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# Including women smallholder farmers: a business case for success

*A gender approach in using satellite data for  
agriculture in developing countries*



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Concerning gender, there is a clear challenge for all ongoing and future G4AW projects: many of the G4AW projects emphasize that a large proportion (sometimes the majority) of their target group is female. Then why is it that women are not accurately represented in these large numbers in the user statistics of the projects? It is a missed opportunity, as there is a clear business case for investing in active participation of women in agriculture, where reaching a larger number of women farmers is necessary and will create more impact'. Including women farmers contributes to achieving food security formulated in Sustainable Development Goal 2: End hunger, achieve food security and improved nutrition, and promote sustainable agriculture and SDG 5: Achieve gender equality and empower all women and girls. Moreover, G4AW projects contribute to SDG 1,3,4,6,8,12,13 and 17.

G4AW projects have indicated that they see opportunities to include more women in the coming years. These opportunities need to be supported by a gender analysis that helps to unravel how their services, products and outreach could be developed in such a way to address specifically the needs of both women and men.

Moreover, in the third G4AW call, gender will be included more prominently. Therefore, the G4AW Facility aims to provide better starting points for projects to include female smallholder farmers by:

- Providing insights into why paying extra attention to including both men and women is the business case for better results.
- Demystifying gender by providing a concise overview of the latest insights on women and farming in developing countries and by providing a list of relevant literature.
- Sharing best practices and lessons learned as a source of inspiration and eye-opener.
- Giving practical suggestions on how to unlock the potential of women farmers as active participants.
- Compiling a database of potential partner organisations in various G4AW countries, "Partners for Gender G4AW", that can be accessed on the G4AW website<sup>2</sup>.

This publication is meant to present the latest insights on women and farming, share best practices and provide practical suggestions on how women farmers can be included in projects as active participants. A list of relevant literature can be found on the back of this publication. The database Partners for Gender G4AW can be found via the G4AW website. The publication has been built up as follows, providing insights on why the inclusion of gender is a sound business case, demonstrating why tailor-made approaches have an added value to include more women as active participants, sharing practical tips on how to include gender into your project, and a list of recommended readings and resources.

### The G4AW Facility

The G4AW Facility promotes and supports private investments for large scale, demand-driven and satellite-based information services. It provides a platform for partnerships between public organizations, research institutes, private sector operators, NGOs, farmer cooperatives, satellite data/service operators, businesses and transmission operators. The goal of the G4AW Facility is to reach at least 4,5 million food producers with services that increase income, agricultural production and productivity and/or provide more resilience by 2022. The G4AW Facility started in 2013 and will run until 2022. For the past three years, the Netherlands Space Office (NSO) has been responsible for executing the G4AW Facility and supporting its 17 on-going projects in 10 countries (anno 2017).



## What is gender?

Gender focuses on the socially constructed differences between men and women, women and girls and men and boys. It focuses on which formal or informal rules define these roles, and provides opportunities and strategies for change for everyone. Gender does mean to focus both on men and women.

By looking through a gender lens, taking time to assess different roles and opportunities for men and women, to project activities can help to raise awareness and identify opportunities to adapt the project tools for needs of both women and men.



## The business case

On average, 46.2% of the agricultural labourers in the G4AW countries are women, with Rwanda having the highest number of female agricultural labourers at 53.1 % and Indonesia the lowest at 36.9 %<sup>3</sup>. These numbers were compiled by the FAO in 2010 and included women who worked as farmers on their own account, as unpaid workers on family farms, and as paid or unpaid labourers on other farms and agricultural enterprises. Women are involved in all types of farming, from (cash)crop to livestock to fish farming both at subsistence and commercial levels<sup>4</sup>. The work done and time spent on the farm differs per gender, age, and task and is heavily influenced by cultural division of labour; for instance, an astonishing 2/3 of the world's 600 million small livestock managers are women<sup>5</sup>. In most countries women are responsible for food security, and thus have gained a substantial amount of experience in growing crops and livestock. Therefore, their expertise is vital to include in the G4AW projects.

The percentage of female farmers has grown significantly over the past years worldwide due to migration of men to cities for instance for higher paying jobs, but also due to shifting cultural norms. For instance, in North Africa the percentage of women in agriculture increased from about 30% in 1980 to 43% in 2010. With this current trend, it is thought that the number of female farmers will further increase, thus making a compelling case to include women as active participants.

The FAO estimates that if women have the same access as men to resources such as land, seeds, funding and knowledge, they will produce 20-30% more than they do now<sup>6</sup>. Moreover, in some countries women have been found to be more efficient producers when using the same technologies and input as men. In projects, women are often open to use new techniques and eager to improve the well-being of their family. This provides a clear business case to reach out to women as it contributes to achieving food security.


An additional reason to include women is that they have a different role and impact on their family. In many G4AW countries, managing the household and raising children is the role of the woman. What is important to bear in mind is that money spent on men (in the form of income) does not necessarily trickle down to women and the family<sup>7</sup>. With the money a woman has access to, she is responsible to ensure there is enough food, clothes, and access to school for the family. This is why women play a crucial role in food security: research has shown that a 10\$ increase of a woman's income achieves the same improvements in the children's nutrition and health as an increase of a man's income of 110\$<sup>8</sup>.

Both the number of female smallholder farmers, their expertise as well as the impact they can have on food security for the family is an important reason to make the effort to include women and make gender the business case for success.

## Investing in equity is an important cornerstone

'95 to 97% of our cooperatives are led by men', explain Tu Anh Tran, Nhue Nguyen Cong, and Truong Tran Quang, of SNV Viet Nam. 'In our team, we include both men and women, but in farming communities, men mostly take decisions, both in cooperatives, farmers groups and households'. In the Enhancing Opportunities for Women's Enterprises (EOWE) project in Viet Nam, SNV works with the national and local governments, cooperatives and household to enable women to take a leadership role and enhance the position of women entrepreneurs. 'It is not always easy, but if groups see that it works well, they don't have problems [with female leadership]. Also, women share knowledge very fast within their networks, which increases the impact of our activities.'

'Investing in equity is for us an important cornerstone', explains Rik Overmars, Market Development Manager Agriculture of SNV. 'It is not easy to hire women trainers due to various reasons, but when we succeed, the women trainers are often our best'. EOWE is a project that is based on the Balancing Benefits approach that tackles gender inequality in a targeted way; addressing mechanisms that improve equity in decision making and income share, that enhance leadership and business skills, and encourage women in business. Specific gender focused action remains needed: 'We found out that only targeting women does not work, nor does mainstreaming as attention for interventions focused on gender often diminish as the project progresses.'

 More information can be found via: <http://www.snv.org/project/enhancing-opportunities-womens-enterprises-eowe>, <http://www.snv.org/update/how-farm-finance-skills-balance-benefits-women>, or in this video: <http://www.snv.org/update/new-video-snvs-gender-approach-balancing-benefits>



## A business case for young people

In 2012, more than half of the world's population was below 30 (Euromonitor International, 2012), with Asia hosting the largest number of young people worldwide, and Africa having the youngest population. Young people are a major stakeholder group. It is also most often the young farmers who abandon the trait and move to cities in search of a better livelihood. Contributing to secure their income is a great contribution to achieving SDG 2 and the aims of G4AW. Youth unemployment is 'a ticking time bomb' according to Zambia's finance minister Alexander Chikwanda<sup>9</sup>. For young women, it is more challenging to secure a job than for young men<sup>10</sup>.

Investing in youth brings not only benefits to the young population of the G4AW countries; It is said that young people adapt more easily to changes and new technologies such as G4AW services and tools and the use of social media. Use of internet depends on age and income<sup>11</sup>.

## Tailor made approaches work

As goes for each group of stakeholders, a specific approach is necessary to include women effectively, simply because their activities and opportunities differ from those of other stakeholders such as men and youth. A proper understanding of the participants and the context they live in from a gender perspective is essential if the products or services are expected to be used by those actually benefiting from the services provided. Singling out only men, or only women, is not the solution. An approach is needed where both women and men are seen, acknowledged, and integrated as active participants in the project as it provides more sustainable results with considerable impacts.

It is important to understand why a different approach is needed to integrate women. A one-size-fits-all approach apparently does not work, otherwise women would have been included in far larger numbers both as receiver and as user of G4AW information services in the past. Please find below the most important reasons generally accepted as bottlenecks preventing successful participation of women despite the context:



**Access to inputs:** Although it is a challenge many smallholders face, women farmers often have less access to seeds, fertilizers and equipment due to financial and cultural barriers<sup>12</sup>, and only 5% of

women across the globe have access to scientific research and new knowledge (extension services)<sup>13</sup>. Getting access to markets to sell goods is also a general challenge for smallholders, and especially for women due to physical and economical barriers<sup>14</sup>, also mentioned below.



**Access to finances:** Differing from culture to culture, on average women have fewer opportunities to secure loans from financial institutions because, for instance, they less often own land that can be used as collateral or they have less opportunity to travel. Furthermore, money in a household is often controlled by the male head of the household, which means that women may not always be given enough money to take care of their familial responsibilities. Thus, an increase in income for a man does not necessary equal an increase of money available for the woman. Only 10% of total aid for agriculture, forestry and fishing goes to women<sup>15</sup>.



**Access to mobile phones and internet:** Poor women in developing cities are 50% less likely to be connected to the internet than men in the same age group with similar levels of education and household income, thus restricting or preventing the use of social media. The World Wide Web Foundation found that among the urban poor internet users they surveyed, 97% uses social media, with eight out of 10 using Facebook<sup>16</sup>. For those with access to internet, use of social media strengthens their 'offline' social networks and support system<sup>17</sup>. Lack of know-how and high costs of mobile phones and services are the two main barriers keeping women offline. Moreover, culturally embedded structures and beliefs can hamper women to own mobile phones for example, or use the internet in public spaces.



**Time constraints and difference in tasks:** Women spend more time on the farm and doing household chores on average than men. Female farmers spend on average 16 hours on household and farming chores, leaving little time to attend training for instance<sup>18</sup>. Also, women often spend the most time on post-harvest activities. As the yield increases, their work will increase as well. Simple, practical advances in access to water, sanitation, electricity and clean stoves could make big differences to the lives of many rural women and girls as it frees up time for women to spent on other activities such as farming<sup>19</sup>.



**Public speaking and decision-making:** Some cultures may restrict women to attend or speak at public meetings, preventing them to participate or understand all information provided at the meeting. Also, men are often the decision makers in households. As women smallholder farmers spend a substantial amount of time on the farm and make up a large portion of the farming community, it is important to actively enable them to share their expertise in all phases of the project cycle and facilitate the use of services provided by the G4AW projects.

These are general statements that differ from country to country and region to region. This is why G4AW projects need to execute a gender analysis which will inform them and provide information to better define their outreach strategies and determine how their



### Small actions count

Best intentions can have adverse effects when one doesn't understand the culture. An example is a project where farmers received agricultural services via a phone. These were voice messages to enable all stakeholders, also the illiterate, to participate. A woman participated received a voice message on this phone. It was a man's voice speaking. At that moment, her husband entered the house. Furiously, he beat her thinking that she was cheating on him.

services and products could be developed in such a way to address specifically the needs of both men and women. A tailor made gender approach is necessary to successfully include both women and men as active participants. In order to carry out a gender analysis, the organisations mentioned in the database Partners for Gender G4AW can be very useful.



### Practical tips on how to include gender in your project

In the first G4AW Mid Term Review<sup>20</sup>, interviewed G4AW projects indicated that women smallholder farmers were underrepresented in their participants' pool and that they see opportunities to include more women in the coming years. A gender analysis was mentioned by most projects as a tool that could help to assess how their services, products and outreach could be developed in such a way to address specifically the needs of both women and men. Please find below several steps that can be undertaken by ongoing and future G4AW projects to include both women and men stakeholders.



**Jemimah Njuki,**  
researcher



*“The question if enabling women to better participate in agriculture leads to better yields, improved food and nutrition security and poverty reduction is a no-brainer.”*

### Understanding gender in your project

- **Understanding gender in your context:** In order to get a better understanding about gender or the different roles of men and women in the country you are working in, liaise with a few women's organisations or universities to get a proper overview and the most up-to-date information regarding women and food security. In most countries, gender analyses have been done, but they have not always been published. Since data are key or the core of G4AW, it is also important to try to find information about if and how women are connected, if they have means to access the information etc<sup>21</sup>. Check with your local partners or organisations listed in database Partners for Gender G4AW to see if they can help guide you in acquiring this information; they may also be able to provide you with other non-published but interesting and useful materials.
- **Perform a gender analysis:** One step further is to do a specific gender analysis in your project area. Different tools have been developed to carry out a gender analysis, for instance the clear guidelines of ACDI/VOCA (2012)<sup>22</sup>. Often there are gender specialists in a country who can carry out such an analysis, such as the ones from AgriProFocus, or you can find them through networks such as WOCAN or Femconsult<sup>23</sup>.
  - A gender analysis provides insight into the following questions:
    - What are the differences in activities of men and women?
    - What resources do they have access to in order to carry out these activities? For instance, are there differences between access to mobile phones or internet between men and women?
    - For G4AW it remains important to focus on the user: does a male user have the same needs as a female user?
    - What are the implications of the differences between men and women for the approach of your project? How is your service expected to impact women, and how is it expected to impact men?

### Extra efforts are rewarding

In the beginning, it did not seem that the East Africa Coffee Initiative was going to reach its gender targets. We aimed to ensure that at least 30% of the farmers trained were women. However, when we started some participation rates were as low as 6%. Additional efforts were needed to enable women smallholder farmers to enjoy our trainings. We noticed that the common belief was that 'Coffee farming is a men's job'. These held women back, preventing them to fully participate in farming and related activities. This depressed overall farm productivity and income. Enabling women to fully participate was needed to reach the project's aims.

Extra efforts that were taken to include women: the topic was discussed with communities at sensitization meetings. We asked husbands to bring their wives to meetings and invited the couples to explain why they attended together. In each group, a woman was elected to serve as either the focal farmer or deputy focal farmer. Training sessions were organised in places that were easy to reach for women, at times that enabled them to join and combine with their other tasks. Group members were also encouraged to bring their children to the sessions. Now, participation of women is up to 36%<sup>24</sup>.



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East Africa Coffee Initiative was set up to increase food productivity in Ethiopia, Kenya, Tanzania and Rwanda by sharing improved, climate-smart farming techniques, and is led by TechnoServe, a non-profit supporting the setup of competitive farms, businesses and industries. Between the launch in 2008 and completion in 2015, the initiative benefited 267,987 farmers, increasing their incomes by an average of 27 percent.

### Setting gender objectives

Setting clear gender objectives for your project is of utmost importance to enable equal participation of men and women. It helps you to become specific, to reflect upon the implementation tools you are using, to keep on track.

- Define with your team the aims of your project to enable both women and men to participate actively.

### Design

While designing your project it is important that women are included as specific stakeholders, thus if you discuss the design or implementation of your project with different stakeholders, make sure women are included and not only that, facilitate that their voices are being heard. This may influence the set-up of your programme, the budget allocation, and the tools you are using. But past experiences have shown that the advice of women can often be very efficient and effective. In case there are governing/decision-making bodies in your project, also make sure that a sufficient number of women participate. Research demonstrates that if women's participation reaches a critical mass of 30 - 35% there is a real impact on political style and the content of decisions.

- **Ensuring gender knowledge is present in the team.**  
Provide knowledge among project partners on analysing different roles and opportunities for men and women in particular contexts and look with creative minds for opportunities to involve women as active participants.
  - If this knowledge does not exist within a project, it is advised to work with (local) partners or experts. A list of potential local partners is compiled for every G4AW country and can be found via database Partners for Gender G4AW<sup>25</sup>.
- **Set up a specific approach and tools to include gender:**  
It is important to develop/include specific approaches and tools for both men and women, while taking into account the outcomes of the gender analysis. Please see the items under 'implementation' for inspiration.
- **Budget:** Make sure to provide sufficient allocation of resources in your budget to reach women and/or their organizations, as well as resources which will help enable women to participate actively, for instance through designing different tools or training.



**Nicolas Mounard,**  
CEO, Farm Africa (formerly Managing Director of Twin & Twin Trading)



*The business and development case is clear; investing in women can offer a high ROI and compelling consumer story - case closed!*



## Implementation

- **Adapt your tools to local needs:** local knowledge, or knowledge gained from the gender analysis, provide valuable information about the needs of men, women and perhaps young people. This gives a chance to adapt tools if necessary. Take into account (local) cultural differences that can support or hamper the uptake of the tools by stakeholders.
- **Location and time:** when holding (public) meetings with local stakeholders, ensure that women are invited as well, and that the training environment and timing fits the schedule of both women and men. For example, organise multiple short trainings instead of full-day ones, hold them at a central and apolitical place such as a church. Take into account how seasonal agricultural work influences the agenda of women and men.
- **Trainers and outreach:** Identify how many women and men work as local trainers. Female trainers can make it easier for women smallholder farmers to participate. It can be beneficial to make an effort to identify and reach out to women cooperative since working together with cooperatives ensures reaching more farmers efficiently. Ensure that women farmers can join the meetings and have opportunities to speak and use their knowledge/expertise as well.
- **Vocational trainings:** for instance, hold field demonstrations, role-plays, use radio shows or other methods to reach out and make information more accessible.

## Selection of female trainers works

In the East Africa Coffee Initiative 'program managers knew that in the rural East African communities where they were recruiting trainers, men typically have more self-confidence and greater experience, and thus are more successful in interviews'<sup>26</sup>. The solution the programme of TechnoServe came up with was inviting a large group of potential local trainers for the recruitment process. In 8 days, all participants were trained and at the end of the training assessed in a set-up where each participant trained a local farmer. This approach allowed the program managers to identify the best trainers, leading to women making up 39% of the project staff.

- **Include the household:** Aim to include both women and men in the trainings and demonstrations. This enables both to use your product, to make decisions together, while taking into account knowledge of both partners, and for both to understand the aims and activities linked to the project.
- **Loans and insurance:** Ensure that financial services provided can be accessed by women as well. If it appears few women make use of financial services, find out what prevents them to do so. It can range from necessary approval of their husband, difficulty to provide an id, to traveling the distance to the project office.



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### Monitoring

- For G4AW projects there are two reasons for monitoring, being reporting and product evaluation. Feedback on products by women may help you to tune the products to be better used by women
- For annual reporting, gender monitoring is also required. All G4AW projects need to collect data and report on women smallholder farmers, including, but not restricted to:
  - Total number of food producers that have been reached by services provided within the project
    - Of which are women
    - Of which are young (age <35)
  - Total number of people that have received training or education within the project
    - Of which are women
    - Of which are young (age <35)
  - Number of food producers with improved food production as a result of using the service(s) provided within the project
    - Of which are women
    - Of which are young (age <35)
- Something that can provide interesting insights and value for your project, but that is not required, is to monitor the outcomes or impacts of the project on men and on women. There is still little data on the impact on women smallholder farmers and research will thus contribute greatly to the existing knowledge base.

### Conclusion

On average, 46.2% of the agricultural labourers in the G4AW countries are women. This number is growing due to migration and cultural changes. If women have the same access as men do to resources like land, seeds, funding and knowledge, they will produce 20-30% more than they do now. Also money managed by women is most often invested in the family, contributing to food security of their children. This provides for a clear business case to make an effort to include women smallholder farmers as active participants.



There are many ways to include men and women on an equal footing in your project as showed in this publication. Often there is already quite some experience gained and lessons learned by women and organisations and in the G4AW countries. Try to get hold of these lessons, liaise with expert organisations such as those provided in the database Partners for Gender G4AW, so that you do not have to re-invent the wheel. Execute a gender analysis and do include women in the design and implementation of the project services. Success guaranteed!



### More women farmers lead to more sustainability

In Uganda, 75% of the women and 62% of the men are active in the agricultural sector. Women constitute the majority of people working in agriculture in Uganda. This is why the MUIIS project (Market-led User-owned ICT4Ag Enabled Information Service) finds it important to make an effort to include women as well as active participants in their projects.

‘We found that reaching out to women farmers is not only a key success factor but also an important contribution to the sustainability for our project’, indicates Carol Kakooza, Chief of Party of MUIIS Uganda, one of the projects. ‘All women smallholder farmers we speak with are eager to try anything that takes them out of poverty, while only 3 out of 10 male farmers we speak with join the programme’.

MUIIS has included women and youth as important stakeholders in their programme. They believe there is a big mutual benefit. Young people are interested in new technologies and learn easily, and women are eager to learn and are able to not only provide basic necessities like water and food but are also be in better position to take responsibility for their family’s wellbeing. The impact of helping them goes far beyond the personal level of the smallholder MUIIS works with. For example, Carol explains the impact a rise or fall in yield on the farm has on children: ‘We have had no rain in December and yields are low. Thus, we see less children going to school in January, due to lack of money for school fees’.


Including women requires a special approach. 200 MUIIS service Agents work all over Uganda to profile farmers and to explain the project. Of these agents, with representatives of all social and religious groups in Uganda, 42% are women. This helps in speaking with the women smallholders. ‘We live in a culture where opportunities are different for women. Women have been marginalised and often lack a voice. Yet, if we meet them in small groups of about 50 women, they voice great ideas’.




‘The project is ICT enabled, helping them to farm in better ways and have better yields’. For the project staff it is vital to adapt an approach to local realities: ‘We work hard to get a good insight into the profile of our stakeholders so as to know about the family situation and power relations between the spouses. We always ensure the inclusion of the whole family in the project; both wife and husband understand what the aims are; are comfortable with the use of a mobile phone, that the wife receives text-messages and goes to group meetings. We want to avoid situations where women suffer from domestic violence due to the use of new technologies. This can happen when a woman receives texts, being thought to come from another man, or when husbands have the feeling their wives will rebel when they receive more money directly in their pockets due to project benefits’.

Considering Agriculture as the backbone of the economy of Uganda, our economy stands to grow with women enabled as a key driver of agriculture. The MUIIS project pledges to achieve that through the introduction of smarter and more result oriented approaches.

MUIIS is an innovative project that uses the power of information and communication technologies and big data to support agricultural productivity in Uganda. It aims to establish a demand-driven, market-led, and user-owned extension and advisory service, using satellite based information services for: weather forecasting and alerts, crop management and agronomic tips and financial services - including index-based insurance to crop farmers in Uganda.

 For more information on MUIIS check <http://muiis.cta.int/>.

## Recommended Reading (in addition to references)

 All references and recommended reading can be downloaded from <http://g4aw.spaceoffice.nl/en/>

AcciVoca (2012) Gender Analysis Assessment and Audit Manual & Toolkit  
AGRIPROFOCUS (2014) Toolkit Gender in Value Chains  
Beuchelt (2016) Gender, Social Equity and Innovations in Smallholder Farming Systems: Pitfalls and Pathways, in Gatzweiler, von Braun ed. (2016) Technological and Institutional Innovations for Marginalized Smallholders in Agricultural Development  
CGIAR (2014) Gender and Inclusion Toolbox: Participatory Research in Climate Change and Agriculture  
CGIAR (2014) Review of gender and value chain analysis, development and evaluation toolkits  
CGIAR (2014) Standards for Collecting Sex Disaggregated Data for Gender Analysis  
CGIAR (2016) Gender Differences in Climate Change Perception and Adaptation Strategies: The Case of Three Provinces in Vietnam's Mekong River Delta  
Doss, Bockius-Suwyn, DSouza (2012) Women's Economic Empowerment in Agriculture  
Dutch Sustainability Unit (2014) Quick Reference Guide: Integrating Gender Equality in Climate-Smart development.  
FAO (2016) Migration, agriculture and rural development  
FAO (2011) The state of food and agriculture - Women in agriculture  
Farming First & FAO (2012) Female Face of Farming  
Fletcher, Kubik (2017) Women in Agriculture Worldwide: Key issues and practical approaches.  
G4AW (2016) A Business Case for Opening new Markets using Satellite Data for Smallholder Farmers and Pastoralists in Developing Countries: How 'Space for Food Security' works at the local level.  
Huyer (2016) Closing the Gender Gap in Agriculture  
ICCO (nd) Women as Business partner  
IFC (2013) Working with smallholders: A Handbook for Firms Building Sustainable Supply Chains  
IFC (2016) Investing in Women along Agribusiness Value Chains  
IFPRI (2012) Women's Empowerment in Agriculture Index  
IFPRI (2013) Reducing the Gender Asset Gap through agricultural development: A technical resource guide  
IICD (2015) Promoting Equal Chances for Women and Men  
IISD (2017) Promoting gender equality in foreign agricultural investments  
International Development Research Centre (2014) ICT pathways to poverty reduction: Empirical evidence from East and Southern Africa, Ottawa  
Land Governance Multi-Stakeholder Dialogue (2016) Strengthening Land Rights for Women  
SNV (2016) Gender in agriculture: Solution is Balancing Benefits  
TechnoServe (2016) Brewing Prosperity in East Africa  
UN Women (2014) Gender Equality and Sustainable Development,  
WOCAN (2016) A Study of Agribusiness Companies' Engagement in Women's Empowerment  
World Bank Group (2016) Feminization of Agriculture in the Context of Rural Transformations  
World Bank, FAO, IFAD (2009) Gender in Agriculture Sourcebook  
World Wide Web Foundation (2015) Women's-rights-online  
World Resources Institute (2016) Making Women's Voices Count in Community Decision-Making on Land Investments



## References

- <sup>1</sup> Doss, Bockius-Suwyn, D'Souza (2012) Women's Economic Empowerment in Agriculture: Supporting Women Farmers
- <sup>2</sup> For more information, please visit [g4aw.spaceoffice.nl](http://g4aw.spaceoffice.nl)
- <sup>3</sup> Pay attention to official statistics about the number of women. In many cases, only formal labour counts, while women are doing a lot of informal jobs in the agricultural sector. Therefore, often the numbers are higher than presented in the statistics.
- <sup>4</sup> FAO (2011) The State of Food and Agriculture 2010-2011, Rome
- <sup>5</sup> Huyer (2016) Closing the Gender Gap in Agriculture
- <sup>6</sup> FAO (2011) The State of Food and Agriculture 2010-2011, Rome.
- <sup>7</sup> WOCAN (2016) A Study of Agribusiness Companies' Engagement in Women's Empowerment
- <sup>8</sup> Farming first, FAO (2012) The female face of farming.
- <sup>9</sup> Africa Renewal, 2013, Special Report: The World's Youngest Populations, retrieved from <http://blog.euromonitor.com/2012/02/special-report-the-worlds-youngest-populations-.html>
- <sup>10</sup> World Bank (2012) World Development Report: Gender Equality and Development.
- <sup>11</sup> OECD (2015) Innovation for growth and society.
- <sup>12</sup> International Finance Corporation, World Bank Group (2016) Investing in Women along Agribusiness Value Chains
- <sup>13</sup> FAO (2011) The State of Food and Agriculture 2010-2011, Rome.
- <sup>14</sup> International Finance Corporation, World Bank Group (2013) Working with smallholders: A Handbook for Firms Building Sustainable Supply Chains
- <sup>15</sup> WOCAN (2016) A Study of Agribusiness Companies' Engagement in Women's Empowerment
- <sup>16</sup> World Wide Web Foundation (2015) Women's Rights Online Translating Access into Empowerment
- <sup>17</sup> International Development Research Centre (2014) ICT pathways to poverty reduction: Empirical evidence from East and Southern Africa, Ottawa
- <sup>18</sup> Doss, Bockius-Suwyn, D'Souza (2012) Women's Economic Empowerment in Agriculture: Supporting Women Farmers
- <sup>19</sup> UN Women (2014) Gender Equality and Sustainable Development
- <sup>20</sup> G4AW (2016) A Business Case for Opening new Markets using Satellite Data for Smallholder Farmers and Pastoralists in Developing Countries: How 'Space for Food Security' works at the local level.
- <sup>21</sup> Beuchelt (2016) Gender, Social Equity and Innovations in Smallholder Farming Systems: Pitfalls and Pathways, in Gatzweiler, von Braun ed. (2016) Technological and Institutional Innovations for Marginalized Smallholders in Agricultural Development
- <sup>22</sup> Acdi/Voca (2012) Gender Analysis Assessment and Audit Manual & Toolkit
- <sup>23</sup> The AgriProFocus network has been successful in bringing parties together to stimulate the sustainable development of agriculture in low and middle income countries in Africa and South-East Asia by supporting entrepreneurial farmers - <http://agriprofocus.com/intro>. WOCAN is a women-led international membership network of 1000+ women and men professionals and women's associations from 109 countries - <http://www.wocan.org/>. Femconsult consists of a multidisciplinary group of experts, applying a gender perspective when offering technical assistance and support to emergency and development related interventions - <https://www.femconsult.org/>
- <sup>24</sup> TechnoServe (2016) Brewing prosperity in East Africa
- <sup>25</sup> <http://g4aw.spaceoffice.nl/en>
- <sup>26</sup> TechnoServe (2016) Brewing prosperity in East Africa




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