

Gender- Transformative Adaptation

From Good Practice
to Better Policy





Introduction

Gender inequality is one of the most pervasive threats to sustainable development. It has negative impacts on access to, use of and control over a wide range of resources, and on the ability to fulfil human rights.

It is also a determinant of exposure to climate change risks as women and girls are more vulnerable to the impacts of extreme events. Good adaptation provides options to manage these risks. To address gender inequality, an amplifier of risk, adaptation must therefore address gender-based vulnerability. In the area of agriculture, gender-transformative adaptation can enhance food and nutrition

security and bring other benefits such as increased socio-economic wellbeing and poverty reduction. New approaches for gender-transformative adaptation have been developed and piloted in different contexts, leading to the emergence of a body of learning and knowledge on how to integrate gender into adaptation practices, both at community and institutional levels. This short paper draws

on experience and learning from projects implemented by various development actors interested in gender transformation in adaptation. The paper describes where transformative change in gender relations has been sought and secured in adaptation initiatives and offers pointers for development actors and policy makers.



Credit CARE/Mildrède Béliard

What are the challenges in climate change, agriculture and gender?

Climate change impacts women, men, girls and boys differently.



Women tend to be relatively more dependent on the products of their local production systems for their food security, fuel and other products and services, and thus more vulnerable to the local-scale effects of climate change.

Women, boys and girls are 14 times more likely than men to die during natural disasters. 70% of fatalities in the 2004 Asian tsunami, and 96% in the 2014 Solomon Island floods were women and children (FAO 2018). And in agriculture, the adverse effects of climate impacts, together with unprecedented biodiversity loss and environmental degradation, pose serious threats to food security and nutrition, especially for small-scale women food producers who are at significant disadvantage. Women tend to be more dependent on the products of their local production systems for their food security, fuel and other products and services, and thus more vulnerable to the local-scale effects of climate change (FAO 2017). They face widespread discrimination in the distribution of assets, services and information – such as secure and adequate land, credit, training, employment opportunities, mobility, climate and market information services, inputs and technologies

(Simelton and Ostwald 2019). Women also have limited decision-making power – and are often excluded or marginalized from governance institutions and policy-making processes. The roles and rules in producing, processing (including cooking) and marketing food are often divided along gender lines (CARE and FAO 2019) and imbalanced gender relations result in time poverty for women. Patriarchy, pervasive stereotypes about men and women's rights and roles, traditional values and cultures, and prevailing economic models combine to reinforce male-centred food and agriculture systems which address women in their stereotypical roles and undervalue their contributions to the economy (CARE et al 2015). To fulfil gendered productive and reproductive responsibilities and obligations women may have an interest in, depend on, and manage natural resources while neither having the right to, nor being entitled to, control these same resources (Jerneck 2017).



In the agriculture sector, where significant adaptation work is carried out, the integration of gender equality is often based on token activities and commitments to disaggregation of data by sex.

What is the core problem at the gender-adaptation nexus?

Adaptation strategies have frequently ignored the dynamics described above. Climate change impacts are substantially gender-differentiated, but not well documented, partly because the area has been dominated by a physical sciences approach in which social scientific approaches have struggled for acceptance (UNEP 2016). Research and related action on the different ways in which boys and men also impact and are impacted by climate change, as victims of environmental degradation, and as agents of change alongside women and girls, is also scarce (Kato-Wallace 2016). The result is that existing inequalities can be ignored and even be exacerbated when gender and power imbalance are neglected in design of programming.

While development partners and governments increasingly recognise gender inequality as a significant barrier to sustainable agricultural development and climate resilience, practice remains inconsistent. In the agriculture sector, where significant adaptation work is carried out, the integration of gender equality is often based on token activities and commitments to disaggregation of data by sex. Some programmes are sensitive or at best responsive to gender-related vulnerabilities – but generally do not seek transformative outcomes by challenging gender

norms and power imbalances. Fund mechanisms often require the identification of gender issues and actions in plans; the inclusion of gender and social inclusion analysis in design; increased participation by women in decision-making; collection of disaggregated data; strengthening of national women's agencies; dedicated budget for technical expertise in gender; and capturing gender and social inclusion in monitoring, evaluation and reporting (CARE 2018a). Despite this, and increased focus on gender equality in international climate change agreements, commitments by both donors and governments to invest in and develop climate change policies and programmes that address gender inequality remains varied and inadequate (CARE 2018a, 2018b). Adequate budget and technical expertise is generally not provided to ensure gender considerations are integrated throughout project cycles, and in many cases gender and social inclusion issues are addressed superficially, only considered within a vulnerability context and are not linked to accountable monitoring and results.

This paper demonstrates that to move beyond 'sensitive' adaptation and to maximise opportunities for increased equality and empowerment, programming must take deliberate and measurable steps to respond to and transform unequal gender relations and power structures.



Credit CARE/Josh Estey

Impacts of gender-related norms, barriers and power imbalance

AGENCY: Women sometimes lack confidence to haggle at markets or sell farm produce without their husband's permission or presence. Women-headed households have difficulties clearing up after storms and typhoons; cutting or removing trees, repairing roofs of houses, or securing livestock takes scarce time from other farming and household practices. Women's voices in public meetings are often not solicited and women hold fewer leadership positions.

STRUCTURES: In many countries, farmers (women and men) are not protected by parental leave legislation or social safety nets. Women have often no choice but to return to work soon after delivery, compromising their health and that of their child. Customary laws for performing certain practices or owning land are often gendered, mostly to the disadvantage of women, that otherwise could enable interchangeable labour division. In many parts of the world, girls' equal opportunities to education are compromised and they are often taken out of school before boys during lean seasons, or during menstruation.

POWER RELATIONSHIPS: Men who migrate for seasonal labour, may continue to remotely control farm decisions with their remittances. Women have no choices but to stay on the farm (men also may have no choice but to migrate for labour), meaning their own sources of income are limited. Women are often restricted from engaging in local governance, have limited decision-making power and have to defer to male community leaders to make decisions that may affect their lives profoundly.

Central elements of a transformative approach in agriculture must surely comprise altering the way that women and girls are perceived and supported, which requires challenging gender norms and barriers and systemic power imbalance.

What is transformative adaptation – and what is gender-transformative adaptation?

Transformation in adaptation remains vague and has plural definitions (Vermeulen et al 2018). In agriculture, transformative adaptation has been defined as intentional alterations in response to climate change-related risks that accomplish one or more of three goals of;

- Shifting the geographical locations where specific types of crops and livestock and the systems that support their production, processing, marketing, and distribution take place;
- Altering the agricultural landscape as a result of changes to many aspects of food production and marketing systems, and;
- Application of new methodologies and technologies that change the types of agricultural production in a particular region or system (Carter et al 2018).

This is based on the critique that many interventions aim at short-term, incremental adjustments to specific aspects of crop or livestock production that do not deliver transformative outcomes. But this and other such definitions do not explicitly address gender inequality (or social inequity) as a variable that needs to be tackled. Central elements of a transformative approach in agriculture must surely comprise altering the way that women are perceived and supported, which requires challenging gender norms and barriers and systemic power imbalance. It requires removing all forms of discrimination against women and the barriers to women's empowerment in order to change the legal and institutional frameworks, and the recognition and realisation of women's social, economic and political rights.

Other definitions of transformative adaptation vary from similarly articulated changes in cropping locations through to substantial redesign of global food systems to meet societal goals for environment, livelihoods

Transformative adaptation approaches move the analytical focus of transformation research from ‘accommodating change’ to contesting the underlying social, political, and economic structures that produce marginalisation and inequality.

and nutrition (Vermeulen et al 2018). What is lacking, it seems, but more appropriate, is an interpretation based on human geography and political ecology perspectives on vulnerability to climate change. In this view, transformative adaptation approaches move the analytical focus of transformation research from ‘accommodating change’ to contesting the underlying social, political, and economic structures that produce marginalisation and inequality (Blythe et al 2018). Since the emergence of adaptation in agriculture, interventions have focused on bio-physical and technological solutions, while the socio-political and economic structures and processes that underpin vulnerability have been neglected. Differential vulnerability to climate change, and diverse forms of marginalization (or ‘intersectionality’, where gender inequality is experienced in different ways depending on class, ethnicity, age, sexual identity etc.), have largely been ignored. Learning presented below makes a case for tackling this differential vulnerability and thus delivering transformation. There are risks, and the challenge of backlash at household, community, and other public levels, in response to women becoming more empowered requires careful attention. This requires working with men and boys at all levels and stages in the course of interventions. There is also a need to consider women and girls’ use of time and ensuring that increased participation in agriculture work does not add to burdens or exacerbate unequal division of labour.

the system, or transformative; serving to fundamentally change system attributes. Gender-transformative approaches create opportunities for individuals to actively challenge existing gender norms, promote positions of social and political influence for women, and address power inequalities between persons of different genders (CARE and FAO 2019). To bring this about, it is critical to address women’s agency (capacities, skills, confidence), the relationships of power that affect their choices (particularly household relationships and community groups), and the structures (such as agriculture and market institutions, land policies, social norms) that govern their lives and choices (CARE 2018c).

Effectively, adaptation must address gender regimes that regulate access to, use of, and control over resources, especially those defining land distribution, labour division, and strategic decision-making power

(Jerneck 2017).

Addressing issues such as mobility, men’s and women’s attitudes towards equitable roles in family life, women’s participation in public life, and men’s participation in domestic tasks – along with changes in women’s productivity, incomes, and access to markets and services thus become important. Identifying and acting on intersectionality is also essential for transformative outcomes. Finally, it is important to note that the risks of not addressing gender inequality within adaptation programming are significant. Sustainable outcomes would not be secured as power imbalances would eventually negate short term gains. The failure to identify barriers (people, laws or institutions) will simply sustain existing inequalities such as in land tenure or resource-use rights. More serious risks are that marginalisation of women would be accentuated or that unintended consequences of adaptation would place women at risk of violence or abuse. Adaptation thus has a responsibility to advance gender equality. This can be achieved through activities targeting changes in the three domains of; building agency, changing gender relations and transforming structures. The table below – based on the Gender Equality Framework (CARE 2018a) illustrates how each of these domains translates into practice.

Gender-based violence

Climate change-related disasters are associated with increases in gender-based violence (GBV), though much of the evidence in post-disaster settings in the developing world comes from studies examining disasters not directly related to climate change. A notable exception is work done after flooding in Bangladesh, which found extremely high incidences of violence against women after 2007 flooding, particularly among disadvantaged groups such as sex workers and the disabled. Recent work from Bangladesh notes that violence against women has increased in response to the effects of climate change. Increases in violence against women after climate change-related disasters have also been documented in Vietnam (Sellers 2016 – Global Gender and Climate Alliance).

Routes to Gender-Transformative Adaptation

Adaptation can be incremental; making changes in the way people act but maintaining

BUILDING AGENCY: Build confidence, self-esteem and aspirations of both men and women, in addition to the knowledge, skills and capabilities they need to thrive.

CHANGING RELATIONS: Transform the power relations through which men and women live their lives through intimate relationships and social networks, through group membership and activism, and citizen and market negotiations.

TRANSFORMING STRUCTURES: Support the transformation of discriminatory social norms, customs, values and exclusionary practices (all within the non-formal sphere), and laws, policies, procedures and services (in the formal sphere).

Integrating gender-transformative actions in climate responses is challenging without resources. But lack of knowhow on the part of practitioners should no longer be excusable. In the following pages, we illustrate where

adaptation in agriculture interventions have resulted in gender equality and the empowerment of women through the building of agency, the changing of relations and the transformation of structures.

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Improving access to means of production for women results in higher yields

Agri-Fed is a UN Women project in Mali working with 25,000 women farmers focused on building capacity and agency on sustainable and modern production systems in market gardening.

Village chiefs and other community leaders and members were invited to video screenings on issues women farmers faced across the country, enabling strengthened land tenure for women. These videos featured well-known Malian comedians and other public figures and created an environment conducive to reflection and discussion on sensitive themes more difficult to address in formal contexts – an approach that also facilitated widespread multi-stakeholder dialogue, awareness-raising and acceptance of the project and its goals.

The project engages in advocacy to promote both behavioural and structural change that supports women's access to land and other means of production. It also enhances women's access to finance by building stronger financial management and saving skills, and working on group relations to stimulate collective investment in agriculture and promote access to markets by improving women's access to information on prices and on product demand.

Transformative approach: Central to the project's success is its holistic approach – prioritizing national ownership; drawing on local resources; selection of crops that women manage directly; building on women's knowledge; strengthening women's capacity to upscale initiatives through access to credit; involving women at all stages and; engaging local role models and public figures to catalyse critical thinking on gender-related behavioral change. For example, village chiefs and other community leaders and members were invited to video screenings on issues women farmers face, enabling strengthened land tenure for women. The videos featured well-known Malian comedians and other public figures and created an environment conducive to reflection and discussion on sensitive themes more difficult to address in formal contexts – an approach that also facilitated multi-stakeholder dialogue, awareness-raising and acceptance of the project and its goals.

Impact: Building on women's existing knowledge, agency and capacities, the project has engaged 3,851 women farmers through field schools and, within two years of implementation had secured the availability 208 hectares

of land. The establishment of quality seed nurseries; production and use of bio-pesticides; diversification of crops and introduction of agroforestry; soil restoration and improved management of water resources have resulted in increased yields and women report better water-use-efficiency, better seeds for production, and extended shelf life of crops. To meet credit constraints, women receive basic financial and savings education and training on how to access loans and negotiate with financial institutions. Groups of women save and lend together. As the lack of guarantees and credit history constrain financial inclusion for most groups, the project identifies financing needs and women's ability to repay. Partnership with the Agricultural Bank of Mali has allowed groups to directly access bank loans on terms more advantageous than those of microfinance institutions. Women have also begun to effectively use mobile technical applications for access to climate information to make informed production decisions. The project engages a platform, Buy From Women, which is a mobile-based supply chain data system that connects women farmers to markets and provides them with information on financing opportunities and financial structures with real-time information on the groups of women or individual companies registered on the platform.

Capacity building results in increased decision making among women

The Kenya Cereal Enhancement Programme-Climate Resilient Agricultural Livelihoods Window (KCEP-CRAL) was conceived to improve the livelihoods and climate resilience of more than 140,000 food-insecure and subsistence farmers in Kenya whose livelihoods depend on maize, sorghum, millet and pulses.



Resilience and nutrition outcomes are promoted, through approaches such as rooftop water harvesting for nurseries and homesteads, road runoff harvesting into ponds for micro-irrigation of fruits and vegetables (kitchen gardens aimed at meeting household nutrition needs), and sand dams for domestic and livestock water.

Transformative Approach: The empowerment of county governments and communities to sustainably manage natural resources and adapt to climate change is a central to this programme. Women-headed households and youth that rely on maize, sorghum, millet and pulses are specifically targeted and a range of partners is engaged to ensure attention to the structures and institutions that impact on gender and equality and youth empowerment. The programme aims are focused on capacity building for resilient productivity and natural resource management; post-production management and market linkages and financial services.

Gender, Youth and Social inclusion analysis was complemented with Household Methodologies (IFAD 2014), the Gender Action Learning Systems (GALS) and the Women's Empowerment in Agriculture Index (WEAI) to explicitly focus attention on gender- and youth-related planning, targeting and interventions. Approaches and systems that have resilient and nutrition outcomes are promoted, including conservation agriculture, capacity building on utilization of climate resilient foods, labour and energy-saving technologies and water, sanitation and hygiene interventions. Following participatory scenario planning, prioritized community and household assets (e.g. rooftop water harvesting for nurseries and homesteads, road runoff harvesting into (farm) ponds for micro-irrigation of fruits and vegetables, and sand dams for domestic and livestock water) will be targeted for investment through county climate change funds. The programme has an innovative e-voucher platform through which farmers with customized debit cards access agricultural and technical inputs as well as capacity building activities encompassing post-harvest management, processing and value

addition (i.e. a basket of farm enterprise choices to enhance commercial resilience).

Impact: Of the cumulative 43,424 farmers who have accessed the e-voucher package, female adults account for 47%, female youth 12% and male youth 7%. Early statistics from supervision reports demonstrate that gender-transformative changes are being realised as women and youth farmers become food secure with increasing dietary diversity. They are spending additional farm-related income on school materials for children, accumulating assets, meeting other domestic and social needs and saving into their individual bank accounts. Initial results of capacity building interventions show that women farmers' decision-making and leadership roles in the household, community and local institutions has been strengthened. There is more equitable sharing and utilisation of economic benefits among household members, including young people. As a result, there is increasing household harmony with joint decisions being made on production, division of labour and income. Further, with a combination of financial literacy training and use of debit cards, women and youth farmers feel self-empowered, with many accessing formal banking services for the first time. Others are taking personal decisions on their savings either through informal savings groups or their bank account linked to their debit cards. Agro-dealers report growing demand for inputs and farmers report increased maize yields due to improved access to crop technologies (a range of between 20-27 (90kg) bags/acre in 2017 as compared with between 8-10 (90kg) bags/acre in 2015). Farmers, including women and young people, have formed marketing groups and are aggregating produce in collection centres, enabling them to negotiate prices and sell to large volume buyers.

Balanced household decision making results in increased household nutrition

Applied research on nutrition was conducted in Tanzania and Ethiopia through a Food, Agriculture and Natural Resources Policy Network (FANRPAN) project called Agriculture to Nutrition (ATONU), which promoted women's empowerment; access to income and; awareness and knowledge on dietary diversity.

Overall prevalence rates of anemia were lower for women and children at endline compared to baseline. Among women, anemia prevalence rates reduced from 23.2% to 18.8%.

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of children reached minimum dietary diversity, compared to 18.3% at baseline.

The African Chicken Genetic Gains (an Africa-wide collaboration), led by the International Livestock Research Institute (ILRI), introduced four breeds of indigenous chickens (better adapted to regional and local climate conditions than commercial breeds – and suitable for free-range and small-scale production) among households in different agro-ecological zones in each country.

Transformative Approach: Women were given sole responsibility in managing the chickens with the rest of the household providing support. The breeds of chicken required low feed input and had higher output in terms of meat and eggs. As the chickens were also suited for free range feeding, the labour burden was reduced, thus providing women with more time to engage in other activities. Of the breeds that were introduced, two performed well and are being scaled out. Men and community leaders were engaged in sensitisation processes on nutrition issues, including consumption patterns and infant feeding practices. Theatre performances were used as intervention delivery mechanisms of key messages on maternal and infant nutrition, financial planning and budgeting and workload in the home and how these affect household diets. Focus group discussions and training for men were carried out with the intention of empowering them to play a more active role in household nutrition.

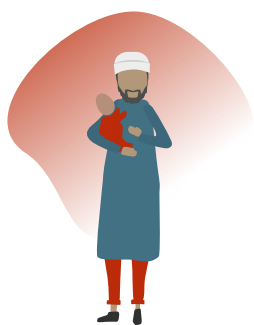
Impact: Men have taken active roles in supporting women with household tasks and have taken leading roles in establishing backyard vegetable gardens, construction of energy saving stoves, child care and support. Men are also allowing

women to make decisions on income use. Data from Tanzania indicate that there is an increase in male participation in household tasks and a reduction in women's labour burden combined with increases in women's rest time. The initiative increased the consumption of diverse foods, including chickens and eggs, and influenced expenditure behaviour to allow purchase of other or complementary nutritious foods. Women's empowerment and gender equity in chicken value chains improved – measured using the adapted Women's Empowerment in Agriculture Index (WEAI) tool. Women's participation was higher at endline compared to midline and baseline for most agricultural activities.

Women's decision-making also improved – including on the ability to decide on consumption of eggs – a key project output to improve access to animal source food among women. In Ethiopia, 11.5% of women reported consumption of eggs at endline, compared to 4.6% at baseline and 32.8% of women reported consuming eggs on at least one occasion in the previous 7 days, compared to 19.4% at baseline. Overall prevalence rates of anemia were lower for women and children at endline compared to baseline. Among women, anemia prevalence rates reduced from 23.2% to 18.8%. 28.3% of children reached minimum dietary diversity, compared to 18.3% at baseline.

Male engagement results in reduced household work burden for women

The GRAD (Graduation with Resilience to Achieve Sustainable Development) project works with 65,000 households within the Ethiopian government safety net programme and applies adaptation and livelihood approaches to build assets and link to financial services and markets. GRAD's success is in the combination of gender-equality messages with the creation of economic opportunities, using localised groups of Village Economic Savings Associations (VESA).



Husbands are now performing household tasks and relieving women of part of their workload has given them more time to engage in income-generating activities and reduces the stress on men to provide for their families alone. Final evaluation reported an increase in average household income from USD 418 at baseline to USD 771 (84%) at endline, and an average household savings increase from USD 12 to USD 141 (1,075%).

Transformative Approach: The VESA was used as a platform for raising awareness and organising dialogues, engaging both spouses, and using male and female role models. The project carried out climate vulnerability and capacity analysis (CVCA, CARE 2019) to guide activities addressing the causes of vulnerability, both at household and community levels. Increasingly unpredictable weather patterns had a negative impact on agricultural production and household income and the project thus aimed to identify adaptation strategies that did not undermine primary productive assets. Value chain analysis focused on weather and climate-related risks and the gender-based differences in those risks.

Impact: By establishing that all household members need to participate equally in livelihoods activities, enhance their adaptive capacities and transform social norms, communities are now better equipped to adapt to climate change. Giving women access to microfinance through the VESA platform has enabled more adaptation measures and built social capital. Mid-term evaluation showed that the VESAs provide an effective entry point for transforming existing gender norms and values, offering platforms for discussions around priority issues for communities. This becomes effective in combination with the economic benefits from the savings and credit activities, where women are given the opportunity to assume new roles within the household and community. Where both male and female members of a household regularly participate in the VESAs, the transformation to empower women and challenge the established

social norms and harmful traditional practices is accelerated.

The project underscores the importance of having a well-formulated gender strategy (and an on-budget gender advisor) to guide implementation of gender-related activities. Relations between husbands and wives have improved and women's voices in household decision-making have been amplified, not only because they are empowered, but also due to the engagement of men in the change process. Husbands are now performing household tasks and relieving women of part of their workload has given them more time to engage in income-generating activities thus also reducing the stress on men to provide for their families alone. Final evaluation reported an increase in average household income from USD 418 at baseline to USD 771 (84%) at endline, and an average household savings increase from USD 12 to USD 141 (1,075%).

Participatory scenario planning leads to increased adoption by women

The Agriculture Climate Information Services (ACIS) project was implemented among nine ethnic minority groups (10,000 farmers - at least 50% women) in Vietnam, Laos and Cambodia by ICRAF and CARE in collaboration with local government and civil society partners.

Creating the agro-advisories themselves, meant that women and men were comfortable and confident presenting and sharing results. When the project started, women were sitting at the back of the room and when it finished they were standing at the front explaining the scenario planning process to provincial leaders and other visitors.

The project model involved context-specific adaptations, which varied in response to differing farming systems, access to agro-climate information services, and needs and understandings of agro-climate information among women and men.

Transformative Approach: A gender-transformative approach was enabled by integrating targeted activities and being responsive to new needs as they emerge. Gender awareness training was conducted for government staff and farmer champions, and facilitators encouraged the voices of women and quieter men in group discussions. Village Savings and Loans Associations for women's groups included training on budget management and group leadership skills. Based on farmers' preferences, women and men were engaged as trainers and facilitators. This was particularly appreciated by female farmers, who perceived that they were 'seen' by the female trainer and that their questions were 'heard'. The design of agro-advisories was needs-based; women and men had different preferences regarding agro-advisory formats, designs and content. Farmers in Cambodia, for example, in which many illiterate or using minority languages, participated in designing weather icons. Participatory scenario planning meetings with village groups resulted in adaptation strategies for different farming systems; building on farmers' own knowledge, sharing of experiences, and documenting local knowledge.

Impact: The swapping of household tasks made some men realise how tied-up women's time was and led to their volunteering to share more work at home. A gradual transition from gender-separated to mixed-gender meetings and

training events, resulted in women becoming more comfortable expressing their views in community meetings. Creating the agro-advisories themselves, meant that women and men were comfortable and confident presenting and sharing results. When the project started, women were sitting at the back of the room and when it finished they were standing at the front explaining the scenario planning process to provincial leaders and other visitors.

In some sites the agro-advisories were jointly implemented with specific agriculture adaptation strategies and new gender-neutral practices such as agroforestry, were included. While previously trees were considered a male domain, in mixed groups women realised they could learn tree management, such as raising seedlings, pruning and composting. In this case, for knowledge sharing, women also learned from men. The agro-advisories resulted directly in improved resource-use efficiency and specifically reduced labour time. Weather information further helped reducing or avoiding losses (and saving significant time), such as by replanting after natural disasters or using fertilisers just before rainfall. Through the introduction of the advisories, 70% of women and men said that costs and time were saved and 80% said they now take more decisions together and share more tasks.

Financial inclusion for women results in dramatic increases in access to savings

The Nampula Adaptation to Climate Change (NACC) project, implemented by CARE in Mozambique, aimed at both economic and social empowerment through integrated gender-responsive actions.

In one community, access to savings went from a very low level of 12% at baseline to an extraordinarily high level of

81%.

The economic pillar of the project tackled household food and nutrition insecurity while strengthening resilience to disasters and climate change. The social empowerment pillar addressed gender and power inequality and worked with women, men and other stakeholders to strengthen the self-confidence and self-esteem of women through skills, capacity and knowledge support.

Transformative Approach: The project worked closely with men; as farmers, as economic actors in value chains and as heads of households and community leaders, to ensure behavioral and attitudinal change and thus more equal power sharing in economic and private spheres. Training and personal transformation of CARE and partner staff in gender and male engagement to support this work at community level was a key component. Empowering women and marginalized groups also implied that the project pro-actively identified and prepared women for roles as community leaders, agricultural extensionists, farmer field school trainers and savings and loans agents. Addressing social equity and gender also implied that the programme was flexible enough to accommodate women's schedules, their limited mobility, their labour and care giving responsibilities and their limited literacy.

Impact: Knowledge and adoption of conservation agriculture techniques increased substantially through project interventions and access to savings increased dramatically as a result of the introduction of savings and loans associations for women. In one community, access to savings went from a very low level of 12% at baseline to an

extraordinarily high level of 81%. An interesting finding is a direct inverse correlation between lower literacy and access to savings – indicating that basic functional literacy for women is an important aspect of ensuring gender equality and economic empowerment for women.

The Public Decision Making Index (PDMI) tool was applied and calculated from interviewee responses to three declarations about women's involvement in public affairs. The index increased among participants (from 2.19 at baseline to 2.43 at endline) while it remained the same for non-participants. Household decision-making was also measured – using the Household Decision Making Index (HDMI) which was calculated from the responses to three questions about decision-making within the household. Among female headed households the HDMI increased. Female headed households who participated in the project reported the highest HDMI – and those who participated in the 'gender and nutrition days' had a significantly higher HDMI (at 2.15) compared to those who did not (1.47).



Credit MEEPZA

MEEPZA – small scale, big impact

MEEPZA is an agro-environmental development initiative led by women using local resources in an arid zone of rural Colombia. Taking a climate change adaptation approach, the project promotes the cultivation and marketing of Nopal (cactus) products (also chosen because of its properties as a carbon sink). The Nopal plant has high nutrient content and is adaptive to extreme temperatures and depleted soils. Nopal pads can be eaten raw or cooked, used in marmalades, soups, stews and salads, as well as being used for traditional medicine or as fodder for animals. The agro-ecological management of this crop has resulted in the recovery of soils and the profitability of agricultural activities that use low input technology. Animals feed on Nopal plants, and the plants are then fertilized with their manure. The initiative focuses on women's equal rights, opportunities and empowerment through capacity building and revenue generating activities. MEEPZA sees its actions in this project as not only an income generating opportunity, but also as a community engagement mechanism for climate resilience, food security, and gender equality. This is strengthened by encouraging women's participation in decision-making within their communities. MEEPZA is a decentralized project that can be replicated in any arid region with limited access to water and applied techniques are low-cost and build a production chain based on agro-ecological use of local resources.

MEEPZA guayacanal.org. the MEEPZA project was a nominee for the 2017 Gender Just Climate Solutions, organized by WECF and the Women and Gender Constituency.

Platforms for women result in higher levels of participation

This CGIAR Climate Change Agriculture and Food Security (CCAFS) project aims at scaling out climate-smart agriculture through a climate smart village approach in Madhya Pradesh, India, through an enabling platform for women farmers to manage and lead climate change adaptation and mitigation interventions.

Gender-transformative results include the active participation of women in community groups and in agriculture activities. These women also now actively seek participation in activities related to health, nutrition and sanitation, conducted by other local agencies.

Transformative Approach: Gender and social inclusion are an essential aspect of the process for conducting research on relevant and context-specific enabling conditions. This started at baseline assessment, where gender disaggregated information about agricultural activities, climate risks and impacts and socio-economic differences at household and community levels was collected. The project design then focused on identification and prioritization of gender-transformative agricultural technologies, practices and services. Options identified included weather, water, seed/breed, nutrient, energy and knowledge-smart agriculture technologies, practices and services. Initial participatory prioritization exercises were conducted with women and men farmer groups to understand preferences on technologies, practices and services. Interventions were explained to group members and costs and benefits were highlighted. Each group shortlisted 20 options and ranked them according to preference. Activities included improving farmers' access to better seeds; establishment of cattle development centers; promotion of clean energy development; provision of weather-based agro-advisory services through ICT and; improving farmers' access to weather-based insurance.

Impact: The active participation of women's groups in implementation has resulted in improvements in farm yield and income. Gender-transformative results include the active participation of women in community groups and in agriculture activities. These women also now actively seek participation in activities related to health, nutrition and sanitation, conducted by other local agencies. ICT-based agro-advisory and climate information is provided to women

farmers through mobile phones owned by them or their spouse. In villages with limited phone connectivity, women farmers are able to access information through community sources including daily public announcement on loudspeakers and written messages on notice boards.

Households engaged in the livestock-based interventions are now seeing significant improvement in milk production, with accompanied increment in income. Diversification of food intake through promotion of vegetable production is also contributing positively to nutrition. In each village, one woman was selected as a Super Champion, 14 women were Champion Farmers; and 134 women and men farmers participated from each village to lead the technology implementation for creating evidence. These farmers were provided training on the implementation of the portfolio of technologies and practices in their farms. This has led to increased recognition and leadership in the community, access to knowledge and information, as well as improved participation in household decision-making. Women also participated equally in the technology prioritization and community consultation process, ensuring their production preferences were addressed.

Context-specific analysis and livelihood diversification results in increased income for women

Findings from six countries engaged in adaptation efforts supported by the Canada-UNDP Climate Change Adaptation Facility (CCAF) demonstrate significant gender equality outcomes.

In the projects, adaptation options are identified and prioritized during participatory vulnerability assessment exercises. Discussions were held separately with groups of women, which allowed for reflective analysis, sharing and co-learning by women on the advantages and disadvantages of different livelihood options.

In all countries, (Cabo Verde, Cambodia, Haiti, Mali, Niger and Sudan), projects aimed to strengthen climate resilience, in the areas of food security and water management.

Transformative approach: A conceptual framework for understanding adaptation strategies in relation to the goals of gender equality and justice provided a frame to analyze findings from the projects. Six critical areas form the base of this framework and provided entry points for analysis: 1) gendered approaches to food security; 2) water access and governance; 3) time poverty and unpaid care work; 4) control over resources and revenues; 5) participation, decision-making and leadership; and 6) targeting of gender groups at risk. One common aim of CCAF projects was to strengthen resilience through diversifying livelihood options as a means of increasing income and food security. Livelihood diversification options implemented in many countries were often linked to some form of revolving fund operated by women's groups and findings suggest that many of these activities and innovations have an underlying gender dimension, and contribute, directly or indirectly, to gender outcomes. In the projects, adaptation options are identified and prioritized during participatory vulnerability assessment exercises. Discussions were held separately with groups of women, which allowed for reflective analysis, sharing and co-learning by women on the advantages and disadvantages of different livelihood options. These varied and context-specific strategies have been successful in supporting women to generate additional income and diversify livelihoods, a central strategy for enhancing adaptation. Findings around limitations in terms of sustainability and size of revenues accruing from income-generation

activities suggest that more attention to the barriers women face in accessing financial resources and markets is required.

Impact: Focusing on the case of Niger, activities that included sheep-fattening; small livestock-rearing; adult literacy classes and; the multiplication of improved millet, sorghum and cowpea seeds, led to notable impacts. Women had revenue that they could control just before Tabaski (Aid-El-Kebir), a festive season when spending increases and the traditional female practice of raising small livestock for emergency spending (goats and sheep are 'women's banking systems') was restored. Impacts are also noted in the gender gap in literacy as women's capacity to manage and control revenues from mills and market sales of produce increased.

Tackling gender norms and barriers through ‘action learning’ results in women assuming leadership roles

The Zimbabwe Livelihoods and Food Security Programme (LFSP) aimed to improve food security and nutrition of small-scale farmers and rural communities.

The theory of change was that conservation of biodiversity, sustainable management of natural resources, and building of resilience to climate change with community stewardship and mobilization hinges upon ensuring gender equality and social inclusion.

Managed by FAO and Palladium, the programme supported 349,000 Zimbabweans through a combination of interventions aimed at increasing productivity, improving market linkage, and stimulating the demand and supply of affordable, nutritious foods.

Transformative approach: The programme identified gender inequality as a critical factor that negatively impacts food security, nutrition and household income and mainstreaming gender equality and women’s empowerment were thus key strategies. The Gender Action Learning System (GALS) and Women’s Empowerment Framework were applied with the aim of addressing social norms and barriers that inhibit the participation of women in production and marketing. Working at the household level, the programme focused on the adoption of climate smart technologies that are gender responsive, by conducting a gender analysis for each proposed technology. The programme also facilitated women’s access to extension services, to support them in adopting new farming technologies, by using group- and family-centred farming approaches. A rural finance component provided ‘smart subsidies’ and enabled women farmers to invest in farm enterprise diversification, productivity-enhancing technologies and non-farm economic activities and livelihood strategies contributing to food security.

Impact: The programme worked directly with women as change agents, supporting them to assume key decision-making positions where they are under-represented, and equipping them with leadership and negotiation skills so that they could contribute meaningfully to community development decisions. Women did

take up leadership positions, began to speak at public gatherings and are now consulted by community leaders. There is also a shift in gender-related social norms at the household level, seen through increased household productivity, increased women’s control over assets and income and male reporting of joint decision-making on household expenditure. Anecdotal evidence suggests that male GALS champions are now sharing household labour and engaging in cooking, washing, fetching water and working in the fields. At institutional level, the programme raised community awareness around laws and policies that support gender equality and women’s empowerment, such as the new Constitution, the Domestic Violence Act and laws relating to wills and inheritance.

CASE 10 - HARIYO BAN

Gender equality and social inclusion actions bring benefits to communities and reduce threats to ecosystems

Now in its second phase, this programme is being implemented by a consortium of World Wildlife Fund (WWF), CARE, the National Trust for Nature Conservation (NTNC), and the Federation of Community Forest Users Nepal (FECOFUN) and aims to increase ecological and community resilience in biodiverse landscapes.

The percentage of sampled community forest user groups with women in key positions in executive committees increased from 47% in 2013 to 70% in 2016.

Phase I had three core interwoven components – biodiversity conservation, sustainable landscapes and climate change adaptation, with livelihoods, governance, and gender equality and social inclusion (GESI) as cross cutting themes. Now in a second phase, the programme operates in two landscapes and works closely with a wide range of stakeholders and beneficiaries at different levels.

Transformative approach: In Phase I the approach was based on the belief that conservation of biodiversity, sustainable management of natural resources, and building of resilience to climate change with community stewardship and mobilization hinges upon ensuring gender equality and social inclusion. In the target communities, women are responsible for managing many forest resources, and if they are not empowered to participate in decision-making, benefit equitably, and eventually play leadership roles in management of these resources, both forest resources and people suffer. The programme carried out participatory climate vulnerability and capacity analyses (CVCA) and adaptation planning, and developed a gender equality and social inclusion (GESI) strategy with the aim of building sensitive organizational cultures, and capacity to address gender issues. It implemented direct interventions to: a) increase access of women, Dalits, indigenous people, and marginalized groups to participate in decision making processes and assume leadership roles in natural resource management (NRM); and b) ensure access for target communities to equitable benefit sharing. The programme made gender an integral part of all interventions,

prioritizing participation of all groups and supporting the mainstreaming of gender equality and social inclusion into policies, plans and practices of NRM groups, NGOs and government agencies from local to national level. Since gender-based violence (GBV) is prevalent in local communities and often acts as a barrier to women's participation, the programme had a specific focus on reducing this.

Impact: 34,830 people have benefitted from gender equality and social inclusion interventions, including 29,104 women, 6,510 Dalits, and 16,012 Janajatis. In a sample of 913 community forest user groups, the number of women in at least one of the two key positions in executive committees increased from 47% in 2013 to 70% in 2016. Representation of Janajatis and Dalits in at least two decision-making positions in the sampled groups increased from 52% to 64% in the same period. Anti-GBV measures were integrated in local NRM policies and 398 climate adaptation plans were implemented. Another result of the programme was that an estimated 4.9 million tons of carbon emissions were avoided, some of which was achieved by promoting more efficient use of firewood and alternative energy such as biogas, significantly improving women's lives as well as reducing threats to forests from overharvesting of firewood.

A common theme across our cases, is the importance ascribed to strengthening the agency of women through leadership skills (and functional literacy, nutrition and other training) and through building on women's capacities and knowledge.



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DISCUSSION

Learning from the cases presented above tells us that, to be successful, adaptation must go beyond addressing vulnerability through targeting specific livelihood groups with discrete actions. Inequality and power imbalance must be tackled in a holistic manner and multiple strategies are often required. Here we briefly discuss the common attributes of our cases within the three domains of the Gender Equality Framework (building agency, changing relations and transforming structures).

A) Building Agency

A common theme across our cases, is the importance ascribed to strengthening the agency of women through leadership skills (and functional literacy, nutrition, management of agricultural production and other training) and through building on women's capacities and knowledge. In one case, empowering women implied that the project pro-actively identified and prepared women for roles as community leaders, agricultural extensionists, farmer field school trainers and savings and loans agents. Social inclusion approaches ensured the engagement and empowerment of marginalised

groups in the case of Nepal and evidence from the Mekong delta on strengthening women's voice underscores the benefits of building agency. Recognising that women have solutions and can drive adaptation is thus a critical point of departure for adaptation interventions. Central to this, and clear in several cases, is the importance of analysis to understand these capacities; and the vulnerabilities that both women and men face. Adaptation projects that do not carry out gender and social analysis are likely to fail as they will not include actions that respond to gender-based vulnerabilities. Engaging women in production that they can control, in crops that they value for family

nutrition, in livelihoods that allow them to gain economic empowerment – all included in our cases – also drives self-esteem, confidence and individual agency.

B) Changing relations

A further frequently mentioned approach in our cases is the engagement of men. Gender and power relations can only be tackled through the proactive and voluntary engagement of men and activities described such as swapping of household tasks, gender dialogues and engaging male leaders as role models for behaviour change represent successful approaches. Impacts described through several of the projects around labour burden sharing, household decision-making and control of income and expenditure show that progress is possible if strategies are planned and resourced adequately. Our cases demonstrate that successful approaches are those that engage men and women as equals and that aim to build the confidence of women while increasing the agency and positive masculinity of men at the same time. Entry points such as child care, household nutrition, or natural resource management allow projects to work with men as agents of change in power relations. Such approaches result in men taking more responsibility in domestic activities and embracing joint decision-making. Thus, providing women and men the same opportunities to make decisions, inform actions, and engage in implementation, will strengthen adaptation. It will also contribute to increased independence of both spouses as heads of household, should one

fall ill. This implies understanding and changing imbalanced gender relations, targeting women for capacity development, and measuring success and impact based on results achieved for both men and women.

C) Transforming structures

Engagement with local and national governance structures is a key approach that also emerges in several cases. Disrupting established processes that have inherently biased approaches is important to achieve transformative change. Securing access to credit and savings and the consequent transformation of economic power and market engagement is a notable theme in several cases. Learning and evidence suggests that transforming the formal and informal structures and processes that underpin economic power by opening access to credit and savings opportunities and linking to financial services brings significant results. Tackling gender-based inequality through the capture, interpretation and communication of weather and climate information – or market information – is also a theme that emerges in our cases and shows that inequality can be addressed through structural approaches and technology transfer. Finally, in two cases the training and personal transformation of project and partner staff in gender and male engagement to support delivery at community level was key. This is structural transformation, and the resourcing of projects with trained gender expertise will be more likely to succeed in this goal.

Our cases demonstrate that successful approaches are those that engage men and women as equals and that aim to build the confidence of women while increasing the agency and positive masculinity of men at the same time.



Conclusions

The threats posed by climate change to agricultural systems and communities in developing countries are so immense that in order to scale-up good adaptation practices – such as those described above – additional financial support is needed.

Lessons from this synthesis learning paper point towards a need to invest, for example, in participatory action research, testing new technologies, strategies, tools, and co-learning. Such efforts will further enhance understanding of gender and climate change issues, while, equally importantly, strengthen capacity in local partners for gender-transformative interventions in agricultural systems and communities. We conclude that adaptation actions in agricultural production and market integration, in natural resource management or in the protection of ecosystems must engage with and address

gender-based power dynamics to succeed. The implications for policy and programming are that women will remain largely information-starved and neglected by service providers and development interventions unless their differing needs, preferences, and constraints are considered from the outset. Better integrating research and practice, and designing information, tools, practices, and interventions with gender in mind will accelerate progress towards achieving many development objectives, while enabling women to become agents of their own empowerment. Here we categorise our main conclusions.

1. Getting the foundations right

- Gender analysis is a non-negotiable action in any adaptation in agriculture design process. Information with respect to the differentiated access to, control over, and knowledge about existing resources in a community is essential for success. Data on the sex-disaggregated division of work, the levels of participation, and the distribution of benefits that impact existing power dynamics should be sought. A gender analysis is an essential feature of a comprehensive assessment that both provides for and influences planning, data collection, and actions.
- Multi-stakeholder coordination is required to drive gender-transformative actions. When it comes to the lives of vulnerable rural communities, cross-ministerial commitment to gender equality is critical and at sub-national and local levels, the engagement of relevant service providers in a coordinated manner is fundamental. Successful local adaptation planning and action requires good governance structures that engage public and private sector actors.
- More research is required that puts communities at the centre of monitoring. The application of social accountability tools to monitor how adaptation activities challenge, benefit from and transform existing gender norms, relations, and structures from a community perspective is required. Gender dynamics change and so participatory performance tracking methods will help communities identify and monitor their own progress and thereby make informed decisions and, when necessary, demands for support.

2. Building agency

- Attention needs to be paid to diverse forms of marginalization in adaptation work. Intersectionality, where gender inequality is experienced in different ways depending on age, class, ethnicity, or sexual identity, amongst other aspects is critical to understand and respond to. Research and actions must also acknowledge gender variations in ownership of assets, labour productivity, and time use.

- Labour burden is often neglected and needs more attention in adaptation work. Attention is needed on women and girls' use of time, in unpaid domestic work and other activities where they are considered providers of manual labour – but are not supported with technologies or labour-saving practices. It is important to ensure that increased meaningful participation in governance spaces does not add to the care burden faced by girls or women. Engaging male gender champions and role models is fundamental in this work.
- Increasing access to agriculture resources and services for women in turn increases their participation in decision-making, and household income and nutrition management. Interventions outside agriculture such as in the financial or social protection sectors can help secure access to resources for women. Development of savings-led financial inclusion and the use of safety nets can improve women's capacity to take action that helps to adapt to climate change and other risks.
- Enabling the amplification of women's voice is key. Women are powerful agents of change and with support, their confidence increases in expressing their views in the household and in public fora. Amplifying voice improves activism and political representation and leads to greater equality.

3. Changing relations

- Creating a safe space for husbands and wives, different generations, and communities, to explore and discuss relevant gender issues is important to avoid anxiety, marginalisation or exclusion.
- Working with men is essential for gender-transformative change. More profound engagement with men is needed to enable a change in gender relations and the gendered coding of responsibilities. The risk of backlash at household or in the public sphere, in response to women moving increasingly into public spaces or gaining financial autonomy is real and must be mitigated.
- Training materials must be designed with end users. By co-generating and testing materials before wider application, training and capacity strengthening materials can be more effective in driving social change. This includes the development of training for technological interventions.
- Participatory scenario planning and generation of agro-advisories are a complementary way to introduce gender-neutral interventions. Within rural development and agriculture projects, the co-creation and sharing of knowledge between women and men farmers, government officers, NGOs, scientists and climate service providers can have impact at wider scales.

4. Transforming structures

- Transformation will come through disruption of social norms and barriers that inhibit women's control over their lives. A focus on real transformation of women's and girls' lives by tackling the underlying causes resulting in gender inequality rather than addressing economic empowerment and the consequences of gender inequality alone is required. This implies sustained funding.
- Gender-transformative work in adaptation is necessarily slow and incremental. Having gender-trained male and female facilitators and leaders in communities who are brokers, role models and gate openers is important. This is equally important at institutional levels; public, private and civil society actors must take responsibility to address gender-based imbalances in their own teams, approaches and investments.
- Participatory policy dialogue can lead to systemic change. Engaging communities in bottom-up formulation of policy support (such as National Adaptation Plans that come with investments for local implementation). This approach ensures that the root causes of inequality and vulnerability can be identified and addressed.

Recommendations for practitioners of adaptation in agriculture

1.

Carry out climate vulnerability and capacity analysis that addresses gender dynamics and identifies priorities and preferences of women and men and how intersectionality influences marginalisation.

2.

Always integrate specific budget that supports human resources and activities that will deliver gender-transformative outcomes – including changes needed within institutions and partners.

3.

Establish multi-stakeholder platforms to ensure action to drive gender transformation, including the creation of safe spaces and processes to allow for adaptive management.

4.

Use innovative approaches such as participatory scenario planning and developing agro-advisories; savings led financial inclusion and; integrated community and ecosystems adaptation approaches as complementary ways to introduce gender-transformative interventions.

5.

Take specific actions to remove structural challenges, including the lack of ownership of land and other assets, unequal division of labour and inequitable decision-making, that inhibit adaptation by women.

Recommendations for donors and policy makers supporting adaptation in agriculture

1.

Recognize and champion the important role of women and men as change agents in agricultural adaptation, rather than reducing their identity to ‘vulnerable groups’.

2.

Invest in adaptation in agriculture programmes and policies that seek gender-transformative outcomes and insist on regular reporting of progress against specific indicators.

3.

Demand and then financially support costed gender-transformative budgets, staffing and performance monitoring frameworks.

4.

Invest in applied research to assess the socio-economic impacts of improved women’s participation in governance and decision-making processes and of reductions in their labour burden.

5.

Support programmes that adopt gender equality and social inclusion strategies through the integration of both community- and ecosystems-based approaches to adaptation.

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