

# AgriFoSe2030

Agriculture for Food Security 2030 - Translating science into policy and practice



# Gender issues in contemporary research on agriculture for food security

Knowledge gaps and key issues across the AgriFoSe2030 themes

#### Foreword

Agriculture in low- and middle-income countries faces considerable challenges, ranging from increased food demand to climate change impacts, with rapidly evolving scope and complexity. At the same time, the opportunities to address these challenges are significant, which brings optimism that efforts in agricultural research can succeed. One major barrier, however, threatens to inhibit the impacts of agricultural research: the low level of gender equity in low- and middle-income countries. This is problematic on many levels and across entire crop and livestock value chains, all the way to landscape management.

Empirical evidence overwhelmingly points to the importance of women as agricultural producers. According to estimates by the Food and Agriculture Organization of the United Nations (FAO), around half of the world's smallholder farmers are women. In some low- and middle-income countries, as much as 79% of women report agriculture as their primary economic activity. Due to unequal access to assets and resources, many women earn less from their agricultural work than their male counterparts and less than what is possible. Additionally, a growing body of knowledge shows that when women control income from their farming, this income is spent on family welfare, especially on child nutrition. Therefore, gender equality matters not only in its own right, but as a prerequisite for the health and

### **Key conclusions**

Apart from the specific conclusions and key messages in each of the literature reviews conducted under the AgriFoSe2030 themes, a number of overall key conclusion can be identified:

- In general, there is significant potential for the structural barriers and key factors that limit women's access to, and inheritance of land, availability of credit, agricultural inputs, services and markets to be better recognized, researched, and addressed.
- Literature on gender issues for the four key areas in the AgriFoSe2030 program is scarce and published in a variety of formats, including both scientific and grey literature. This literature is not always easy to assess in terms of scientific quality.
- There is a strong need for more and better channels for publishing research focusing on gender issues and food security
- Further research is required in all four thematic areas to clearly identify knowledge and research gaps, as well as areas of opportunities.

development of families and societies, and as a driver of economic growth.

AgriFoSe2030 contributes to sustainable intensification of agriculture for increased food production on existing agricultural land. One aim of the program is to transform practices towards a more efficient use of human, financial and natural resources, and to thereby increase social, economic and environmental sustainability. To achieve this, state-of-the-art science in various research areas is collated and translated to support policy-makers and improve practices in the agriculture sector.

To attain this aim, it is also fundamental to consider the issues at stake in a gender-inclusive way. Project teams within the AgriFoSe2030 research themes conducted a literature review on gender research and knowledge in their respective fields, in order to identify knowledge gaps and opportunities (see the yellow box). Findings and ways forward are further described below under each thematic area.

#### Thematic literature reviews in this brief

- Gender dimensions of formal and informal land tenure systems in South Asia and sub-Saharan Africa By Theme 1: Social and economic dimensions of smallholder-based agriculture and food security
- Women and food production in multifunctional landscapes
  By Theme 2: Multifunctional landscapes for increased food security
- 3. Gender and sustainable intensification practises in smallholder crop production By Theme 3: Increased productivity and diversity in smallholder cropping systems
- 4. Gender research in relation to livestock production

By Theme 4: Livestock-keeping among smallholders for a nutritious diet and increased food security



# Gender dimensions of formal and informal land tenure systems in South Asia and sub-Saharan Africa

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Within the theme of social and economic dimensions of smallholder-based agriculture and food security (AgriFoSe2030 Theme 1), the project team conducted a literature review on the gender aspects of land tenure systems. The review focused on eight countries in South Asia (India, Nepal and Bangladesh) and sub-Saharan Africa (Kenya, Rwanda, Uganda, Nigeria and Madagascar), since these are the regions in which the lion's share of the global agrarian population is found today. These countries have experienced decreasing farm sizes since the turn of the millennium. Moreover, research overwhelmingly shows that during times of heightened demand for land, the rights of more marginalized groups (such as women) tend to be sidelined, especially in the context of land reforms. The aims of the literature review included:

- Describe the current situation of women's land ownership and access in the selected contexts and detect the nature of inequities and discrimination that are present in the contemporary tenure, market, and inheritance systems.
- Understand the structural parameters behind these existing inequities and identify the formal and informal mechanisms through which they are perpetuated.
- Trace how women's land rights have evolved over the past few decades, both in terms of policy and practice.
- Relate these developments to the larger themes of land fragmentation and changing rural livelihoods.

The review summarizes the literature pertaining to formal and customary legal frameworks on land ownership and inheritance; to a lesser extent, it also summarizes the consequences of such frameworks for women's livelihoods. Most of the reviewed literature is academic (peer-reviewed), but there are a limited number of authors and sources that are



relevant to the scope of the review. To make up for this gap, the review also included census reports, statistical overviews, policy briefs, and research and working papers from conferences, as well as a few media reports and reports from NGOs, INGOs and other international development organizations. Literature in any other language than English was excluded.

The literature review showed that most of the existing academic literature is based on case studies that are qualitative in nature or provide an overview of legal and policy frameworks and reforms. Very little literature is available on the gender dimensions of livelihood changes arising from land fragmentation or legal reforms, and few large scale quantitative studies exist. In the case of sub-Saharan Africa, several legal reforms were undertaken in the late 1990s and early 2000s, and the literature for this section covers the period from 2000 to 2017. For South Asia, the sources are dated between the mid-1980s and mid-2000s, after which there seems to have been a drop in the number of such studies. In general, the statistical basis for South Asia is far superior to that of sub-Saharan Africa, although in

the former case there is a gap in detailed statistical data beyond the aggregated levels. In sub-Saharan Africa, the countrywide literature is patchy, with a lot of literature on Kenya, Rwanda and Uganda, but very little on Nigeria and hardly anything on Madagascar. A database of case studies pertaining to inheritance disputes, joint titles for husband and wife, and customary settlements of cases of divorce and separation also seems to be missing. A directory of what customary laws are followed and how they impact women's chances of land ownership could be a valuable resource in both regional contexts.

Overall, the review shows ample evidence of discrimination against women both in inheritance law and in everyday practices of ownership, control, and access to land. Even in cases where progressive reforms have been implemented (e.g. through joint titles), women's rights to land remain fettered to their relationship with male relatives. Gender norms pertaining to marriage, social beliefs, and patriarchal values pose structural barriers to women's access, control and ownership of land. In the case of South Asia, one of the ways this can be addressed is through the facilitation of collective ownership by women's groups. This can also address the problems of land fragmentation, inelastic land markets, and very little public land being available for redistribution.

In the case of sub-Saharan Africa, legal pluralism, poor legal infrastructure, low awareness, and limited administrative and technical capacity pose challenges to implementing statutory law that, in some cases (such as Rwanda), has a strong genderequalizing intention. Common to the remainder of the African countries (Uganda, Kenya, Nigeria and Madagascar) is that patriarchal customary law prevails in practice, with consequences for general tenure rights and land access, for laws of succession, and for property rights within marriage and upon its dissolution.

#### Key messages and ways forward

The main conclusion of this literature review is that there are two key structural barriers to equal inheritance rights and/or tenure rights for women. One is the presence of personal law codes; in the case of South Asia, those are specific to each religious community. The second is the upholding in practice of customary law in most of the African

countries covered by the review. However, this is a politically charged issue and cannot be approached from a purely policy-driven perspective. Therefore, attention must be turned to the other structural barriers within society and everyday practice. One of the interventions could be to spread awareness about the provisions that are already present within current legal frameworks and encourage their utilization. This includes changing opinions and perceptions about the roles and rights of married daughters within the natal family and the meaning of marriage as an institution. Another important intervention could be to facilitate the formation of women's collectives, especially among landless and wage-laboring communities, to lease or purchase agricultural land as a group.

Based on the findings of this literature review, a way forward could be to update the existing knowledge frontier. It is well-established that women's representation as landowners has not improved significantly. But have there been any changes to the barriers and difficulties women face in the process of inheriting, purchasing, or accessing land? This would involve carrying out in-depth and place-based case studies. Simultaneously, advocacy programs aimed towards equalizing inheritance laws and ensuring their fair implementation needs to be adopted and implemented.

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## Women and food production in multifunctional landscapes

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Multifunctional landscapes or land-use systems simultaneously support biophysical, biological, social and economic functions. They comprise a combination of outputs and services, both private and public, which can have different time frames, and benefit a range of stakeholders with varying rights, access, and power. This means that there are often trade-offs between different interests. Examples of multifunctional landscapes include agroforestry systems, home gardens, and integrated cropping systems. Multifunctional landscapes may provide more opportunities for women, or other disadvantaged groups, to produce food, or products to be sold in order to enhance their food security.

On the topic of *multifunctional landscapes for increased food security* (AgriFoSe2030 Theme 2), the project team conducted a literature review focusing on issues related to gender and women

in food production in multifunctional landscapes. A directed search based on a number of keywords was done in key databases (Scopus and Google Scholar). While the literature dealing specifically with gender/women and food production in multifunctional landscapes is limited, the team reviewed a range of scientific (peer-reviewed) publications with broad relevance to the topic. Rather than providing a systematic review of the literature, the aim of the review was to highlight some of the challenges and opportunities that women face in relation to their own and their households' food security, with specific reference to multifunctional landscapes. We reviewed 104 scientific articles dealing with food production in a range of multifunctional land use systems across Africa, Asia and Latin America, including agroforestry, home gardens, livestock systems, and urban and peri-urban agriculture. The geographic scope of the



included literature comprises Africa, Asia, and Latin America, but with a focus on Africa.

The presentation of the findings in the literature review has been structured according to the two categories of resources that are necessary to ensure food security: productive resources and marketization resources. The productive resources comprise land, labor and capital, also known as the 'factors of production' in economic theory. The marketization resources relate to women's opportunities for benefitting from value chains and commercialization of their produce, and include market access, information, access to processing technology, and transport.



#### **Productive resources**

The products in multifunctional landscapes that are picked and used by women are often considered secondary to the primary (male-labelled) products such as agricultural crops or timber. Women dominate wild plant food collection in Asia and Africa, but not in Latin America. In agroforestry and forest landscapes, these non-timber forest products (NTFPs) provide an important source of food, and contribute to the diversification of diets, which is important for food security.

Ownership, user rights, and other types of access to land and trees shape production opportunities for both men and women. Numerous case studies have shown that in landscapes characterized by the presence of trees – including forest and agroforestry lands - tenure and access rights are often complicated, multi-layered, and structured by gender, ethnicity and other social relations. In addition, NTFPs and wild plants are often found in in-between spaces, such as the edges of fields or roadsides, which are often not considered by policymakers. Women's customary tenure and user rights may be strong, but due to their informal nature, they risk being overlooked and marginalized when laws, policies or projects are introduced. In a study of the formulation of a REDD+ (Reduced Emissions from Deforestation and Forest Degradation) program in Burkina Faso, researchers found that the lack of understanding of the customary organization of access to certain NTFPs risked marginalizing some women's use of shea and néré fruits. Since access to these sought-after products is structured by ethnicity, which is ignored in policy formulation, policies aimed at increasing their value risked leading to increased competition and conflict. This highlights the importance for policies aimed at production, use, and/or trade in forest and tree resources to be designed with awareness of, and sensitivity to, local and informal institutions and relations of power.

Studies have found home gardens to be especially important for those who lack land and capital, which is the case for many women in the study regions. Home gardens can provide an important contribution to diversifying diets since they often contain a greater diversity of crops than the family fields, including vegetables, beans and fruits. Their location in or near the homestead makes them easy to combine with other household chores, which is an advantage for women who often have time constraints due to their heavy burden of household labor. Studies from several parts of the world, including Sudan and Bangladesh, have found that women play an important part in the management and decisionmaking related to home gardens.

#### Marketization resources

The same gender inequalities that affect women's production opportunities in agriculture shape their performance in value chains. Feminist economists emphasize that markets are gendered institutions, shaped by social relations. Women are thus limited in their ability to benefit from market exchange, as a result of gendered constraints to information access and to control over processing facilities, transport and productive resources. Studies of NTFPs in various contexts – including those on shea value chains in Burkina Faso – have found evidence of men taking over parts of a value chain as profitability increases, pushing out women.

Moreover, small-scale poultry production, often integrated in home garden systems, has proved to be a useful strategy for enhancing food security for those who lack land, capital and labor resources, not least women. In Africa, small-scale poultry production contributes 20% to 30% of total animal protein intake, and it is an important source of micronutrients. A study from Kenya, however, found that as poultry production became more commercialized, more men started to get involved as middlemen in poultry trade. Policy interventions aimed at increasing women's participation in markets need to consider the risk of such unintended consequences.



The unstable nature of gendered norms around production and trade can also work in a positive direction. In an example from Kenya, the expansion of the monetary economy prompted women to take greater part in market activities to earn income, thus expanding their independence to move beyond the homestead.

#### Key messages and ways forward

Multifunctional landscapes provide opportunities for women to play a central role in food production, despite limited access to land, labor and capital. However, "women's products" are often of secondary importance or have a lower economic value. Therefore, they risk being disregarded in decisions related to land use or management. Moreover, men often have a more advantaged position in markets and product value chains, allowing them to reap a larger share of the benefits.

A multifunctional landscape with a diverse set of products and services can provide opportunities for women to take control of certain resources or value chains to secure food production and enhance food security. Hence, policy-makers need to be aware of the different products and services produced in multifunctional landscapes, and of the customary organization that influences access to, and decisionmaking about, these products.

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# Gender and sustainable intensification practises in smallholder crop production

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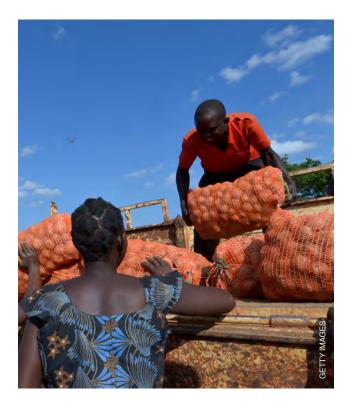
Labour constraint is a major challenge in smallholder crop production and is therefore a factor that is imperative to consider when looking at implementation and adaptation of sustainable intensification practices. Women constitute a considerable, and in many cases the major, part of agricultural labour in low-income countries. Women also often need to split their time between "productive" activities (such as working in the field) and "reproductive" activities (such as household labour). Sustainable intensification practises have economic and social consequences that impact the lives of smallholder farmers, by potentially improving agricultural productivity, profitability and livelihoods.

Consequently, sustainable intensification practises may be more widely adopted if they reduce the productive workload for women. On the other hand, some practices may increase women's productive workload. For example, agricultural practices based on reduced soil cultivation may increase the need for weeding.

Against this background, the team of the third AgriFoSe2030 theme, *increased productivity and diversity in smallholder cropping systems for increased food security*, conducted a preliminary literature review, in preparation for a systematic literature review during 2018, that addresses the following key questions:

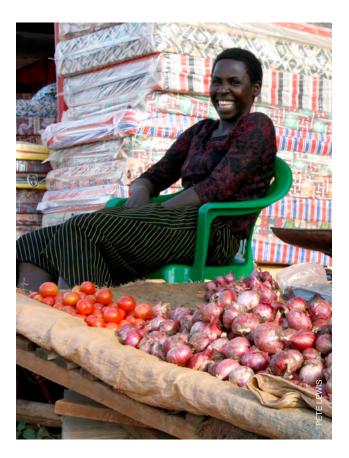
- Do practices for sustainable intensification affect men's and women's workloads in crop production differently?
- 2. Does the workload influence the rate of adoption of these practises?
- 3. What other factors than workload have a major influence on the rate of adoption of sustainable intensification practises? Are these factors important on different scales for men and women?

As a first step, the project team conducted a preliminary literature search in a number of databases including Web of Science, Scopus, and



Google Scholar. The sustainable intensification practices included in the search strings were intercropping, conservation agriculture and integrated soil fertility management (ISFM). More general search strings, such as "sustainable intensification," were also used. The practices were combined with the words gender, women and female. No geographic or climatic criteria were used, but the literature was restricted to low-income countries in sub-Saharan Africa and South and Southeast Asia. Both peer-reviewed and grey literature will be reviewed in the full review. The preliminary literature search indicated that the relevant literature covers studies mainly from Southern and East Africa, but there are also some studies from other parts of Africa, India, Nepal and a few other South Asian countries.

According to the preliminary literature search, the type of sustainable intensification practice most frequently studied in gender-sensitive studies is conservation agriculture, including different types of minimum soil disturbance such as no till or reduced tillage. Other practices include strategies



for soil fertility management, water management, and intercropping. Improved varieties, fertilization and pest management are less studied. The most common effects of sustainable intensification practices identified in the reviewed literature relate to labour requirements, labour allocation, productivity, and profitability. Out of these, labour is the one most often studied in combination with gender perspectives. However, judging from the preliminary literature search, gender perspectives on labour requirements in sustainable intensification practices are not commonly published in the academic literature.

There are studies that make comparisons between men and women regarding adoption of sustainable intensification practices. Researchers have studied both differences in adoption rates and preferences that affect adoption, as well as factors affecting the rate of adoption, with major focus on access to land, agricultural inputs and other resources. For example, studies identify that insecure land tenure reduces the likelihood of farmers adopting new technologies. And when women have less access to land than men, it can lead to gender differences in adoption rates. Another aspect influencing the likelihood of adoption is knowledge and access to extension services. There are also gender-sensitive studies looking at the relationship between labour supply and demand, and the adoption of sustainable intensification practices.

#### Key messages and ways forward

The literature in the preliminary literature search provides information related to most of the key research questions, with a focus on conservation strategies. These results indicate that there may be a difference in the impact of the workload between men and women, regarding sustainable intensification practices, such as conservation agriculture and intercropping systems. However, the impacts vary depending on the sustainable intensification practice. In addition, there are several factors affecting the adoption rate, and the literature indicates that these may be differently important for women and men.

More in-depth analysis is required to provide a more comprehensive picture of how different sustainable intensification practices affect the workload of men and women, as well as determine if factors influencing the rate of adoption among men and women differ between practices.

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### Gender research in relation to livestock production

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Within the theme livestock-keeping among smallholders for a nutritious diet and increased food security (AgriFoSe2030 Theme 4), the project team conducted a literature review on gender research in relation to livestock production. The interest in gender in development aid has increased drastically over the last decade, primarily to develop more efficient aid and with a focus on equity. This holds true for the agricultural, livestock and food security sector as well. Thus, the gender dimension of development is increasingly highlighted in the grey literature from international development and aid organizations, as well as from the donor community. In this preliminary literature review, we have tried to identify the scientific basis and/or gaps for the positions taken, regarding a gendered approach in development work. We focused on approaches that link livestock-keeping to poverty reduction, food security and nutrition.

We have made a systematic search of English language, peer-reviewed research articles in the Web of Science database that were conducted in countries described on the OECD Development Assistance Committee (DAC) list as "least developed country," "other low income country" or "lower middle income country." Our search spanned from January 2008 to July 2017 and generated 1,525 reports, of which 345 were deemed as relevant for this study. The studies were further categorised based on the country in which they were conducted, the livestock species included, and if the article combined gendered data with climate, economics, food security and human health.

Almost all studies identified focused on women only. Most studies were performed in Asia, followed by Africa; only two were conducted in South America. Notably, two-thirds of the reports were published in journals without a so-called impact factor (IF),



which can potentially make their scientific quality difficult to assess. However, the impact factor is not a measure of scientific quality and these studies may well have high scientific quality and value, particularly for specific cases, regions or countries, as in many cases these journals are regional or country-specific.

An interesting finding of the studied literature was that most focused on women handling larger ruminants, such as cattle and buffalos. This contradicts the general assumption that women often handle small livestock species like goats, sheep, pigs and poultry, while men are assumed to handle larger ruminants. It is not possible to make a general conclusion that the assumption is faulty, but the finding calls for further investigation of what animal types are most often handled by women and men respectively.

The reviewed studies can be categorized based on the approach to the gendered aspect. Three categories are identified:

- Gender-responsive research with the primary goal of expanding knowledge about both men's and women's behaviours, values, constraints, and opportunities;
- Information generated by gender-focused research about gender relations, roles, and responsibilities used for investigating other questions; and
- An evaluation of programmes and projects with the goal to empower women and/or other gender categories through livestock interventions.

Reports on transformative mechanisms – or how women gain capacities to choose their way of life by improved livestock keeping – were rare.

One key conclusion of this preliminary literature review is that the scientific literature about gendered aspects of livestock production in low-income countries is scant, often focusing on a local scale and published in low-impact factor journals. Generally, this research is very often solely descriptive.

#### Key messages and ways forward

It is generally acknowledged that the gender aspect in science-based development is imperative to successfully improve the livelihood of smallholders and small-scale livestock keepers. Thus, it is important that gender-based science is published and communicated in well-known and acknowledged academic forums, as well as allowed to be part of the science agenda. The fact that many livestock producers, in the regions in focus for this study, are smallholders – and the difficulty in upscaling their production – may hinder gender-focused studies on livestock keeping from being included and communicated more widely in high-impact scientific journals and to policy-makers and practitioners

Livestock-keeping generates income and produces food with high nutritional value, making it a possible path towards a better life for women. To assist this, future gender research should focus more on transformative processes, be of high academic quality, and be allowed a place in the international scientific community. Moreover, the importance of livestock production must be better acknowledged as a pathway to economically empowered women.

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### Concluding remarks and future research needs

Although women's roles as important food producers and critical contributors to household food security are increasingly recognized, they are still experiencing limited access to resources such as land, credit and agricultural inputs and services. Thus, to increase food security, it is imperative to identify ways and means to close the gender gap. Knowledge and science-based advice on how to improve policies, practices and interventions to further recognize and strengthen the role of women in agricultural production systems is critical. This brief identifies the importance of more knowledge co-creation and collaborative interdisciplinary research on gender issues in four key areas of agricultural development and food security.



**Agriculture for Food Security (AgriFoSe2030)** is a programme directly targeting Sustainable Development Goal (SDG) 2 – "... ending hunger, achieving food security, improving nutrition and promoting sustainable agriculture ..." by building capacity to synthesize and communicate the latest scientific knowledge to support the transformation of smallholder agriculture in low-income countries, particularly in sub-Saharan Africa and South and Southeast Asia.

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