sex-disaggregated data alone. Gender analysis provides a broader context for understanding the gender disparities that are revealed by the data and suggests the possible consequences of gender gaps for women and men. For example, if they are disaggregated by sex, the records of microfinance organizations provide accurate information about the number of female and male borrowers in a given period, but these data do not explain the gender-based constraints that women face in accessing credit (such as their lack of collateral or unfamiliarity with loan processes). Likewise, school enrolment ratios for girls and boys do not provide insights into how gender stereotypes impact on children's absenteeism from school. Girls may be absent from school because they are caring for younger siblings or due to underage marriage, while boys may have lower school attendance because their families rely on them to contribute income.

You will recall that gender analysis is usually guided by a framework consisting of several areas of inquiry. Once you have processed the data, you will already have some answers to core questions about gender roles and who has access to, and control over, which key resources. The processed data (in tables, charts or graphs) can be enhanced with **descriptive information** that is based on the gender analysis questions and answers.

Including descriptive information to provide a picture of gender constraints and opportunities generally requires reference to other data sources and to **qualitative studies**. Qualitative data are usually collected through research methods such as focus group discussions, interviews and social mapping. Qualitative data are especially valuable in making the data more understandable to a wider audience. When considering other sources of data, keep in mind the theoretical basis of your analysis (for example, what is your hypothesis about the gender disparities revealed by the data?) and the key information that you want to convey.

> *Reminder!*
>
> *The "depth" of gender analysis will depend on the particular gender issue, the type of statistical publication (for example, whether for a general publication or for a more comprehensive study of a particular topic) and the dissemination plan. Gender specialists can recommend appropriate gender analysis tools and frameworks.*

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78 Information available at http://unstats.un.org/unsd/genderstatmanual/Descriptive-analysis-of-data.ashx.
79 UNFPA, 2002, p. 34.

Consulting Other Sources of Data in Gender Analysis

The following are simplified data from a *fictional* 2014 agricultural survey conducted in the country of "Alorra":

Crop	Area planted (%)		Harvest (kg per hectare)	
	male farmers	female farmers	male farmers	female farmers
Wheat	54.1	72.4	2 197	2 024
Cotton	18.2	14.3	6 131	5 212
Rice	9.9	7.2	2 564	2 761
Maize	4.2	2.4	4 422	3 544
Tobacco	3.5	--	6 443	--
Potatoes	5.2	3.1	634	652
Vegetables	3.0	0.6	349	170
Fruit trees	1.9	--	120	--

Consider the additional types of data and qualitative information that are listed, below, in the column on the left. *Would they be useful to consult during gender analysis?* Check your answers using the right hand column.

The above data also disaggregated by market-oriented crops and subsistence crops.	**Yes.** Additional data about whether women and men are growing high value crops or subsistence crops – and related data about a lack of diversity in crops – could enrich the analysis.
A monograph describing the history of agricultural industrialization in Alorra and the roles of female and male farmers.	**Yes.** This research could provide insights into present-day gender differences in farming practices (for example, the fact that former state programmes promoted cash crops among male farmers).
Findings from focus groups conducted with female and male farmers about issues they find most critical (for example, female farmers: a lack of fertilizer, poor seed quality, limited local markets. Male farmers: high taxes on land, a lack of fertilizer, unpredictable weather patterns).	**Yes.** This information could suggest that the smaller harvests of female farmers may be related to their limited access to certain agricultural inputs.
Research about women's traditional knowledge of seed handling and conservation.	**Yes.** This information could be relevant, especially for studies on, or analysis of, agricultural biodiversity.
A nationwide public opinion poll in which 63 percent of respondents stated that they consider farming to be "male work".	**No.** While gender stereotypes can have negative or positive impacts, the links between societal perceptions of female and male occupations, gender patterns in crop agriculture and differences in crop yields for female and male farmers is very tenuous here and is most likely irrelevant.

G. Presentation and Dissemination (Step 5)

For statisticians and data producers, presenting and disseminating gender statistics is the last stage in the process. However, for many data users, their first encounter with gender statistics will be through publications or databases produced by the NSO. You will recall the reasons that we produce gender statistics: to raise awareness among stakeholders (specifically, to focus the attention of policy-makers and others on priority gender issues), to support further research and to contribute to policy reform. To achieve these goals, the data must be presented clearly and in a format best suited to the audience.

How the data are presented will influence the extent to which data users will understand the information and apply the findings in their work. It is very useful to consider data presentation and dissemination in parallel, since the choice of presentation method is dependent on the audience and how the gender statistics will be disseminated.

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80 Hedman, B., Perucci, F. & Sundström, P. 1996. Engendering Statistics: A Tool for Change. Stockholm, Statistics Sweden. p.79

Effective Data Presentation Strategies

Although different datasets will be used to illustrate a range of gender issues, the overall objectives in presenting gender statistics are the same: to clearly highlight gender disparities so that policy-makers can prioritize and address them; to facilitate comparisons between women and men; to convey the key points that result from data analysis; to reach a wide range of data users; and to encourage further research and study.[81] Ultimately, gender statistics are the evidence base that policy-makers must rely on to effectively address the needs of women and men.

> *Reminder!*
>
> *Keep the target audience in mind when determining how best to present the data.*
>
> *Tables and graphs should provide clear messages, attract readers, encourage further analysis and stimulate demand for more information.*[80]

Tables are a basic form of data presentation. They can be effective in two formats: small tables that illustrate points made within the text of a publication; or large and comprehensive tables used in annexes. Explanatory information (definitions or metadata) should be provided in notes immediately below the table. If data are missing, or you want to draw attention to a specific relationship between the data, formats other than tables should be selected.

Other forms of data presentation, including, **graphs, charts, maps** and **infographics,** can be very effective for the visual presentation of specific types of gender data. Table 5 below highlights several ways of presenting data and some of their key features. Samples of the kinds of graphs and charts that are described below are also included in Annex 3.

Table 5. Features of Data Presentation Tools	
Type of Graph or Chart	**Features**
Line charts	• Show trends over time. • Show differences across various groups. • Generally, a line chart begins with zero in the y-axis of a variable, unless this makes it difficult to directly compare women and men.
Bar charts (vertical or horizontal)	• Easy to understand visually because the longer the bar, the greater the value. Bar charts are best for data that do not vary too greatly in magnitude. • Clustered bar charts (separate bars representing women and men) allow for easy comparison of the sexes. • Horizontal bar charts are preferable when there are many categories or categories with long labels.
Stacked bar charts	• Illustrate the distribution of variables within a female and male population and are useful for datasets with two or more categories. • Effective for categories that total 100 percent. • Stacked bar charts are less effective when there are too many segments in each bar or the categories are too small to be visible.
Pie charts	• Can be used as an alternative to stacked bar charts to illustrate the percentage distribution of qualitative (categorical) variables. Categories must total 100 percent. • They are useful for presenting direct comparisons between women and men because the sizes of the "slice" of pie are easy to compare visually. • Pie charts can be difficult to read when many categories are included. Generally, when there are more than five categories, a bar chart should be selected.
Scatter plots	• Used to show the relationship between two variables, which are plotted against each other in order to illustrate patterns in how they are grouped. • They are useful when many data points need to be displayed that cannot easily be presented in bar charts or tables, for example, data related to regions or sub-regions in a country. • They are also useful for identifying and analysing outliers in the data.

81 World Bank Gender Statistics Training Workshops, Session 6 (Rwanda 2014).

Thematic maps	• Data overlaid on maps show the geographic distribution of a particular variable. • They can be used to illustrate regional clusters within a country or isolated differences in regions that differ significantly from the norm. • Maps are useful for advocacy purposes and are readily understood by the general public.
Infographics (information graphics)	• Infographics are graphic illustrations of data; they are increasingly used for mass communication. • A weakness is that they can over-simplify data and so are of limited use to researchers or specialists. • However, they do convey information efficiently to a wide audience and can be used for advocacy and promotional materials.

Remember that data presented in table, chart or graph form are used to enhance the descriptive text. Statistical compilations that consist exclusively of tables, charts and graphs should be avoided. Selecting the appropriate method for presenting data will depend on the points and key messages that are conveyed in the text. Some useful tips for creating user-friendly presentations include:

✓ Each table, chart or graph should relate directly to the gender issue that is being described in the text. Choose the presentation method that best conveys the results of gender analysis.

✓ Limit the number of messages that are conveyed by each table, graph or chart.

✓ Charts, graphs or tables should be designed to be clear to all data users. Take note of the following recommendations:

- Use a simple visual layout.
- Use clear, simple and accurate headings and labels.
- Provide a legend.
- List data sources.
- Facilitate comparisons between women and men (for example, place data side by side; and use consistent colours and placement to indicate women and men throughout the presentation).

✓ Consider the audience, and remember:

- Round numbers are more easily understood by the general public.
- It is more difficult to compare percentages using decimals, so round off percentages to integers.
- Labels for values presented inside charts or graphs can be distracting and are often not needed. However, if no values are presented in the accompanying analytical text, they can be added to a chart or graph to provide fuller information to the reader.
- Totals are often unnecessary to capture differences between women and men and so can be omitted.

A Note about Metadata

Metadata are an important part of presenting gender statistics because they help to make the information clear to data users and also explain the limitations of the data collection methods. Because gender statistics are often produced by combining several sources of data, metadata are key to explaining how the data were collected, processed and analysed. Metadata consist of general information about the data, and can include basic features about the data source, the data collection methodology, notes about data quality and any relevant country information. There is no single standard for what information should be contained in the metadata, but the following appear most consistently in gender and development indicators used by various international

organizations (for example, the UN, OECD and World Bank):

- Source
- Indicator name
- Relevance to gender issues
- Contact point or lead agency (for the data producer)
- Statistical concepts and classifications used (definitions)
- Statistical population and scope of the data
- Method of processing, computation and analysis (methodology for obtaining data)
- Problems or limitations of the data
- General comments (recommended uses, quality comments)

Metadata should be included with gender statistics when they are presented and disseminated. This can be done within printed publications, as an annex, or with links to electronic databases. In some countries, NSOs include links to metadata alongside online presentations of gender statistics. The website for the Turkish Statistical Institute, for example, includes a search function of metadata.

Figure 4. Website of the Turkish Statistical Institute[82]
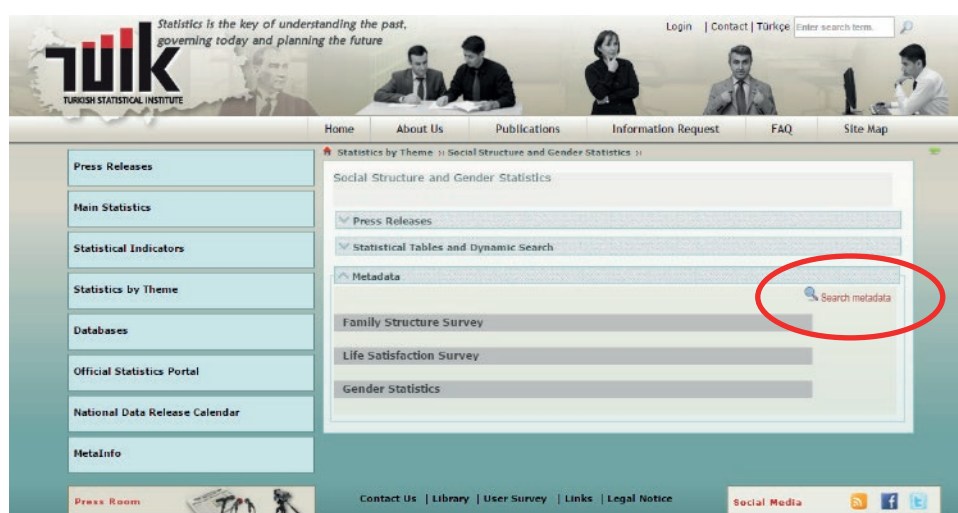
Dissemination of Gender Statistics

The final stage in producing gender statistics is dissemination or the communication of key information that the data reveal. Attention should be paid to the target groups (the core audience of data users) and a plan for "marketing" the particular type of publication.

The audience for gender statistics is diverse and most likely to consist of a number of local institutions, as well as international development organizations. In order to better understand the audience for gender statistics, and their needs, it can be useful to informally map the typical **target groups** that exist in the country.

When considering gender statistics in the context of agriculture and rural development, target groups can include the following:

- Government ministries or agencies (for example, ministries of agriculture, labour and social protection and parliamentary committees)
- Government bodies for the advancement of women or promoting gender equality (for example, Committees on Women and Family Affairs)
- Women's organizations (NGOs or women's factions of political parties)
- Research and advocacy institutions with a focus on gender, agriculture, rural development, environmental protection and climate change, among others
- Libraries and information centres
- Media outlets (note that in addition to mainstream media, there are specialized gender news listserves and information networks, some of which also have a regional focus)[83]
- International development organizations, especially those with gender equality mandates (for example, UN Women and UNDP)

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82 The page is available at http://www.turkstat.gov.tr/PreTablo.do?alt_id=1068.
83 For example, the Women's UN Report Network, available at http://www.wunrn.com/.

✓ Remember to engage with data users

Understanding the needs of data users enables NSOs, and other data producers, to respond through appropriate dissemination plans and communication campaigns. Some data users will be from ministries or government bodies that make requests for specific gender statistics. In this case, the ways in which the statistics will be disseminated may already be clear. It is nevertheless recommended that **focus group discussions**, **workshops**, **seminars** or even **surveys**, be used to identify other possible data users and to determine how to promote statistical publications among this target audience. The topics of gender, agriculture and rural

livelihoods should be included in more general meetings about developing NSO work plans. Alternatively, a discussion of data presentation and dissemination methods can be included in preliminary meetings to identify priority gender issues and data gaps (step 1 of the Gender and Agricultural Statistical Framework). Standing **advisory groups**, which ideally have an interagency composition, including members of government bodies and civil society, can also play a role in elaborating work plans and budgets for the production of gender statistics, and identifying priority materials to be disseminated.

Types of Statistical Products

In the same way that data can be presented in a number of forms (such as charts, tables or infographics), choosing the type of statistical product or publication should take into consideration the complexity of the issues, the audience and ways of presenting the data in a comprehensible manner. Some of the most common statistical publications and products, in both print and electronic form, include the following:

- Women and Men publications (annual compilations of sex-disaggregated data)
- National statistical publications (results of specific data collections, censuses and surveys, ideally, produced in a gender-sensitive manner)
- Analytical reports or articles (products that result from gender analysis, have a more limited scope, and are policy-oriented, for example, gender profiles, fact sheets and electronic bulletins)
- Online databases
- Microdata files relating to specific data collections
- Dedicated gender portals on websites
- Brochures, flyers and posters for a general audience

Publications dedicated to gender statistics, such as *Women and Men* compilations, are useful ways of presenting diverse data about gender disparities in a single resource. There is a risk, however, that such publications become the *only* dissemination method, as has happened in some countries. It is better practice to include gender statistics across a range of statistical publications. In this way, a wider audience of data users, especially among policy-makers, will be exposed to gender-specific data and information. In the same way that gender concerns are mainstreamed in the operation of producing statistics, gender statistics themselves should be incorporated into official publications of the NSO.
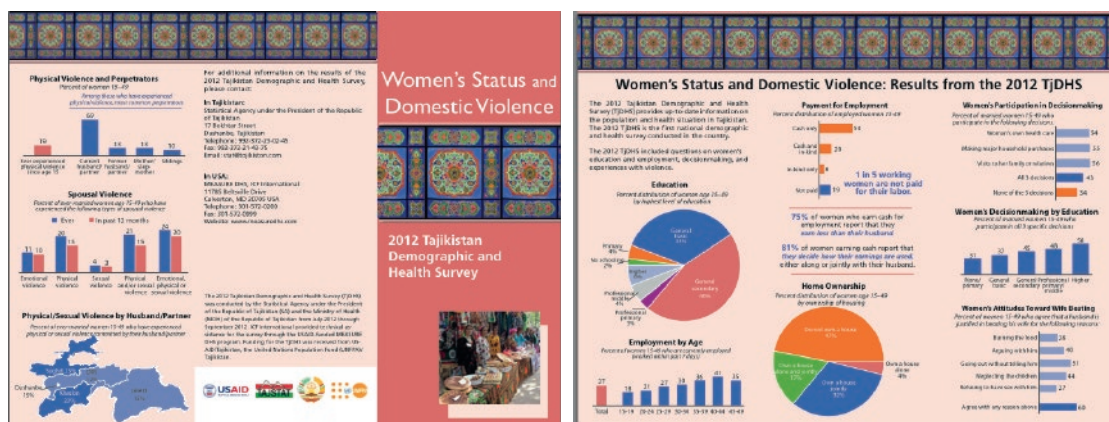
Disseminating gender statistics using parallel and multiple methods is recommended. For example, gender relevant data from an agriculture or population census can be highlighted in single topic fact sheets or analytical reports that are published at the same time as the full census report. These shorter analytical publications are useful when communicating information about trends towards gender equality with the media or the general public.

Figure 5. Tajikistan DHS, 2012 - Women's Status and Domestic Violence[84]

In addition to printed publications (distributed in hard copy), dissemination of gender statistics through online methods is cost-effective and efficient. Full publications can be made available to download from the NSO website, and making databases accessible online means that more detailed information can be provided, and that the data can be updated more regularly than is possible with annual or biennial compilations. The countries of the Central Asian region have online databases of gender statistics that, for the most part, reflect the MDGs and several other key indicators. For example, the National Statistical Committee of the Kyrgyz Republic has compiled 56 easily accessible gender indicators in the form of "dynamic tables".

Figure 6. Website of the National Statistical Committee of the Kyrgyz Republic[85]
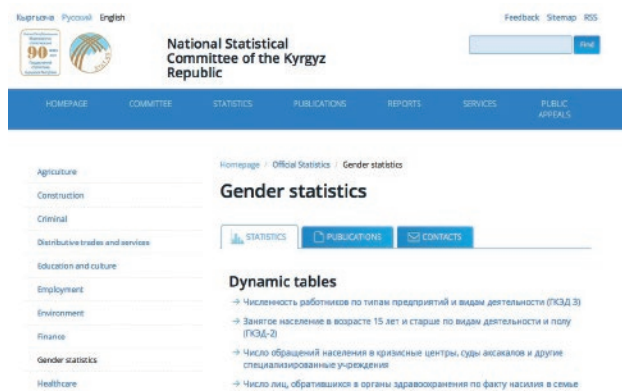
Several international organizations, such as FAO, UNECE and the World Bank, have interactive databases that allow users to generate their own data based on a number of indicators and using specific years.

Communication Strategies

Communication strategies are closely linked with dissemination. However, while dissemination is concerned with the provision of data, the focus of communication is on "building relationships with users and encouraging use of gender statistics."[86] Dissemination is the final step in the process of producing gender statistics, but communication with data users should, ideally, take place throughout the production process.

Unfortunately, gender statistics are frequently underused. Many NSOs have limited printing budgets, and they produce only a small number of publications containing gender statistics. Therefore, dissemination is very

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84 All materials about the Tajikistan DHS for 2012 are available at http://dhsprogram.com/what-we-do/survey/survey-display-384.cfm.
85 The website of the National Statistical Committee of the Kyrgyz Republic is available at http://www.stat.kg/.
86 UNECE & The World Bank, 2010, p. 129.

limited. Conversely publications may be available, but the data are not fully analysed. Even comprehensive online data may not be accessed if users are unaware of its existence. NSOs can make gender statistics more visible in a number of ways. For example, seminars and press conferences present useful opportunities for publicising new publications and data. When the NSO is part of the national machinery for gender equality, or even when it is not, it is possible to cooperate with national committees on women's affairs or gender equality to disseminate information about gender statistics through their networks.

Direct communication with the media (for example, through press releases or by submitting analytical articles), as well as with potential data users (for example, through bulletins or newsletters) are also useful ways of reaching a wider audience.

Effective communication requires that NSOs have a plan for promotion and marketing that includes attention to key partners and data users, clear responsibilities for communications, the development of media contacts and a system to monitor and analyse feedback from customers.

Good practice example

*In 2011, the National Bureau of Statistics of the Republic of Moldova conducted a General Agricultural Census. One of the important outputs of the process, in terms of gender statistics, was the publication of a separate 14-page booklet dedicated to **Women and Men in Agriculture of the Republic of Moldova** (2014). The booklet compiles sex-disaggregated data from the agricultural census, presented using a range of tables and charts with explanatory text. One of the reasons for highlighting the gender-specific challenges that women and men face as farmers, entrepreneurs and agricultural workers, is to promote "gender-aware decisions about the sector, leading to more effective, efficient and sustainable solutions".[87]*

The publication of Women and Men in Agriculture was part of a larger campaign to publicise both the census taking process and the results, through a variety of media, including posters, leaflets, video clips and press conferences.[88]

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87 National Bureau of Statistics of the Republic of Moldova. 2014. Women and men in agriculture of the Republic of Moldova. (available in Romanian, Russian and English at http://www.statistica.md/newsview.php?l=en&idc=30&id=4533).
88 Information about the 2011 Agricultural Census, including publications of the results, methodological tools and promotional materials are available at http://www.statistica.md/pageview.php?l=en&idc=352[in English] and http://www.statistica.md/pageview.php?l=ru&idc=352[in Russian].

4. Tips on adopting a gender sensitive approach

The success of any effort to produce gender statistics depends on the degree to which the NSO has adopted a gender sensitive approach in its operations. Many of the good practices that make up a gender sensitive approach have already been described in detail in this toolkit. In conclusion, it is also useful to provide a short checklist of key practices that can be adopted to further enhance the production of gender statistics and gender-relevant information about agriculture and rural livelihoods.

✓ Institutionalise a system of regular dialogue between data producers and data users, through regular meetings and focus groups, use of an advisory board or within the operations of the national machinery for the advancement of women or gender equality. Consider data users broadly to include stakeholders from government offices, as well as civil society, research institutions and international development organizations.

✓ Put in place data-sharing agreements between the NSO and other agencies of the national statistical system or other producers of data.

✓ Develop a gender focal point position in the NSO. The responsibilities of the gender focal point should be clearly developed, and a plan for who s/he will cooperate with in the NSO and how s/he will be supported by the whole agency should be included.

✓ Develop policies and practices for the regular review of coding, classification systems, definitions and terminology, among others, to ensure that there is no inadvertent bias in data collection methods.

✓ Carry out regular gender training for NSO staff, as well as any other personnel involved in data collection (including enumerators, interviewers and supervisors). Consider offering short training sessions or workshops for data users on the methods used to collect data and produce gender statistics, so that they are better informed about the possibilities and limitations of the data.

✓ Make use of multiple methods to communicate information about gender, including engaging with local media.

✓ Practise balanced recruitment of women and men as enumerators and interviewers and ensure the promotion of women to management positions within the NSO, on an equal basis with men.

Annex 1: Core Set of Gender Indicators in Agriculture (FAO REU)

Food and Agriculture Organization of the United Nations

FAO Regional Office for Europe and Central Asia

Core Set of Gender Indicators in Agriculture

SEAGA questions

	Gender indicator for the holding*	Who does what? 1	Who owns what? 2	Who has access to /controls what? 3	Who knows what? 4	Who benefits? 5	Who should be included in development programmes? 6
1	Distribution of holdings by sex of the holder	●	●				●
2	Average size of the holder's household by sex of the holder	●	●				●
3	Average age of the holder and his/her household members by sex of the holder	●					●
4	Percentage of holdings with hired labour by sex of the holder	●					●
5	Percentage of holdings with the risk of food shortage by sex of the holder			●			●
6	Percentage of holdings with holder's education level over a certain level by sex of the holder			●	●		●
7	Percentage of holdings receiving agricultural extension services by sources of agricultural extension services and sex of the holder			●	●	●	●
8	Percentage of holdings participating in farmer organizations and cooperatives by sex of the holder			●	●		●
9	Average area of holding by land use type and sex of the holder	●					●
10	Average number of livestock by species and sex of the holder		●	●			●
11	Average area of forest and other wooded land as primary land use by sex of the holder		●	●			●
12	Average area of aquaculture by sex of the holder		●	●			●
13	Percentage of holdings with irrigated land by land use type and sex of the holder			●			●
14	Percentage of holdings using chemicals by type of chemicals and sex of holder			●			●
15	Percentage of holdings with selected machinery and equipment by sex of the holder		●	●			●
16	Percentage of holdings receiving credit for agricultural purposes by sex of the holder			●		●	●
17	Percentage of holdings by type of farming (crop – temporary, permanent –, livestock, aquaculture and forestry) and sex of the holder	●		●			●
18	Percentage of holdings with other gainful activity in the household by type of activity and sex of the holder	●		●			●

*Or household when no data for holding is available. In that case the holder should be substituted by the household head.

Annex 2: Selected Resources

1. Online Guidance and Manuals on Gender Statistics

2. Training Materials

3. Video Resources

4. Databases

5. FAO Guidance and Policy

6. Tools for Gender Mainstreaming in Agricultural Development

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1. Online Guidance and Manuals on Gender Statistics

Manual on Integrating a Gender Perspective in Statistics (United Nations Statistics Division)
http://unstats.un.org/unsd/genderstatmanual/Default.aspx

Library of Handbooks, Guidelines and Training Manuals on Gender Statistics (United Nations Statistics Division) [in English and Russian]
http://unstats.un.org/unsd/demographic/standmeth/handbooks/default.htm

Developing Gender Statistics: A Practical Tool (United Nations Economic Commission for Europe and World Bank Institute, 2010)
In English: http://www.unece.org/fileadmin/DAM/stats/publications/Developing_Gender_Statistics.pdf
In Russian: http://www.unece.org/fileadmin/DAM/stats/publications/Developing_Gender_StatisticsRUS.pdf

The Gender Asset Gap Project (including documentation, sample questionnaires, key findings and further resources) http://genderassetgap.org/

Agricultural Censuses and Gender Considerations - Concept and Methodology (FAO, 2001)
http://www.fao.org/docrep/003/X2919E/x2919e00.htm

Methodological Guidelines for the Gender Analysis of National Population and Housing Census Data (UNFPA, 2002)
http://www.unfpa.org/publications/methodological-guidelines-gender-analysis-national-population-and-housing-census-data

Gender Statistics in the Southern Caucasus and Central and West Asia: A Situational Analysis (Asian Development Bank, 2012)
In English: http://www.adb.org/publications/gender-statistics-southern-caucasus-and-central-and-west-asia-situational-analysis
In Russian: http://www.adb.org/ru/publications/gender-statistics-southern-caucasus-and-central-and-west-asia-situational-analysis

Using Gender Statistics: A Toolkit for Training Data Users (United Nations Economic Commission for Europe, 2016)
http://www.unece.org/stats/gender/toolkit.html

2. Training Materials

E-learning course on *Gender in Food and Nutrition Security:* two lessons on gender statistics (FAO)
http://www.fao.org/elearning/#/elc/en/course/FG

Materials from Gender Statistics Training Workshops, Vietnam and Rwanda, 2014 (World Bank)[89]
http://datatopics.worldbank.org/gender/CapacityBuilding

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89 Note that the workshops were conducted in Vietnam and Rwanda but the training materials offer general guidance and good practices that can be used in any country.

3. Video Resources

Gender Equality in Agriculture: Video Toolkit (FAO) Playlists:
In English: https://www.youtube.com/playlist?list=PLzp5NgJ2-dK4Ei-CY1kLCQwzuA5_iXbKo
In Russian: https://www.youtube.com/playlist?list=PLzp5NgJ2-dK7hkf0fdKrKGhNqpWjolkIR

Library of Training Videos on Gender Statistics (UNECE) [in English and Russian]
http://www.unece.org/stats/video/welcome.html

4. Databases

FAO Agri-Gender Statistics Toolkit / database
http://www.fao.org/gender/agrigender/agri-gender-toolkit/en/

FAO Gender and Lands Rights database
In English: http://www.fao.org/gender-landrights-database/data-map/statistics/en/
In Russian: http://www.fao.org/gender-landrights-database/data-map/statistics/ru/

World Bank Gender Equality Data and Statistics portal
http://datatopics.worldbank.org/gender/

UNECE Statistical Database
In English: http://w3.unece.org/PXWeb/en
In Russian: http://w3.unece.org/PXWeb/ru

5. FAO Guidance and Policy

Developing a Gender and Agricultural Statistics Framework for the Asia-Pacific Region (2010)
http://www.fao.org/fileadmin/templates/ess/documents/meetings_and_workshops/APCAS23/documents_
OCT10/APCAS-10-25_-FAO_Gender.pdf

Core Gender Indicators for Assessing the Socio-Economic Status of the Agricultural and Rural Population (2012)
http://www.fao.org/fileadmin/user_upload/Europe/documents/WPW/gender_files/Gender_Indicators_
en.pdf

6. Tools for Gender Mainstreaming in Agricultural Development

FAO Library of Gender Resources and Toolkits
In English: http://www.fao.org/gender/gender-home/gender-resources/gender-toolkits/en/
In Russian: http://www.fao.org/gender/gender-home/gender-resources/gender-toolkits/ru/

Gender Checklist: Agriculture (Asian Development Bank, 2006)
In English: http://www.adb.org/publications/gender-checklist-agriculture
In Russian: http://www.adb.org/ru/publications/gender-checklist-agriculture

Gender in Agriculture Sourcebook (International Bank for Reconstruction and Development / World Bank, FAO, International Fund for Agricultural Development, 2009)
http://www.ifad.org/gender/pub/sourcebook/gal.pdf

Gender in Value Chains: Practical Toolkit to Integrate a Gender Perspective in Agricultural Value Chain Development (Agri-ProFocus, 2012, updated 2014)
http://agriprofocus.com/upload/ToolkitENGender_in_Value_
ChainsJan2014compressed14152032301426607515.pdf

Women's Empowerment in Agriculture Index (Feed the Future, USAID, International Food Policy Research Institute, Oxford Poverty and Human Development Institute, 2012)
http://www.ophi.org.uk/wp-content/uploads/2012_WEAI_Brochure.pdf?a7648b
http://feedthefuture.gov/lp/womens-empowerment-agriculture-index

The Abbreviated Women's Empowerment in Agriculture Index Resource Center (International Food Policy Research Institute, 2015)
http://www.ifpri.org/topic/weai-resource-center

Annex 3: Samples of Data Presentation Tools for Gender Statistics

The following are examples of the various types of data presentation tools that are described in Step 5 of the toolkit (Chapter 3, part G). Included here are a range of graphs and charts that can be used for presenting gender statistics. Note that data presentation tools concerning gender and agriculture were selected not for the data themselves, but to demonstrate a variety of presentation methods.

Line chart

These line charts depict differences in the share of income from various types of rural labour, across levels of household expenditure and by sex of the household head (male-headed households- MHH and female-headed households- FHH) in Tanzania. The data show that farm activities are an important source of income for all poor households, and also that as wealth rises, the importance of agriculture as an income source declines. The fact that sex-disaggregated data are presented in two charts allows us compare MHH and FHH. We can see that for FHH, on farm income is lower for both the lowest and highest expenditure quintiles, while the share of on farm income clearly decreases for wealthier MHH, suggesting that non-agricultural labour opportunities are more accessible to MHHs.[90] Note that in the full publication from which this chart was extracted, a table of characteristics of rural households by expenditure quintiles was also included, to allow for more precise comparison of the data concerning FHH and MHH.

Graph 14: Share of income from different labour activities
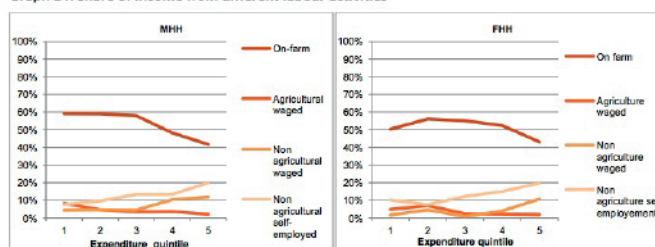
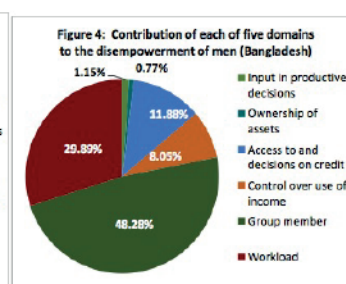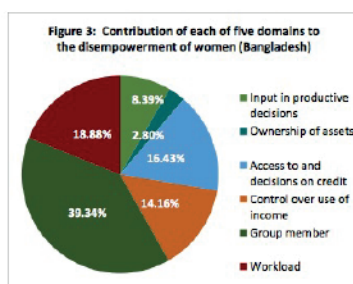Source: RIGA 2009

Stacked bar chart

This stacked bar chart illustrates the comparative age differences between female and male farmers in the Republic of Moldova, and also that female farmers are on average older than male farmers, using data from the 2011 General Agricultural Census.[91]

CHART 3 - Age composition of male and female agricultural holders - by age groups as respective share of total, female and male holders
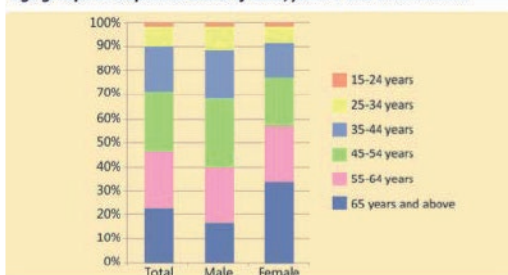
Pie chart

These pie charts illustrate data collected through the Women's Empowerment in Agriculture Index (A-WEAI) conducted in Bangladesh. They show how specific indicators in five domains contribute to women's and men's disempowerment. Note that the pie charts graphically depict the fact that the overall patterns are the same for women (left chart) and men (right chart), but that there are differences in the degree to which each domain contributes to disempowerment.

Figure 3: Contribution of each of five domains to the disempowerment of women (Bangladesh)

Figure 4: Contribution of each of five domains to the disempowerment of men (Bangladesh)

90 Osorio, M., Percic, M. & Di Battista, F. 2014. Gender Inequalities in Rural Employment in Tanzania Mainland: An Overview. Rome, FAO. p. 187.
91 National Bureau of Statistics of the Republic of Moldova & FAO. 2013. Women and Men in Agriculture in the Republic of Moldova. Chisinau.

Bar charts

The bar chart on the left illustrates the percentage of women and men employed in three sectors: agriculture, industry and services. The chart on the right shows the gender gap in sectoral employment (the difference between female and male employment) for three regions, the European Union, the Commonwealth of Independent States andthe Western Balkans, and two countries, the Kyrgyz Republic and Turkey. Compare these bar charts with the infographic below. Notice that they present similar data in different ways.[92]
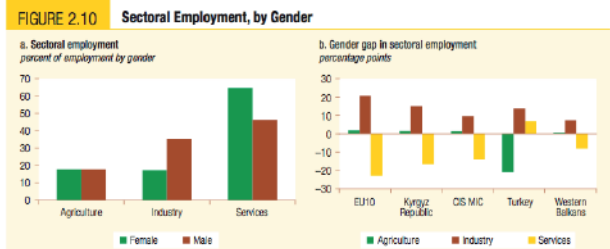
FIGURE 2.10 Sectoral Employment, by Gender

Source: World Development Indicators Database, World Bank, Washington, DC, http://data.worldbank.org/data-catalog/world-development-indicators/.

Scatter plots

The figure on the right is a scatter plot that depicts the following phenomenon: countries where agriculture is a primary contributor to the economy have a larger share of working persons that are self-employed. Note that the data are not sex-disaggregated in the scatter plot, but a bar chart is included to illustrate both the high level of self-employment in specific countries, and also that there are gender differences in self-employment between the countries and regions included in the sample.[93]
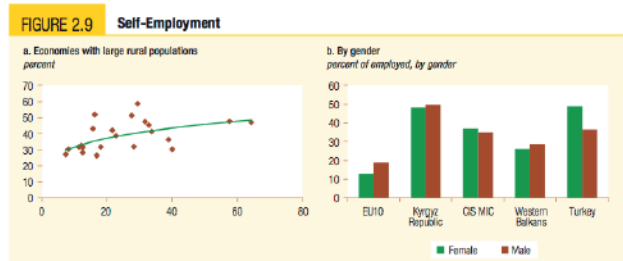
FIGURE 2.9 Self-Employment

Source: World Development Indicators Database, World Bank, Washington, DC, http://data.worldbank.org/data-catalog/world-development-indicators/.

Thematic map

This thematic map, using data from the General Agricultural Census of the Republic of Moldova[94], graphically illustrates the regions in which women are most likely to manage farms.

Distribution of female headed holdings by rayons

Infographic

This example is an infographic created by the Committee on Statistics of Kazakhstan[95] to illustrate the way in which women are represented in key sectors of the economy, with the light orange figure (far left) representing services, the green figure (middle) representing agriculture and the dark orange figure (far right) representing industry and construction combined. Observe that the data presented are simple and limited to only three variables. However, the image clearly conveys the relative proportion of women employed in the three sectors, and the information can be understood with little use of explanatory text. Nevertheless, the data could be further enhancedif statistics about men were also included.

Women in the economy of Kazakhstan

The distribution of employed women by economic sector in 2013

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92 Sattar, S. 2011. Opportunities for Men and Women: Emerging Europe and Central Asia. Washington, DC, World Bank. p. 43. Data for 2008.
93 Ibid. p. 41.
94 National Bureau of Statistics of the Republic of Moldova & FAO, 2013.
95 Infographic available athttp://www.stat.gov.kz.

This publication is a methodological tool and a guiding resource prepared under the "Strengthening national capacities for production and analysis of sex-disaggregated data through the implementation of the FAO Gender and Agriculture Framework (GASF)" project, funded by the FAO / Turkey Partnership Programme (FTTP). The project was implemented from 2013 to 31 May, 2016, and targeted national statistical offices and ministries of agriculture of three countries: Kyrgyzstan, Tajikistan and Turkey, with the overall objective to assist the beneficiaries in developing gender-sensitive statistics on the agricultural and rural sector, to assess the current status of the rural population – both women and men – and to ensure evidence-based and informed policy-making processes. The contents of the toolkit were validated at three national workshops held respectively in Kyrgyzstan, Tajikistan and Turkey from July 2015 to April 2016.

This toolkit has been designed primarily to assist statisticians working in national statistical offices (NSOs) and statistical units of relevant ministries and government agencies (such as ministries of agriculture, natural resources management and economic development). Data users, especially policy-makers and development planners working in ministries, national agencies for the advancement of women or parliamentary committees), as well as non-governmental organizations (NGOs), international development organizations, advocates and researchers working on gender and agriculture issues, can also benefit from this resource.