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GENDER STATISTICS IN AGRICULTURE AND FOOD SECURITY: UPDATES ON RECENT INITIATIVES

1. Introduction

Women make essential contributions to agriculture and rural economic activities in all developing countries. Their role varies considerably across and within regions and is changing rapidly in many parts of the world, especially where agriculture is undergoing rapid transformation.

The *State of Food and Agriculture* 2010-11 has pointed out the data limitations that make it difficult (sometimes impossible) to conduct valid and reliable gender-sensitive analyses of the contribution of women in agriculture.

For instance, while household level data allow distinguishing, to some extent, male-headed from female-headed households[1], data limitations do not allow distinguishing systematically the real functions performed. It is not possible to distinguish between households headed by widowed/divorced women (ie., *de jure*-female household heads) and those who are associated with an adult male who supports the family through remittances (*de facto* female households heads). Similarly, very little data is available on women's control over resources and women's labour in agriculture. Gender gaps are observed in their access to productive inputs, assets and services (ie., land, livestock, education, credit, extension services and technologies), but data are scarce and frequently incomparable. Finally, existing studies suggest that women's time-use and employment in agriculture vary widely depending on the crop, the phase of production, the type of activity and a number of other factors.

This paper provides an overview of the recent work undertaken at global level by FAO in terms on methodology, data dissemination and data collection.

[1] FAOSTAT reports information on this distinction, extracted from Households Budget Surveys in about 40 countries (see food security domain).

2. Methodological Work

2.1. Gender in 2020 World Programme of Census of Agriculture

The biennium 2013-14 has been critical to FAO for strengthening gender mainstreaming into the 2020 World Programme of Agricultural Census (WCA 2020). Indeed, the Guidelines for the 2020 World Census of Agriculture (WCA 2020) have included a new theme: "Intra-household distribution of managerial decisions and ownership on the holding". This theme replaces the previous "Management of the holding" theme and implicitly supersedes the concepts of sub-holding and sub-holder introduced in the WCA 2010 proposing two more operational concepts – ie., "decision-making" and "ownership" within the holding.

The new proposal is based on the consideration that most holdings are not managed by one single decision-maker; rather, complex decision-making processes can take place within a holding, especially in the household sector. Oftentimes different members of the household take responsibility for managing different aspects of the operation of the holding, so that responsibilities are shared between household members.

To reflect this more complex situation, WCA 2020 has proposed three supplementary data items that enquire on the distribution of managerial decisions in the holding[2]:

1. Sex of the Household Members Making Managerial Decisions (list of decisions to be investigated is country specific) (item 1001)
2. Area of crops by sex of the person managing them (item 1002)
3. Number of livestock by sex of the person managing them (item 1003).

Similarly, given that ownership and management of land and livestock are not necessarily in the hands of the same holding's manager, the WCA 2020 has proposed to measure:

4. The Area of Land Owned by the Sex of the Owner (item 1004)
5. The Number of Livestock Owned by the Sex of the Owner (item 1005)

Acknowledging that the concept of ownership is composite and highly country-specific, the WCA 2020 encourages countries to use proxies relevant to the country context – such as ownership certified trough a document, self-reported ownership, right to make decisions, etc.

The WCA 2020 Guidelines do not provide precise instructions for collecting data on decision-making and ownership; however, they will be followed by operational thematic guidelines.

2.2. Gender in the Research Agenda of the FAO - World Bank Global Strategy for improving Agricultural and Rural Statistics

Even if country-specific studies suggest a gender gap in agriculture, comparable data do not exist and haven't been integrated systematically into farm or agricultural surveys. In 2014 the FAO Statistics Division has therefore decided to go beyond the context for Agricultural Censuses and draft a Guideline for mainstreaming gender into agricultural surveys and, more generally into agricultural statistics.

[2] All the data items proposed under this theme are supplementary.

A Guideline titled "*Developing Guidelines on sex-disaggregated data and gender indicators in Agriculture*" is being developed under the research umbrella of the FAO / World Bank *Global Strategy*[3].

The research, started in mid-2014, will produce a literature review, .which will 'make the case' for strengthening the availability of gender statistics in the agricultural sector and provide an overview of data gaps and good practices. The guideline will instead propose gender-relevant indicators for agriculture and illustrate how these indicators can be mainstreamed in agricultural surveys.

The guideline considers gender-based disparities across the main types of capitals – ie., human, social, natural, physical, and financial. It addresses emerging and challenging topics, such as women's ownership and management of key productive assets, women's access to agricultural services and credit, decision-making in the holding, and women's work and employment in agriculture.

The literature review will be completed by the end of 2015, while the guideline will be finalized by 2016. Some recommendations will be field-tested for verification.

3. Data Collection and Data Dissemination Initiatives

The FAO Statistics Division is working to enhance the collection, availability and dissemination of gender relevant statistics on agriculture and food security through four main activities: 1) the Integrated Agricultural Survey (AGRIS) programme; 2) the Gender and Land Rights Database (GLRD); 3) the Rural Livelihood Monitor (RLM); and 3) the Food Insecurity Experience Scale (FIES).

3.1. Mainstreaming Gender in the Integrated Agricultural Survey Programme (AGRIS)

The Agricultural Integrated Surveys (AGRIS) is a farm-based modular survey program designed in the context of the FAO / WB *Global Strategy to improve Agricultural and Rural Statistics*, as a cost-effective way for national statistical agencies to accelerate the production of quality disaggregated data on the technical, economic, environmental and social dimensions of agricultural holdings.

AGRIS is composed of three core modules (household, crop production, livestock production) and four rotating modules (Labor Force, Economy, Machinery and Equipment, Production Methods and Environment).

The inclusion of gender issues in the AGRIS questionnaires is informed by the preliminary recommendations provided by the Guideline "*Sex-disaggregated data and gender indicators in Agriculture"* (see section above). In addition, particularly relevant from the gender perspective is the design of the AGRIS LABOR questionnaire.
The AGRIS LABOR questionnaire is being developed in a way to be consistent with the new definitions of work and employment adopted at the 19th International Conference on Labor Statisticians in 2013 (see box 1).

The design of the AGRIS LABOR questionnaire is benefiting from the Partnership "*Women's Work and Employment in Agriculture*" involving Data 2X, FAO, ILO and the Word Bank.

[3] See https://home.fao.org/docrep/015/am082e/,DanaInfo=www.fao.org+am082e00.pdf, page 33.

Box 1 – definition of work and its forms

Work comprises any activity performed by persons of any sex and age to produce goods or to provide services for use by others or for own use.

[…]

To meet different objectives, five mutually exclusive forms of work are identified for separate measurement. These forms of work are distinguished on the basis of the intended destination of the production (for own final use; or for use by others, i.e. other economic units) and the nature of the transaction (i.e. monetary or non-monetary transactions, and transfers), as follows:

(a) *own-use production work* comprising production of goods and services for own final use;

(b) *employment work* comprising work performed for others in exchange for pay or profit;

(c) *unpaid trainee work* comprising work performed for others without pay to acquire workplace experience or skills;

(d) *volunteer work* comprising non-compulsory work performed for others without pay;

(e) *other work activities* (not defined in this resolution).

Source: ILO, 2013, page 2-3

As mentioned above, the AGRIS LABOR questionnaire is expected to be consistent as much as possible with the new ILO definitions of work and employment and, more importantly, to provide an accurate and feasible reporting of work-for-own-use. This measurement issue is of utmost importance for small-holders and particularly for women, since they play a key role in producing goods and services for their own household's consumption.

The finalization of the AGRIS LABOR questionnaire is planned for early 2016, after presentation and discussion at the Scientific Advisory Committee of the FAO / WB *Global Strategy for Improving Agricultural and Rural Statistics*.

The current draft individual-level questionnaire gathers information on a detailed list of activity clusters, many of which derived from the ILO pilot model questionnaires. A series of questions concerning individuals' involvement into these activity clusters allow classifying each household member according to whether or not s/he:

1. Produces goods for own-use
2. Is in employment
3. Is an unpaid trainee
4. Does voluntary work
5. Produces services for own-use
6. Works on the household's agricultural holding / farm

In addition, the adoption of a "light" time-use approach helps estimating the amount of time spent on unpaid domestic work; child/elderly care; other unpaid domestic work.

Considering women's disproportionate involvement in production of goods and services for own-use, unpaid domestic work and unpaid care, the design of this questionnaire will bring added value in understanding women's involvement in agricultural work.

3.2. Gender and Land Rights Database

The FAO Gender and Land Rights Database[4] was recently enriched, with the addition of indicators on different aspects of women's access to and rights over land. This was the outcome of a successful collaboration between the Social Protection Division, the Statistics Division, and the partnership of FAO with IFPRI.

The indicators currently disseminated through this database include:

- The distribution of agricultural holders by sex (out of total agricultural holders) (1)
- The incidence of land ownership by sex (out of total women or men) (2)
- The distribution of land owners by sex (out of total landowners) (3)
- The distribution of land area by sex (out of total owned land area) (4)
- The distribution of land value by sex (out of total owned land value) (5)

While the distribution of agricultural holders by sex (1) is extracted from the available Agricultural Census reports, the other indicators are derived from LSMS-ISA, Living Condition Surveys, Demographic Health Surveys, etc[5].

The distribution of agricultural holders by sex (1) is by far the most prevalent of the currently available indicators. This is not surprising since the sex of the agricultural holder is one of the core data items of the Agricultural Censuses, and it is collected and reported by almost all the censuses of agriculture.

As a consequence, this indicator is the only one that allows for cross-country and cross-regional comparisons. The table below, for instance, presents the percentage of female holders (out of total holders) by region, and clearly confirms that managing a holding is mainly a men's work[6].

Table 1 - Percentage of female agricultural holders out of all agricultural holders

Regions	pct female holders	# countries
Sub-Saharan Africa	15.4%	20
North America	15.4%	2
Latin America and the Caribbean	18.2%	20
Middle East/North Africa	4.9%	8
Central, East and South Asia	10.9%	14
Europe	27.8%	34
Oceania	9.6%	6
Global	**12.8%**	**104**
Developing regions only	**12.1%**	**68**

Source: FAO Gender and Land Rights Database.

Global averages weighted with number of holders in each country in the region

However, the distribution of agricultural holders by sex does not provide details on the intra-holding distribution of managerial responsibilities and land ownership. As a consequence, it tends to underestimate the management role of household members other than that of the person designated as the official holder.

[4] http://www.fao.org/gender-landrights-database/data-map/statistics/en/

[5] Most of these statistics result from the analytical work conducted by IFPRI and are disseminated on GLRD with their permission.

[6] Most of the data points on which the regional averages have been calculated belong to the 2000 and 2010 agricultural census rounds. However, some data are from the 1990 census round and are consequently relatively outdated.

For this reason, the database promotes the other four indicators, and makes the effort to collate all the data available. Indeed, analytical work is ongoing to further mine survey data archived in the Statistics Division repository in the attempt to generate new statistics on these indicators.

While the major challenge of indicator (1) has to be found in the fact that it doesn't provide intra-holding information and that some data are relatively outdated, the major limitations of indicators (2), (3), (4) and (5) are data scarcity and the fact that countries adopt different operational definitions of land 'ownership'. Indeed, while some countries rely on documented ownership, others use reported ownership or a series of proxies regarding control and rights.

3.3. **Mainstreaming Gender in the FAO Rural Livelihood Monitor (RLM)**

Rural livelihoods are a broad concept, which stretches across a number of domains and disciplines to capture the different ways in which socio-economic and ecological systems and their governance contribute to determine income generation and distribution in rural areas.

Obtaining relevant and well-organized information on rural livelihoods is crucial for informing governments and international policy makers, and for promoting the formation of evidence-based decisions. In order to describe rural livelihoods, a number of indicators are required, and those already existing are spread across institutions at the sub-national, national and international level. The lack of a systematically organized data repository linking different aspect of rural livelihoods, therefore, makes it difficult for existing information to support decision making for reducing rural poverty and food insecurity.

In order to fill this gap and provide policy makers with a unique platform that encompasses all relevant data and indicators required, FAO is developing a Rural Livelihood Monitor (RLM). The main objective of this project is to collect and to harmonize indicators on rural livelihoods, welfare and wellbeing in a comprehensive and harmonized repository.

All the indicators generated through the RLM[7] are being disaggregated through a set of qualifiers, including the sex of the household head or the sex of individuals, depending on data availability. For instance, indicators of employment, health and education can be disaggregated by sex of the individuals, while the indicators pertaining to the other clusters can be disaggregated using the sex of the household's head. Consistently with the work ongoing for the GLRD, land ownership indicators disaggregated by the sex of the owner are included in the platform every time the relevant data are available.

3.4. **Mainstreaming Gender in Food Security Statistics**

The Food Insecurity Experience Scale is a survey-based measure of the severity of food insecurity. FAO has adapted the methodology for the scale from earlier experiential food security measures in use in a limited number of countries in the Americas and has applied it to nationally representative samples throughout the world through the Voices of the Hungry (VoH) project.

The FIES relies on people's direct responses to a set of questions regarding their factual experiences in accessing food. While it builds upon established tools (the *U.S.Household Food Security Scale, USHFSSM,* and the *Escala Latino Americana y Caribeña de Seguridad Alimentaria, ELCSA*) the FIES methodology introduces some key innovative elements. One of them is the possibility to refer to individuals, rather than households, as units of analysis.

[7] Indicators are clustered in nine groups: Employment, health and education; Land and natural resources; Livestock; Infrastructure and services; Inputs and technology; Income, Productivity and inequality; Social Protection; Community characteristics; Household Characteristics.

When the information is collected on individuals' experiences rather than at household level, it allows a proper investigation of possible gender-based disparities in food access in the population. Indeed, VoH is arguably the first project that allows characterizing the profile of food security separately for men and for women in the national population of low-income and middle-income countries.

In 2014, FAO contracted Gallup, Inc. to include the FIES in their annual Gallup World Poll®, with a plan to extend the collaboration over the next five years, after which it is expected that the FIES or a compatible instrument will be included in many national governmental surveys. With the Voices of the Hungry project, FAO will collect FIES data in more than 140 countries annually, and this will allow generating cross-culturally comparable, real time estimates of the prevalence of moderate and severe food insecurity at the national level that can be disaggregated by the sex of the respondent, at a relatively limited cost.

The first set of comparable and sex disaggregated indicators on the prevalence of food insecurity in the national population will be available, for the first time for 146 countries towards the end of November. FAO has a plan to disseminate all FIES microdata through an interactive platform, to facilitate research and analyses.