




Catholic Agency for  
Overseas Development



# **Seed Systems and Gender Equality**



Recently harvested sorghum – a variety native to the Busia region.

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Cover photo: Caroline, a farmer from Busia County who specialises in growing and preserving seeds, and providing training on indigenous seed saving and storing.

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# Executive summary

**The world is back at hunger levels not seen for almost two decades<sup>1</sup> and is way off track to achieve the Sustainable Development Goal (SDG) 2 target of ending hunger by 2030.**

There is consensus among the international community that “to achieve zero hunger by 2030, urgent coordinated action and policy solutions are imperative to address entrenched inequalities, transform food systems [and] invest in sustainable agricultural practices.”<sup>2</sup>

At the same time, the world is making slow progress towards gender equality with only 15 per cent of SDG5 targets on gender equality on track for achievement by 2030.<sup>3</sup>

Women represent 43 per cent of the global agricultural labour force. As such they have the potential to hugely contribute to eradication of hunger. But their productivity is often less than that of male farmers because of social and economic barriers rooted in those entrenched inequalities. One of those barriers is access to seeds.

Seeds are the foundation of agriculture and the starting point of the food chain. Access to the right varieties of seeds is vital for achieving zero hunger, food security and for increasing incomes from agricultural production.

In many low-income countries, seeds are accessed through one of two systems. The largest is the farmer-managed seed system (FMSS) which provides 80 per cent<sup>4</sup> of farmers’ seeds globally, and is based on farmers’ own seed saving. Through the FMSS, farmers have access to a wide diversity of seeds that are adapted to their local environment and can evolve in response to changing conditions. This is vital for farmers’ resilience in the face of climate change, helping to secure their livelihoods.

The other sector is the commercial sector, in which government and commercial plant breeders develop and release new seed varieties, that are certified, regulated and sold through government or commercial outlets. Although this is by far the smaller seed system, it is steadily growing and is being actively promoted in low-income countries by international institutions such as the World Bank. A fundamental problem with this seed system is that the seeds are developed in isolation from the specific context where they will be grown, meaning that they are not always fit for purpose and do not easily adapt to changing climates.

Furthermore, the commercial seed sector is, by design, focused on the development of high-value commercial crops. This means women farmers and seed-savers in low-income countries are often left behind as they are more likely to grow crops for domestic use where there is little commercial value. The commercial sector is, therefore, not able to provide the crops women need or want to grow in the same way that the FMSS can.

At the same time, seed certification laws make it harder for the FMSS to operate, because they make it illegal for farmers to sell their own seeds. The result is that women cannot find the seeds they need in the commercial sector and cannot access them from the FMSS.

In 2023, CAFOD conducted research showing that the World Bank has made it easier for big agribusinesses to expand their role in markets around the world, to increase the availability of hybrid seeds and chemical fertilisers. Despite its mission to end extreme

poverty the Bank has systematically supported the expansion of the commercial seed sector through its funding instruments, and overlooked support to the wide range of farming systems that are essential to tackling poverty and the climate crisis.

In 2024, the World Bank Group (WBG) published its Gender Strategy 2024-2030.<sup>5</sup> The strategy presents objectives and outcomes to improve gender equality. It recognises the importance of the policy arena in influencing gender equity, including laws, regulations and institutions. It also identifies complementary roles for the private and public sectors in creating “market incentives toward greater inclusion and equality” and addressing the “structural conditions that drive inequality.”

It states:



*The conceptual framework informs WBG efforts to explore pathways to gender equality in different contexts. It creates space for local initiatives in tailoring solutions, adopting market initiatives, implementing policy, and learning lessons from monitoring and evaluation efforts.”*

In this report, CAFOD has analysed a selection of World Bank agriculture programmes from 2024 to assess their approach to gender. We found that they focused almost exclusively on promoting the commercial seed market and encouraging farmers to buy hybrid seeds and fertilisers. Yet they ignored the role of farmer-managed seed systems in enabling small-scale farmers to tackle poverty and enhance food security.

They also promoted changes to seed certification laws that have made it illegal for local communities to propagate, grow, exchange and sell their own seeds.

CAFOD’s analysis shows that the World Bank’s programming promotes the same model of agricultural development across multiple contexts and locations, undermining their stated goals of addressing gender equity through creating “space for local initiatives” and responding to different contexts.

CAFOD has worked with its partner BIBA-Kenya to conduct new research examining the gender impacts of seed laws like the ones promoted by the World Bank. This research investigated the concrete impacts on women seed savers within a community in Busia County (Kenya) of the introduction of seed certification laws and regulations that effectively make farmer-managed seed systems illegal.

By examining the impact of law changes from 2012, it is possible to assess how those same law changes being enacted now might affect women seed savers in other countries where the World Bank has pushed for seed certification laws, such as Zambia and Sierra Leone.

We also present a gender analysis framework to assess the impact of seed laws and policies on women’s access to seeds and we applied this framework to the case study in Kenya. This new research shows that:

- Women seed savers are adversely affected by the introduction of seed certification laws.
- Women farmers in particular are unable to afford seeds from the commercial sector.

- The changes in the law have affected the availability of traditional seed varieties and the quality of seeds women can access.
- The changes in the law have affected women's incomes and consequently their food security.
- The changes in the law have been detrimental to women in their role as seed savers, as well as to biodiversity conservation, cultural autonomy and gender equality.

We also applied the gender analysis framework to recent World Bank agriculture programmes, to try to understand how those programmes are assessed and whether any of the factors affecting gender equality in seed systems have been taken into account.

Once again, success has been measured by the Bank in terms of greater participation of the private sector in providing access to hybrid seeds and fertilisers, as opposed to measuring impacts based on poverty reduction or increased food security for poor farmers.

We show that the metrics the World Bank uses to measure the gender impact of its programmes are limited to counting the number of women reached and do not take account of wider social, economic and cultural factors affecting women's empowerment, their work in agriculture and their roles in their communities.

This minimalist approach to measuring the impact of their programmes reveals very little about whether the World Bank is succeeding in its stated aim of improving gender equality. But our research into the impacts of seed laws on women farmers indicate that they are not.

This report concludes with calls for the World Bank to change its approach to the design of its agriculture sector programmes, and in how it measures the impact of its work.

Its programmes should stop promoting restrictive seed laws and move to supporting farmer-managed seed systems.

Specifically, the World Bank should:

- Stop putting conditions on grants and loans demanding that countries align their seed regulations with mechanisms to protect proprietary seeds such as UPOV91 (see Box 2), effectively criminalising the FMSS.
- Recognise the role of small-scale women farmers as seed producers as well as seed consumers, and their role as conservers of vital biodiversity, through policy frameworks that support the conservation and use of diverse indigenous seeds. This could include supporting countries to develop laws and regulations aimed at the needs of the FMSS and encouraging more engagement from government actors to support the FMSS, such as seed fairs and exhibitions.
- Support market mechanisms that enable women seed savers to continue to sell their seeds, building their livelihoods and autonomy.

- Invest in supporting the FMSS and channel funding to support participatory plant breeding and other community level initiatives to protect and build crop diversity. This could include supporting government investment in training on seed saving; establishment of seed banks for indigenous seeds; and the creation of national databases of indigenous varieties.

The World Bank should also re-examine its mechanisms for assessing the gender impacts of its programmes, to ensure that its commitments to gender equality laid out in its gender strategy are enacted through its programme design. This includes:

- Reassessing how they measure the gender impacts of their projects, in particular moving beyond merely counting beneficiary numbers to actively considering how project activities interact with gender dynamics. This means applying a gender lens to its project design to assess whether a project reaches, benefits and empowers women.

The UK government, as a Board member and major shareholder in the World Bank Group, has a role to play in holding the Bank to account for the successful implementation of its Gender Strategy, to align with its own 'International Women and Girls Strategy 2023-30'. To ensure UK funding to the World Bank group is well aligned, the UK government should undertake a gender assessment of its funding to the World Bank, with a particular focus on the agriculture sector, in line with the International Development (Gender Equality) Act 2014.

# Introduction

**As 43 percent of the global agricultural labour force, women have the potential to play a vital role in tackling food insecurity, building climate resilience and ending poverty. Yet this potential remains largely unrealised.<sup>6</sup>**

There are multiple reasons for this, and while much is already known about the challenges women face – in acquiring land, equal pay and financial services – an issue much less discussed is the role of regulations and laws in shaping how they work in agriculture. This report aims to address that gap, by exploring the role that restrictive regulations and laws have played in limiting women's access to the fundamental building block of agriculture: seeds.

International institutions such as the World Bank have a key role in shaping the policy arena for seed regulation. This report takes stock of the World Bank's new Gender Strategy 2024-2030<sup>7</sup> which lays out ambitious objectives for achieving greater gender equality, and indeed recognises the importance of policy choices in influencing these outcomes.

For many decades, the World Bank has promoted changes in national seed regulations across many countries,<sup>8</sup> either directly through conditions on its loans<sup>9</sup> or indirectly through the influence it exerts over national governments.<sup>10</sup> These policy changes have facilitated the growth of the commercial seed sector.

CAFOD and its partner, BIBA-Kenya, have conducted qualitative research in Kenya, where the government passed new seed regulations in 2012, aimed at furthering understanding of what the impact of shifting towards commercial seeds has on women farmers. Given the length of time since the laws were passed, it is possible to see how they have affected smallholder farmers' access to seeds, and women farmers' access in particular.

There has been very little research conducted on this topic, and there is limited understanding of the impact of different seed systems on women's access to seeds. Programmes designed to improve smallholder farmers' access to seeds rarely include any gender analysis, or evaluation of gendered impacts of the programmes. However, when a gender-sensitive lens is applied to agriculture, it also has the potential to be a source of greater freedom and empowerment for women.

We hope that this report, presenting new research from Kenya, will contribute to improved policies, laws and regulations that affect women's empowerment and will inform future decisions by policy-makers in favour of gender-sensitive seed regulations.



# 1. Seed systems and their impact on gender equality

Caroline Anyona working on the land in Kenya.



Across sub-Saharan Africa, over half of women earn their livelihoods from agriculture.<sup>11</sup> But their productivity is often less than that of male farmers because of social and economic barriers. For instance, the World Bank's Gender Assessment in Zimbabwe found that women had limited access to land, finance and agricultural assets relative to men.<sup>12</sup>

Seeds are the starting point of the food chain. Access to the right seeds is vital both for food security and for increasing incomes from agricultural production.

But unequal gender dynamics often affect women's access to seeds. Research conducted around the world has shown that women and men have different roles in agriculture, which means they have different priorities when choosing what crops to grow and what seeds to use.<sup>13</sup> For instance, women may prioritise varieties that are easier to cook or store over varieties that are easy to harvest.<sup>14</sup>

Women also have different access to commercial markets, both for seeds and for the sale of produce.<sup>15</sup> This means that seed laws affecting commercial and farmer-managed seed systems have different impacts on women and men. This is why it is vital to examine the impact of seed systems through the lens of women farmers' particular experiences.

## Box 1: How do farmers access seeds?

In many low-income countries, seeds are accessed through two systems. These are sometimes known as the 'formal' and 'informal' seed sectors. In this report, we call them the commercial (formal) and farmer-managed (informal) seed systems.

The commercial sector (CS) involves government and commercial plant breeders who develop and release new seed varieties, that are certified and regulated, then sold through government or commercial outlets. In this system, seed for planting and grain for eating are distinct and separate.

The farmer-managed seed system (FMSS) is built on farmer-saved seeds, and the processes of variety selection, development and dissemination are integrated into farmers' production systems, rather than seeds being bought in as an external input. Seeds are chosen and developed based on farmers' own technical knowledge.



*Globally, farmer-managed seed systems provide up to 90% of the seeds farmers use."*

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## Seed systems through a gender lens

For seed systems to work for smallholder farmers, they must ensure the availability, and access to, seeds of appropriate variety and quality, and that smallholder farmers have control over their use.<sup>16</sup>

Applying a gender lens to seed systems means asking:

- Can women afford seeds and access them? – does the seed system **reach** women?
- Can women get the seeds they need or want, and do they have **control** over decision-making about seed use and income from seed use? – does the seed system **benefit** women?
- Is women's role within the seed system recognised and valued? – does the seed system **empower** women?

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## A gender lens:



### Availability

The commercial seed sector often fails to reach women in rural communities in low-income countries because it focuses on high-value crops for commercial production rather than crops for domestic consumption. As women face many barriers to entry into commercial markets,<sup>17</sup> they usually grow crops for home use, but the seeds for the crops women need or want to grow<sup>18</sup> in most cases are not available through the commercial sector. This is because seed

certification laws create barriers to the production of a wide range of seed varieties<sup>19</sup> and because seed companies may not see the commercial value in producing varieties for a small domestic market.



### Appropriateness

Governments often provide farmers with training and information through extension services which are aimed at improving agricultural production. However, government extension workers are usually men, who often overlook the role women play in producing food for domestic consumption and instead focus on men's role in producing for commercial markets. As a result, women often do not have access to the same information, training and support as men.<sup>20</sup>

Similarly, private sector actors only produce a limited range of seeds,<sup>21</sup> overlooking women as seed users, and failing to provide seeds they need. Because of this, women tend to rely on FMSS to learn about the qualities of seeds available to them.



### Access

The cost of commercial seeds can be a real constraint for women farmers, who often do not have control over cash within a household. As well as access to finance, social norms may limit women's ability to go to markets, further reducing their access to commercial seeds.

The expansion of commercial seed markets also affects women farmers because they are less likely to own land or other investment resources, which makes it harder for them to access credit to buy commercial seeds.<sup>22</sup>

On the contrary, a 2021 review of existing literature on women and seeds found that FMSS "reach women more easily as they circumvent the barriers of mobility and cash to buy seed."<sup>23</sup>



### Control

Women often do not have decision-making power, or control over the family's financial or other resources. This means they are less likely to be included in decisions about what to plant for the commercial market, where crops will be grown, whether for sale or home consumption and who does the work.<sup>24</sup> Men generally have control over deciding what crops to grow for the commercial market, while women play a major role in the FMSS including "in seed exchanges, selection, production, and storage, contributing to enhancing nutrition and maintaining crop diversity."<sup>25</sup>



### Empowerment

In the FMSS, women have played a vital role as seed savers and producers for many generations. This has been essential for conserving biodiversity and developing new resilient varieties.<sup>26</sup>

In the CS, however, the high costs of seed certification, and other barriers to entry, mean women are less likely to become seed producers. Eroding the role of women as seed savers, means they lose out on direct access to seeds and control over their own income, as well as improved food security. There is also evidence<sup>27</sup> that training women farmers in seed production increases their self-confidence and their status within the community as knowledgeable farmers.<sup>28</sup> This recognition and financial independence contributes significantly to women's empowerment.

## 2. The World Bank's approach to seeds and gender



Anna, a seed saver from Busia. In the background, an avocado fruit tree.

The World Bank's Gender Strategy 2024-2030<sup>29</sup> sets out the Bank's priorities for improving gender equity through its programmes. The strategy has three objectives:



*End gender-based violence and elevate human capital, expand and enable economic opportunities, and engage women as leaders.”*

The outcomes the Bank seeks to achieve under these objectives include:



*Greater ownership and use of economic assets... Wider access to and use of enabling services ...[and] Advances in women's participation in decision-making.”*

The strategy also acknowledges the need for actions to be “tailored to specific contexts”; and identifies the need for “policies, programs, practices, and behaviors that advance gender equality.”



*The conceptual framework informs WBG efforts to explore pathways to gender equality in different contexts. It creates space for local initiatives in tailoring solutions, adopting market initiatives, implementing policy, and learning lessons from monitoring and evaluation efforts.”*

Despite these commitments, the World Bank’s agriculture loans promote the same model of agricultural commercialisation across multiple contexts and locations, and push for the same changes in seed laws across different countries, without a comprehensive assessment of their impact on gender equality (see table page 11).

In 2023, CAFOD reported that the World Bank has repeatedly put conditions on its Development Policy Financing loans, requiring governments to open up their agriculture inputs sectors to private investment. It showed that the World Bank has required changes to plant variety protection and seed certification laws to align with the Union for the Protection of New Varieties of Plants (UPOV) 1991 regulations as a condition of their loans.

## Box 2: UPOV (International Union for the Protection of New Varieties of Plants) Convention

UPOV was established by a handful of European countries in 1961, with the mission to “...provide and promote an effective system of plant variety protection”.<sup>30</sup> Its purpose is to protect the inventions of commercial plant breeders, establishing intellectual property rights for plant breeders, called plant breeders’ rights (PBR). This protection is intended to encourage breeders to develop new varieties. However, UPOV does not provide similar protection to farmers for the varieties they develop.

Plant varieties that can be protected under UPOV must be: “(i) new, (ii) distinct, (iii) uniform, (iv) stable...”<sup>31</sup> The convention allows some exceptions to PBR. Protected varieties can be used “...privately and for non-commercial purposes”; for research; and to breed other varieties.<sup>32</sup> There is an additional **optional** exception, which permits “...farmers to use for propagating purposes, on their own holdings, the product of the harvest which they have obtained by planting, on their own holdings, the protected variety...” (Article 15, UPOV, 1991). This does not allow farmers to sell the varieties they develop.

The World Bank promotes this same model of agricultural investment through its other funding streams.

The table below shows a selection of loans approved under different funding streams in 2024.<sup>i</sup>

<sup>i</sup> The World Bank provides a database outlining the ‘prior actions’ a government must take before disbursement of Development Policy Financing. Unfortunately, similar databases do not exist for other financing mechanisms. This means that it is only possible to identify loan conditions or disbursement-linked indicators by examining every single project funded by the World Bank.

Country	Project Name	World Bank project design and conditions on financing	World Bank approach to gender and seeds
Liberia <sup>33</sup>	Second Inclusive Growth Development Policy Operation P175570	<p>The World Bank condition for disbursement of funds (known as a 'prior action') is:</p> <p>Approval of new Seed Development and Certification Regulations to "promote private sector participation in seed production and marketing".</p> <p>Funds will only be released after "...the Recipient has: (i) approved regulations to implement LSDCA Act; and (ii) has revised the National Seeds Policy."</p>	<ul style="list-style-type: none"> <li>Women are mentioned as being less productive than men when growing rice, but there is no gender disaggregation and no analysis of the gendered impacts of programme activities.</li> <li>The Project impact assessment acknowledges "Private sector participation in the seed market may, however, benefit disproportionately the well-off." But it does not acknowledge that poorer farmers are more likely to be women.</li> </ul>
Sierra Leone <sup>34</sup>	Third Productivity and Transparency Support Grant P169498	<p>The project includes a requirement of changes in seed certification regulations "to enhance private sector participation". The World Bank requires the government of Sierra Leone to create a Seed Certification Agency and prove the Agency is operating. "To enhance private sector participation and access to seeds for farmers, the Recipient has (a)...prepared and presented to Parliament the Seed Certification Agency Regulations and the Regulations have matured into law; and (b) established and operationalized the Seed Certification Agency..."</p>	<ul style="list-style-type: none"> <li>The project rationale for seed sector reform is that it will increase "access to seeds for all farmers especially women through increased private sector delivery." However, no evidence is provided for how the reform will increase women's access to seeds.</li> <li>Results indicators focus on the number of private sector seed and fertiliser companies licenced to operate, not on any benefits to farmers.</li> <li>The indicator on yield increases is not gender disaggregated.</li> </ul>
Zambia <sup>35</sup>	Growth Opportunities Program-for-Results Project P178372	<p>The World Bank conditions for disbursement of funds are:</p> <ul style="list-style-type: none"> <li>Completion of the Plant Breeders Rights Act. Verification that Zambia has done this will be through "Zambia joining the Union for the Protection of New Varieties of Plants (UPOV) which review confirms that the Act meets expected standards."</li> <li>Completion of the Plant Variety and Seeds Act</li> <li>Completion of the Fertilizer and Feed Act</li> <li>Completion of the Agricultural Credit Act.</li> </ul> <p>Fund disbursements "will be made against the evidence of approval of these Acts by the Parliament."</p> <p>The WB further stipulates that it should approve the draft law prior to its presentation to the Zambian parliament for approval. The WB has included this change in national law as a 'disbursement indicator', which means that funding from the WB to the Zambian government under the ZAMGRO project will not be released until Zambia complies with the WB's demands for changes to national laws.</p>	<ul style="list-style-type: none"> <li>Only 0.3% of the programme budget is allocated to mainstreaming gender, HIV/AIDS and governance issues in agriculture.</li> <li>Gender-sensitive programming includes provision of training and extension services to women farmers, but the only gender-disaggregated results indicator is for the number of women receiving extension services. While the number is set to increase, the percentage relative to total farmers stays the same, indicating no additional benefit for women farmers.</li> </ul>

Niger <sup>36</sup>	Livestock and Agriculture Modernization Project (LAMP)  PI79276	This project provides funding for “seed sector reforms to expand private sector participation in production and distribution of improved seeds. This will include institutional strengthening of the National Seed Committee and the official seed control and certification structure... to transform it into a National Agency for Seed Control and Certification.”	<ul style="list-style-type: none"> <li>■ The project document states that it will “particularly target women and youth”, setting a target of 45 per cent of beneficiaries being women. But there is no gender analysis in relation to seed sector reforms and no programme interventions targeted towards women.</li> <li>■ Key indicators are either not disaggregated by gender (e.g. number of ‘farmers reached with agricultural assets or services’) or not defined (eg for target of ‘women with strengthened food and nutrition security’ the “measurement method is under development”).</li> </ul> <p>The gender analysis section of the document recognises that women face barriers accessing seeds, but gender analysis is not incorporated into the seeds section of the project design.</p>
Chad <sup>37</sup>	Agribusiness and Rural Transformation Project  PI79238	<p>The project focuses on increasing access to ‘improved’ seeds and increasing fertiliser use. It includes a subcomponent aimed at “Creating an Enabling Environment for Agribusiness Promotion” including “creating and capitalizing a National Seed Fund for more sustainable management of Chad’s seed sector.”</p> <p>Farmers’ access to ‘climate-resilient inputs’ will be supported by an e-voucher scheme, enabling farmers to afford products supplied by private sector companies that would otherwise be too expensive for them – in effect a subsidy for the private sector.</p>	<ul style="list-style-type: none"> <li>■ Women and youth are targeted by this project. However, the results indicators suggest a target of only one third of total beneficiaries being women.</li> <li>■ The project document states that design of the e-voucher scheme will include “deliberate measures to ensure women farmers receive e-vouchers...” but the indicator for this element is not gender-disaggregated.</li> <li>■ The gender analysis section of the document recognises that women face barriers accessing seeds, yet gender analysis is not incorporated into the seeds section of the project design.</li> </ul>
Benin <sup>38</sup>	Agricultural Competitiveness and Export Diversification Project: Additional Financing  PI80505	This project focuses on the provision of agricultural inputs (seeds and fertilisers) and “the strengthening of the seed sector”. This includes funding for “capacity strengthening of the new national seed company to enable it to oversee and regulate the seed sector; ... promoting and strengthening private sector participation in the provision of seeds; and ... restructuring of the seed research, production, quality control, certification, and distribution systems.” Once again, the programme model is one of providing subsidy for private sector ‘improved’ seeds and fertiliser distribution.	<ul style="list-style-type: none"> <li>■ The project document states it will enact measures to enable wider participation by women such as quotas, waiving requirements to have land titles.</li> </ul> <p>Nonetheless, the results framework includes very few gender-disaggregated targets, and the project aims for only 27% of beneficiaries to be women.</p>

None of these programmes include:

- 1. Any comprehensive analysis of the impacts of seed sector regulation on women's access to seeds**
- 2. Any differentiated strategies for meeting the needs of women and men farmers**
- 3. Any assessment of the impact of changing seed laws on women's ability to access, or keep hold of, the seeds they want to use.**

Instead, the World Bank uses the metric of counting how many women are reached by the project – for example how many women were able to access the 'improved' seeds on offer through the subsidy scheme. This metric provides no information on whether those farmers gained increased incomes, or improved food security, or greater control over their resources.

This reductionist approach to measuring the impact of programmes is not analysing the agriculture sector projects using a gender lens, or designing them with any regard to their impact on gender dynamics.

The current World Bank 'one size fits all' model of agricultural development constitutes an obstacle to *"creating the space for local initiatives and tailoring solutions"* it claims to advocate for in its gender strategy.



### 3. How seed laws impact women: Kenya case study



Bibiana A Odour holds her recently harvested sorghum, a variety native to the Busia region.

CAFOD and BIBA-Kenya (Biodiversity and Biosafety Association Kenya) recently conducted research into how the introduction of a new seed law in 2012, known as the Kenya Seeds and Plant Varieties (Amendment) Act 2012, has impacted women's roles in seed saving in Kenya, where women constitute up to 80 per cent of the agricultural labour force.<sup>39</sup>

This law, introduced by the Kenyan Government, is similar to those promoted by the World Bank and is designed to regulate and strengthen the commercial seed sector. Examining the impact of 12 years of the seed law in Kenya can provide some insights into how the World Bank's programmes for 2024, such as those listed above, are likely to affect women farmers.

The research revealed that women farmers and seed savers are caught between the commercial and farmer-managed seed systems, to the detriment of their livelihoods, autonomy and even food security.

Kenya has a dual seed system comprising of both the commercial sector (CS), and the farmer manager seed sector (FMSS) (see Box 1).

The CS has undergone significant reforms in its seed laws and policies with the aim of improving agricultural productivity, and to align with international standards, including UPOV.

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*In Kenya, women constitute up to 80 per cent of the agricultural labour force.”*

One of the critical changes includes the enactment of the Kenya Seeds and Plant Varieties (Amendment) Act 2012, which aims to strengthen the regulation of seed certification, registration, and distribution. The legislation mandates that all seeds sold in the market must be certified, and it establishes strict penalties for the sale of uncertified seeds. Violating the provisions of the act renders the offender liable for a fine up to one million Kenyan shillings (KES 1,000,000) or imprisonment for a term up to two years, or both the fine and imprisonment.

The new laws are intended to improve the quality of seeds available in the commercial sector by regulating the market and reducing the circulation of counterfeit or substandard seeds. However, in practice, the regulations create challenges and barriers for small-holder farmers reliant on farmer-managed seed systems.

To understand the impact of these changes to the seed laws on gender equality, the research explored the views of different actors in the commercial and farmer-managed seed sectors.<sup>ii</sup>

Participants ranged from national policy makers to women seed savers. They were asked about any changes to women's role in seed saving, any impacts on cost, availability and choice of seeds and other questions to examine whether the changes have affected how seed systems reach, benefit and empower women.



*In most countries, seed marketing laws and policies do not include measures to foster local peasant seed varieties. The norms they establish are not adapted to the needs and realities of peasant seed systems and they create an insurmountable administrative burden for peasants.”<sup>40</sup>*

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## Women's role in the Farmer-Managed Seed System

There was agreement across all respondents that women are the main seed savers within the FMSS. Women and men may choose together the varieties to be grown for the family or community, but women do the work of saving, preserving, exchanging and selling seeds. Because of this, women are the ones considered most directly affected by the changes in the law.



*Since women are in charge of seed saving, they usually experience most challenges firsthand. It is the women who usually have to deal with the price hikes and at times unavailability of some varieties.” (WS1)*

However, respondents reported that usually men control the finances of the household, including the funds to buy seeds, and the use of any profit from selling seeds.



### Availability

Respondents agreed that availability of seeds has changed since the 2012 law was passed, both in the CS and FMSS. In the CS, there is “a continuous release of [new] varieties” (NPM) and “new hybrids coming up each planting season.”

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<sup>ii</sup> For details of the research methodology, see Appendix 1. All quotes are from research participants, unless otherwise stated.

(CSO1). However, some respondents also observed a decrease in the number of local seed varieties available, even reporting that some varieties are now extinct.



*There is limited variety: regulations can limit the availability of diverse seed varieties, hindering ability of small-scale farmers to grow crops suited to local conditions and preferences.” (CL2)*

Similarly, respondents felt that the quality of seeds has improved in the commercial sector, but declined in the FMSS. This is probably because of a lack of support and investment, and because of cross-pollination with hybrid varieties, making it impossible for farmers to find “pure-bred indigenous seed.” (FGD2).

Forty per cent of respondents saw a direct link between the expansion of the commercial sector and the reduction of seeds available in the FMSS.



*We have lost many local seed varieties for the last 20 years due to over emphasis on using the hybrid seeds. Local seed diversity has been lost...” (A1)*

## **Certification**

Seed savers are not able to rectify the decline in farmer-owned seed quality by getting their own varieties certified. Respondents reported many barriers stopping the certification of indigenous seed varieties.



*Compliance with seed regulations imposes costs on small-scale farmers, making it more difficult for them to compete with larger agricultural enterprises.” (CPM)*

The process is very expensive (costing KSHs 300,000 – approximately £1,775), which is more than most smallholder farmers can afford. It is also very bureaucratic, and lengthy.



*The requirements needed for certification such as high prices are impossible for small scale farmers and seed savers to meet.” (FGD2)*

**Farmers struggle to get their varieties certified because of the high cost, bureaucracy and long time-frame. But more importantly, the certification process is not designed for indigenous seeds.**



*For certification, varieties must meet the NDUS (novel, distinct, uniform and stable) requirements, yet farmers' varieties are the storehouse that meets the needs of humanity for food, medicine and clothes and must remain diverse. Consequently, most farmers' varieties are not registered.” (A2)*



### Appropriateness

Ninety per cent of respondents commented on the changing quality and variety of seeds available. Some saw positive changes, but others were concerned that varieties are being lost.



*The varieties have changed over time, whilst others have gone extinct. A good example is the cassava grown by the ancestors and native to the local land.” (FGD2)*

They highlighted the wide range of varieties that women seed savers hold, and expressed concern that this diversity was being lost. The importance of indigenous seeds for health, nutrition and to maintain cultural traditions was mentioned several times, alongside their environmental importance.



*The indigenous seeds have a higher nutritious value compared to the new hybrid varieties.” (FGD2)*



### Access

All respondents reported that the costs of seeds had increased in both seed systems. Commercial sector seeds are approximately four times the cost of FMSS seeds, and the choice of varieties is much more limited.



*The costs of seeds have increased especially during planting season – the prices of both commercial seeds and farmer seeds is high.” (WS1)*

Demand for indigenous seeds remains high, but fewer farmers are saving seeds because of fear over the new laws. This means that availability is low, and therefore prices are high.



*Because of poor access to credit, [women] may not afford to buy certified seeds as required by the seed law.” (SB1)*

Some farmers are forced to buy cheaper, lower quality seeds. Others rely on their own saved seeds to ensure higher quality than they could afford to buy.

But their incomes have decreased because they are no longer able to sell their seeds.



*We are sometimes unable to afford basic household amenities because of reduced income.” (FGD2)*

## Markets

A key factor affecting access to seeds is how markets operate. The introduction of regulations aimed at strengthening the commercial market has had a detrimental effect on the market for local seeds. Respondents reported that the new law has had a big impact on how the farmer-managed market for seeds operates. Although the laws do not stop farmers from saving their seed, the change in seed regulations has had a profound effect on women’s ability to sell seeds, effectively making it illegal for any uncertified seeds to be sold.

This, coupled with the difficulty farmers face in getting their seeds certified, and the fact that the certification process is essentially unsuited to the types of seeds available through the FMSS, means women’s access to markets for their seeds has been reduced. This has affected the availability of seeds in the FMSS.



*Women seed savers face challenges in accessing markets for their seeds, when regulations favour certified seed producers.” (CL1)*

Under the new law, farmers are allowed to save seeds, but are prohibited from selling them. As a result, women seed savers can no longer gain income from seed selling, but instead have to sell seeds as grains, at a much lower price.



*The law prohibiting the sale or even the exchange of seeds really weighs down the women involved in seed saving. The high penalties and jail term makes most of us indigenous farmers afraid to practice seed saving.” (SB1)*

No respondents reported knowing of anyone who had been arrested or fined under the new law. This indicates that even the fear of the penalties has a chilling effect on women seed savers.

Several respondents reported intimidation and harassment by government officials, including the imposition of taxes, when they tried to sell their seeds at local markets. They also reported restrictions on marketing of their products, making it much harder to advertise the qualities of their seeds.

All of this has stalled the market for indigenous seeds, and has reduced women’s incomes. It has also led to some women abandoning seed saving altogether (FGD2).



*Harassment by officials for selling the indigenous seeds is quite discouraging. The economic security that we had is being put to the test. Affording basic household items has become a challenge once again and having to fully depend on our spouses for the basics needs.” (FGD2)*

*Unwillingness of the market to purchase local indigenous seeds because of the imposed regulations has also contributed to the low sales and consequently the low standards of living.” (FGD2)*

The prohibition on selling also contravenes farmers’ rights as allowed under various international agreements signed by Kenya, and by Kenya’s own law.



### Control

There was agreement across all respondents that women play a key role in seed saving, but there were varying views about the level of decision-making and control they have over what seeds to use, because they often do not have control over finances.



*Finances to purchase new seeds is provided by the men.” (CSO1)*

Women also do not have control over other key assets, particularly land. This means they are unable to make decisions about how to use the land. More importantly, without land, it is impossible for women to meet the criteria for registering a seed variety.



*Seed production requires one to have available land of more than five acres to ensure isolation distance of crop in question is met. In many cases women do not own land....so it becomes hard for them to [produce] quality seeds.” (SB1)*

Many respondents felt that women had a lot of control over decision-making within the household and were able to choose what seeds to save.

However, there was broad agreement that smallholder farmers in general, and women farmers in particular, were rarely represented in decisions made at county or national level “leading to regulations that do not take their needs and perspectives into account.” (CPM).



*Women’s involvement in seed governance is minimal as they are mainly players in the “informal” (farmer managed) seed system that gets little recognition from the Government.” (A2)*



Group of farmers in Busia County, Kenya, showcase indigenous seed varieties harvested from the previous season.

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## Do the policies benefit women?

The changes in the law have made it harder for women to work as seed producers and sellers, and this has had an impact on their autonomy, incomes and even food security. The cost of certifying their seed is beyond the reach of most women farmers, but they cannot sell them in the FMSS.

“

*The hefty fines and jail terms have forced most of us to abandon the seed saving culture and tradition.” (FGD2) As a result, “women that previously had an income are now being rendered jobless.”*

The law change is reducing women’s incomes, and women’s ability to develop independent businesses. This reduces the money available for household necessities:

“

*The lack of seed sharing leads to hunger.” (FGD4)*

Some respondents recognised the potential benefits of the changes in regulations, citing protection from fake seeds and availability of new hybrid varieties, but even those respondents felt that the laws were not beneficial to small-scale farmers. This is because the new regulations are not designed for, or in any way suitable for, the FMSS, which is where most women farmers and seed savers operate. This means that the new laws do not benefit them and can be actively detrimental.

Respondents stated that policies do not address women's needs, and because women have to buy certified seeds, they cannot choose the seeds most suited to their needs (A1). They may also find themselves unable to comply with the law because lack of access to credit means they cannot afford certified seeds (SB1).



*The regulations are hindering these [small-scale] farmers from using their own local seeds. If the seed governance framework would allow for women seed savers to sell their locally produced seeds, the food production rate would be higher.” (A1)*

Respondents were also concerned that women were losing social support networks.



*Seed exchange and sharing provided a ground for socialization among our households in the community. Prohibiting these practices has created a social gap that previously did not exist.” (FGD2)*

The strong link between women's seed saving practices and culture was also stressed.

Several other issues were also raised several. For instance, many were worried about health, nutrition, food security and biodiversity, all of which they felt were under threat as a result of the seed certification laws. They observed that the new seeds were less resilient to pests, diseases and climate change than indigenous seeds. They also considered them to be of lower nutritional value, and less appropriate for the preparation of traditional foods.

Several respondents recognised the value of alternative seed sources such as community seed banks, and the important role of the Seed Savers Network, but everyone reported that these alternative networks are primarily supported by civil society and non-government organisations rather than government bodies.



*Seed saving and exchange had been imbedded in our cultural lives as farmers. Prohibiting the exchange of the seeds is essentially robbing us the people and especially women off of their culture.”*

(FGD2)



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## What do women farmers need?

There was consensus across all respondents that there needs to be more support for the FMSS. Many expressed concern that there has been unequal treatment of the commercial and farmer-led seed systems, and called for a review of seed laws to rectify this injustice.

“

*Unequal government regulation...that impacts negatively on farmers' rights must be reviewed.” (A2)*

“

*Allow the sale of indigenous seeds...Do away with laws that oppress us small scale farmers.” (FGD2)*

Many called for changes to certification processes to make it possible for farmers to get their varieties certified.

“

*The government should also recognise farmer-managed seed systems or the non-certified seeds and create policies to protect them...Government should support the seed savers in marketing their seeds to farmers just as they promote commercial seeds to farmers in the region.” (FGD1)*

Limitations were also recognised within the FMSS, including the quality of seeds available, and therefore called for more interactions with research centres, more support for farmer innovation and more training, especially for women farmers and seed savers.

Demands were made for more gender-sensitive and women-focused policies and actions, including “to enhance women’s access to land, credit and agricultural inputs” (CSO2) and to promote women’s engagement in decision-making processes.



Indigenous seed varieties harvested from the previous season. Busia County, Kenya.

## 4. Pathways to empowerment through seed systems



Salina Begum  
seed saver from  
Gorasin village  
in Bangladesh.

Within farmer managed seed systems, women can control seed selection and crop diversity and as a result contribute to greater food security and improved nutrition. This approach also improves their incomes and status through their role as seed producers. The experience of women in Bangladesh, supported by the research organisation, UBINIG, illustrates how this alternative approach to managing seeds is working in practice.

### Women's experience from Bangladesh



*To keep the seeds in our own hands is the main thing. Without seeds, being a farmer is not possible.* Salina Begum, Gorashin Village, Tangail

Small scale farmers rely heavily on Farmer Managed Seed Systems (FMSS) for agricultural production in Bangladesh, with the commercial sector providing only around 30% of seeds.<sup>41</sup> Women remain the primary keepers of indigenous seed and hold vast knowledge of the traits of different varieties and the agroecological conditions necessary to fully express those traits: productivity, nutrition and taste.

*Nayakrishi Andolon*, a movement of small-scale farmers practising agroecology-based agriculture, is mainly led by women. "Sisters keep seeds in your own hands" is a slogan of *Nayakrishi* farmers.

This approach is based on carefully selected local seeds and emphasises the critical role seeds and genetic resource conservation play in ensuring food sovereignty and the nutritional needs of the community.

Alimon Begum a small-scale farmer of Sirajganj district says:



*We don't use outside seed. We have more confidence in seed maintained in our hands."*

At the heart of this approach is a women-managed network of Community Seed Wealth Centres (CSWC), village-level seed huts, and farmers collecting seeds in their homes. This has resulted in a huge variety of crops available in the network. The *Nayakrishi* farmers in Bangladesh have a collection of 2,252 rice varieties, 352 vegetables of different kinds, and about 1,000 other seeds of lentils, pulses, oil, fruits, flowers, timber, and spices as of March 2023 in the Community Seed Wealth Centres.<sup>42</sup>

Farmers' groups have been formed based on their specialisation. They are actively collecting and preserving the seeds, seeking out those that are disappearing and those that can withstand disaster situations. They share and exchange seeds among themselves, enhancing their genetic resource base.

Salina Begum of Gorashin Village, Tangail adds:



*To keep the seeds in our own hands is the main thing. Without seeds, being a farmer is not possible. When there is heavy rain the chemical farmers who bought seeds from outside don't have any options. Because they bought the seeds, they already spent their money on seeds and cannot buy new ones. Seeds should be in the farmer's house, so there is always a backup. Seeds should be stored in a collective way as well. If I have 7 or 10 varieties of seeds, other farmers should have the other 15 or 20 varieties, and we should develop relationships and exchange seeds with each other. Diversity is very important, because then you have no risks. If one crop is damaged, another crop will survive. And one farmer alone cannot maintain that diversity."*

Women who preserve seeds play an instrumental role in their communities as they decide which seasonal crop seeds to save and share them with their husbands and other male family members. On the contrary, with corporate seeds, men buy the seeds and go to the field and therefore exclude women from the decision-making process.

The contribution of women seed savers to the maintenance of food security for their communities is significant but so too is their contribution to the Bangladeshi economy.

Bangladesh is the third-largest producer of rice globally, reaching about 37 million tonnes in 2023.<sup>43</sup> Seeds from Farmer-Managed-Seed-Systems (FMSS) account for approximately 85 per cent of the total seed supply for rice in Bangladesh.<sup>44</sup> The remaining 15 per cent is from commercial seeds.

# Conclusions and Recommendations

The research conducted by BIBA-Kenya and CAFOD has shown that new laws aimed at expanding the commercial seed sector create a seed system that fails to reach, benefit or empower women. In particular it found:

- Introducing seed certification laws aligned with UPOV91 undermines women farmers' livelihoods and rights.
- The unequal promotion of commercial seeds has adversely affected women as seed producers and users, accelerating gender inequality and undermining local climate resilience and food security.
- Fair access to seeds is vital for promoting gender equality in a context where a significant proportion of food producers are women.
- Supporting strong farmer managed seed systems is vital for gender-sensitive access to seeds.
- Promotion of commercial seeds has come at the expense of farmer-managed systems, and has undermined attempts to protect indigenous seed varieties.

It demonstrates that:



*The push to introduce a legal and regulatory framework designed for the industrial seed system (monoculture-based, chemical input reliant and intensive) in African countries encroaches on peasants' right to save, use, exchange and sell farm-saved seeds enshrined in UNDROP.” (Article 19.1d)<sup>45</sup>*

The World Bank's approach does not recognise farmers as seed producers, and does not take account of the central role of women in seed development in many countries across Africa, Asia and Latin America. As a result, its policies fail to deliver on its stated commitment to gender equality and improving women's livelihoods.

However, the World Bank could support both the CS and the FMSS. Building on the recommendations of the research respondents in Kenya, the World Bank should:

- Stop putting conditions on grants and loans demanding that countries align their seed regulations with UPOV91 (see Box 2), effectively criminalising the FMSS.
- Recognise the role of small-scale women farmers as seed producers as well as seed consumers, and their role as conservers of vital biodiversity, through policy frameworks that support the conservation and use of diverse indigenous seeds. This could include supporting countries to develop laws

and regulations aimed at the needs of the FMSS and encouraging more engagement from government actors to support the FMSS, such as seed fairs and exhibitions.

- **Support market mechanisms that enable women seed savers to continue to sell their seeds, building their livelihoods and autonomy.**
- **Invest in supporting the FMSS and channel funding to support participatory plant breeding and other community level initiatives to protect and build crop diversity. This could include supporting government investment in training on seed saving; establishment of seed banks for indigenous seeds; and the creation of national databases of indigenous varieties.**

The World Bank should also re-examine its mechanisms for assessing the gender impacts of its programmes, to ensure that its commitments to gender equality laid out in its gender strategy are enacted through its programme design. This includes:

- **Reassessing how they measure the gender impacts of their projects, in particular moving beyond merely counting beneficiary numbers to actively considering how project activities interact with gender dynamics. This means applying a gender lens to its project design to assess whether a project reaches, benefits and empowers women.**

The UK Government, as a board member and major shareholder in the World Bank Group, has a role to play in holding the Bank to account for the successful implementation of its Gender Strategy, to align with its own 'International Women and Girls Strategy 2023-30'. To ensure UK funding to the World Bank group is well aligned, the UK Government should undertake a gender assessment of its funding to the World Bank, with a particular focus on the agriculture sector, in line with the International Development (Gender Equality) Act 2014.

## Annex: Methodological notes and datasets

The study focuses on Luhya community in Busia County of Kenya, which has a population of 893,861 and spans about 1,700 square kilometres.<sup>46</sup> The population is primarily from the Luhya community, with small communities of the Teso and the Luo. Busia County experiences both short and long rains thus making farming the main source of livelihoods, leading to the development of a diverse range of seed saving practices that reflect both the community's cultural heritage and the agricultural diversity of the region.

### Study design

The study used qualitative research methods, including Key Informant Interviews (KII), Focus Group Discussions (FGD), direct observations, seed savers and farmers' personal testimonies, and learning from seed savers and learning centres in Luhya community. FGD participants were drawn from community seeds saving and learning centres supported by the Busia Environmental Management Programme (BERMA) and Transcommunity Organisation (Transcom), two civil society organisations working locally with the Luhya community. These centres have approximately 260 members.

Each FGD involved between eight and fourteen participants of whom at least 80 per cent were women and 20 per cent men aged 18 years and above. Four FGDs were conducted.

Fourteen KIIs were conducted: two with women seed savers, two with CSOs working locally with the community on seed saving, two with learning centre leaders, two with county agricultural extension officers, two with agriculture and seed saving activists, one with a lawyer, one with a commercial seed breeder and two with national and Busia County policy makers. These interviews have all been anonymised and quotes from interviewees are referred to in the text by a number and letters assigned to each respondent.

Semi-structured interview guides were used in the KIIs and FGDs. The study also utilised systematic observations and case studies or testimonials to collect additional data. The data was coded and interpreted using thematic analysis methods.

Focus Group	Women	Men	Youth	Total
1	8	2	3	10
2	9	5	6	14
3	7	1	1	8
4	8	2	1	10

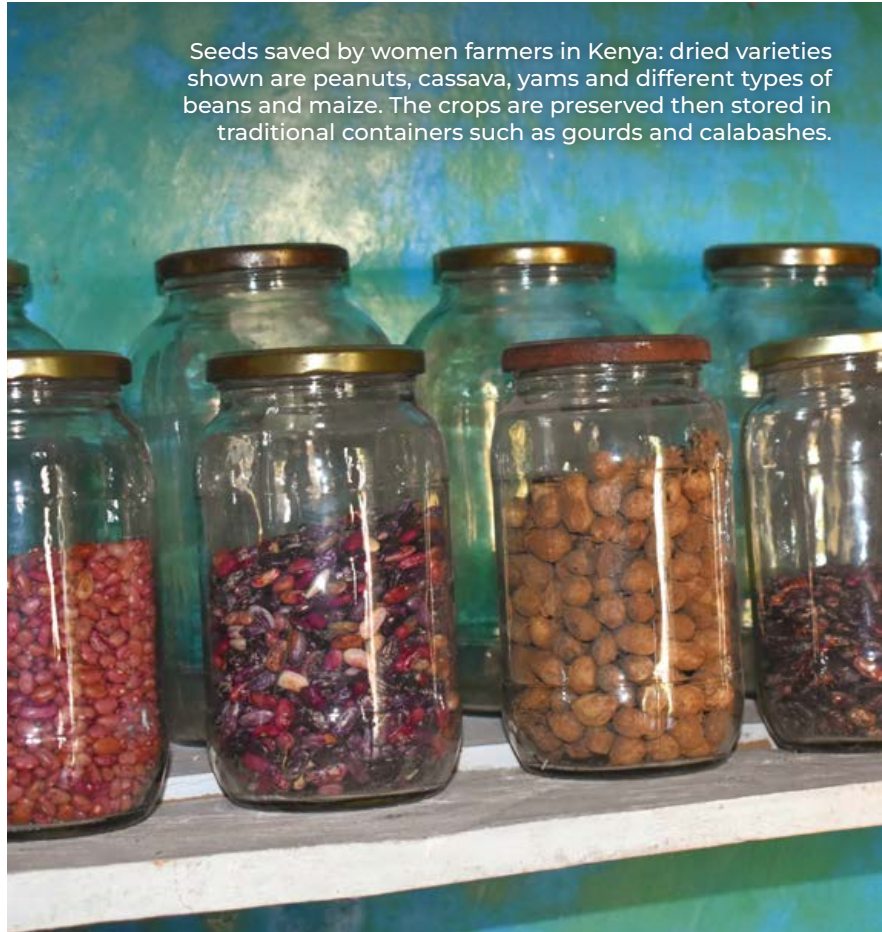
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Seeds saved by women farmers in Kenya: dried varieties shown are peanuts, cassava, yams and different types of beans and maize. The crops are preserved then stored in traditional containers such as gourds and calabashes.



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