



Food and Agriculture
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Good Practices for Integrating Gender Equality and Women's Empowerment in Climate-Smart Agriculture Programmes



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ACRONYMS

AACES	Australia Africa Community Engagement Scheme
ACIAR	Australian Centre for International Agricultural Research
ACIS	Agriculture and Climate Information Services
ACG	Association of Continuity of Generations
ALP	Adaptation Learning Programme for Africa
AFPD	L'association féminine de la pêche des palourdes et de développement
BWDB	Bangladesh Water Development Board
CA	Conservation Agriculture
CAAP	Community Adaptation Action Plan
CBA	Community Based Adaptation
CBO	Community Based Organization
CCA	Climate Change Adaptation
CCAFS	Climate Change, Agriculture and Food Security
CGIAR	Consultative Group for International Agricultural Research
CSA	Climate-Smart Agriculture
CSO	Civil Society Organizations
CSR	Corporate Social Responsibility
CultiAf	Cultivate Africa's Future
CVCA	Climate Vulnerability Capacity Assessment
DFID	Department for International Development
DGIS	Directorate General for International Cooperation
DRR	Disaster Risk Reduction
DryDev	Drylands Development
FAO	Food and Agriculture Organization of the United Nations
FFBS	Farmer Field and Business Schools
FFS	Farmer Field Schools
FGM	Female Genital Mutilation
FMM	Multipartner Programme Support Mechanism
FMNR	Farmer Managed Natural Regeneration
GALS	Gender Action Learning System
GCF	Green Climate Fund
G-CVCA	Gender Sensitive Climate Vulnerability and Capacity Analysis
GE	Gender Equality
GEWE	Gender Equality and Women's Empowerment
GFRAS	Global Forum for Rural Advisory Services
GHG	Greenhouse Gases
GRAD	Graduation with Resilience to Achieve Sustainable Development
GRAISEA	Gender Transformative and Responsible Agribusiness Investments in South East Asia
GWI	Global Water Initiative
HICAP	Hillside Conservation Agriculture Project
HIMA	Hifadhi ya Misitua ya Asili
HLPF	High Level Political Forum
ICAFIS	International Collaborating Centre for Aquaculture and Fisheries Sustainability
ICRAF	International Centre for Research in Agroforestry
ICT	Information and Communications Technology

IDRC	International Development Research Centre
IIF	Innovative Investment Fund
IFPRI	International Food Policy Research Institute
IPCC	Intergovernmental Panel on Climate Change
IR	Intermediate Report
LFSP	Livelihoods and Food Security Programme
LFSP-APN	Livelihoods and Food Security Programme- Agricultural Productivity and Nutrition
LPA	Learning and Practice Alliance
M4P	Markets Work For the Poor
MCD	Marine Conservation and Community Development
MDG	Millennium Development Goal
MFI	Monetary Financial Institution
MMD	Mata Masa Dubara
NAP	National Adaptation Plan
NBE	National Bank of Ethiopia
NDC	Nationally Determined Contribution
NEF	New Economics Foundation
NTFP	Non-Timber Forest Product
PAR	Participatory Action Research
PEP	Poor and Extremely Poor
PNGO	Partner Non-Governmental Organization
PRIME	Pastoralist Areas Resilience Improvement through Marketing Expansion
P-SIA	Poverty and Social impact Analysis
PSNP	Productive Safety Net Programme
PSP	Participatory Scenario Planning
REDD	Reducing Emissions from Deforestation and Forest Degradation
ROI	Return on Investment
SAA	Social Analysis and Action
SDG	Sustainable Development Goal
SDVC	Strengthening Dairy Value Chains
SEAGA	Socio-Economic and Gender Analysis
SHOUHARDO II	Strengthening Household Ability to Respond to Development Opportunities II
SI	Sustainable Intensification
UDV	Union Disaster Volunteer
UDMC	Union Disaster Management Committee
UN	United Nations
UNDP	United National Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
USAID	United States Agency for International Development
VC	Value Chain
VDC	Village Development Committee
VESA	Village Economic Savings Association
VSLA	Village Savings and Loans Associations
WE	Women's Empowerment
WEMAN	Women's Empowerment Mainstreaming and Networking
WE-RISE	Women's Empowerment: Improving Resilience, Income and Food Security
WFP	World Food Programme



FOREWORD

As highlighted in The State of Food Security and Nutrition in the World (2018, SOFI) there is a rise in world hunger and, in 2017, the number of undernourished people has increased to nearly 821 million. This is partly due to more frequent climate-related disasters, including extreme heat, droughts, floods and storms, which have doubled since the early 1990s, with an average of 213 of these events occurring every year during the period of 1990–2016. These extreme events harm agricultural productivity, contributing to shortfalls in food availability, with knock-on effects causing food price hikes and income losses that reduce people's access to food.

The highest levels of vulnerability are often found amongst women, children, the elderly and the socially isolated, as well as indigenous or disabled people. These population groups experience multiple dimensions of inequality that inhibit their capacity to manage daily risks and shocks, and limit their adaptive capacity.

Women farmers are more exposed than men to climate variability and extremes, due to their limited entitlements and assets, and the restricted access to the social and natural resources required for adaptation and resilience building. In some communities it is only men who hold the right to cultivate certain crops or to access markets. As a result of extreme climate events and climate-related disasters, women often experience additional duties as labourers and caregivers as a consequence, for example, of male out-migration. As primary caregivers and providers of food, water and fuel, women need to work harder to feed and care for their families without support. Moreover, they have reduced food intake, adverse health outcomes due to displacement and, in some cases, increasing incidences of gender-based violence within the household owing to greater tension, loss and grief, and disrupted safety nets.

In this context, there is an urgent need for greater and continuous efforts to address gender inequalities and increase women's access to financial resources, land, education, information, health, advisory services and other basic human rights. It is also crucial to overcome women's social exclusion from decision-making processes and labour markets, so that they can better cope with and adapt to climate change impacts. Special provisions and investments in cash, time or labour are also needed to introduce innovative adaptation practices, which are too costly for households with poor access to credit and with few – mostly female – working-age adults.

In addressing food insecurity and climate-related challenges, FAO and CARE International are fully committed to integrating the economic, environmental and social dimensions of sustainable development. To reach climate-smart agriculture it is essential to increase agricultural productivity and incomes, support the adaptation and building of resilience to climate change, while reducing and/or removing greenhouse gas emissions. All these three elements are essential to achieving sustainable development, and can only be achieved when no one is left behind and the crucial role of rural women and the youth are fully recognised.

With a view towards accelerating the impacts of country programmes in meeting these targets, FAO and CARE have jointly developed this paper to help policymakers and practitioners meet the Sustainable Development Goals (SDGs) and the ambitious goals of Agenda 2030. The paper is intended to help development organisations, public institutions and local organisations to develop climate-smart agriculture (CSA) investments, projects and policies that are more gender-responsive.

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KEY MESSAGES

- **Women, children, elderly, indigenous and disabled people face the highest levels of vulnerability to severe food insecurity and malnutrition. Rural women and men increasingly face the challenge of having to adapt their production systems and livelihoods in the context of climate change and natural resource depletion.**
- Rural men and women have different access to productive resources, services, information and employment opportunities, which may hinder women's productivity and reduce their contributions to agriculture, food security, nutrition and broader economic and social development goals.
- **Multiple dimensions of inequality inhibit women from managing risks and shocks, and limit their adaptive capacity to climate change. Women farmers are more exposed to climate change risks compared with men, as they depend more on natural resources for their livelihood, have fewer endowments and entitlements to help them absorb shocks and may not equally benefit from agriculture technologies and practices.**
- Climate change can exacerbate existing gender inequalities in agriculture, but also create new opportunities to maximize women's potential as agents of change and resilience building. This requires recognising the crucial role and capacity of women in agriculture, and in ensuring food security and nutrition.
- **Assuring equal access to productive resources, climate-smart and labour-saving technologies and practices, services and local institutions is at the core of FAO's approach to enhancing the sustainability of agriculture.**
- Climate-smart agriculture is an approach that integrates the three dimensions of sustainable development (environmental, economic and social dimensions) by jointly addressing food security and climate challenges.
- **A gender-responsive approach to climate-smart agriculture identifies and addresses the different constraints faced by men and women, and recognises their specific capabilities. This approach aims at reducing gender inequalities and ensuring equal benefit from CSA interventions and practices, thus achieving more sustainable and equitable results.**
- A gender-responsive or gender-transformative approach can be beneficial to food and nutrition security and broader development outcomes by simultaneously addressing the interconnected challenges of gender inequality, resilience to climate change and disasters, and improving agricultural productivity and livelihoods through climate-smart agricultural development.



INTRODUCTION

Global food production is sufficient to feed the world's population. However, due to structural factors that limit the equal access of men and women, boys and girls to food, this does not result in global food security. In 2017, the estimated number of undernourished people in the world increased to nearly 821 million (one out of nine people), from around 804 million in 2016. One in every three women of reproductive age was found to be anaemic. Persistent instability in conflict-ridden regions, adverse climate events in many regions of the world and economic slowdowns affecting more peaceful regions and worsening food security all help to explain the increase in severe food insecurity and malnutrition. The situation is worsening in South America and most regions of Africa, while Asia's decreasing trend in undernourishment seems to be slowing down significantly. The disparity in food security is partially due to existing gender inequalities and discrimination in the agriculture sector, with the inadequate engagement of women in the agricultural system and the additional challenges they face in accessing productive resources, services and employment opportunities as compared to men. Women contribute to 43 percent of the world's food production.¹ Yet, despite their crucial role in agriculture, they lack the access to information, resources, services, land, finance, technology and local institutions that men more easily obtain. FAO reports that if women were to have the same access to resources as men, agricultural productivity would increase by up to 30 percent, agricultural output by up to 4 percent, and the number of poor people would decrease by 100 to 150 million.²

Available data show that 79 percent of economically active women in developing countries spend their working hours producing food through agriculture, and women represent 43 percent of the global farming workforce.³ Indeed, conflict is a major source of food insecurity and hunger, and a contributing factor in reversing twenty-five years of gains made in reducing global hunger. In case of conflicts, there is likely an economic recession, which leads to a reduction in market functionality and increases in food prices. The ensuing reduction in livelihood potential, social protection, social networks and increase in disease has significantly reduced the resilience capacity of a large part of the world, and led to a drastic rise in the prevalence of undernutrition. Conflict, disease that results in loss of income and labour in the household, male outmigration and the growth of commercial farming have drastically increased women's participation in the rural agricultural workforce.⁴ Migration can offer opportunities for women's empowerment and gender equality, but it can also expose women to new or increased risk and vulnerability. Gender norms shape every stage of the migration experience, from the process of decision-making to arrival at the destination and, eventually, return to the origin community. Whether they migrate or stay behind, women are confronted with specific challenges.

Rural women and men increasingly face the challenge of having to adapt their production systems within the context of climate change and natural resource depletion. Women farmers are more exposed to climate change risks compared with men. They tend to be more dependent on natural resources for their livelihood, have fewer endowments and entitlements to help them absorb shocks and may not equally benefit from agriculture

GENDER AS A PRIORITY TO REACH AGENDA 2030

The principle of "leaving no one behind" guides every goal of the 2030 Agenda for Sustainable Development. The focus on gender equality and women's empowerment is made explicit throughout the Sustainable Development Goals (SDGs), both in the form of a dedicated Goal on Gender Equality (SDG5) and a cross-cutting theme with more than 30 related targets across other SDGs.

SDG2: By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment.

SDG5: **Achieve gender equality and empower all women and girls.**

SDG 13.B Promote mechanisms for raising capacity for effective climate change-related planning and management in the least developed countries and small-island developing states, **including focusing on women, youth and local and marginalised communities.**

SDG 5.4: **Recognise and value unpaid care and domestic work** through the provision of public services, infrastructure and social protection policies, and the promotion of shared responsibility within the household and the family.

SDG 5.A: Undertake reforms to **give women equal rights to economic resources**, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws.

technologies and practices. Climate change can exacerbate existing gender inequalities in agriculture, but also create new opportunities to tap into women's potential as agents of change and resilience building.

In order to achieve the goal of zero hunger by 2030 – a Sustainable Development Goal (SDG) that is also championed by FAO – it is essential not just to augment agricultural yields or income, but rather to make sure that agricultural development reaches the poorest and most marginalised communities, leaving no one behind. Building and enhancing people's resilience to climate change, and translating this into the equitable distribution of food, cannot be accomplished without a clear understanding of the role that women play in food and agriculture systems, and the social norms and other societal factors that affect gender inequalities in different contexts.

FAO has adopted a vision of Sustainable Food and Agriculture (SFA) for a world in which food is nutritious and accessible for everyone and natural resources are managed in a way that maintain ecosystem functions to support current as well as future human needs. In this vision, farmers, pastoralists, fisher folks, foresters and other rural dwellers can actively participate in, and benefit from, economic development, have decent employment conditions and work in a fair price environment. In this vision, rural men, women and communities live in security, and have control over their livelihoods and equitable access to resources, which they use in an efficient way.

SDGs AND GENDER EQUALITY

In 2015, the international community adopted a set of Sustainable Development Goals (SDGs) that articulate objectives to be achieved by 2030. These important benchmarks for accountability are useful reference points for policy analysis, advocacy and programme design. Gender Equality is a standalone goal (SDG 5), for which FAO is a custodian agency, and a cross-cutting issue, without which the overarching aims of the SDGs cannot be realised. Gender indicators are integrated into all 17 SDGs and translate into comprehensive commitments that advance the achieving of gender equality and empowering of women and girls.

FAO AND GENDER EQUALITY IN CLIMATE CHANGE

FAO has made gender integration in climate change programmes a priority,⁵ as enshrined in its corporate [Strategy on Climate Change](#),^{6,7} and has developed the [Gender in Climate Smart Agriculture](#) (CSA) as Module 18 of the Gender in Agriculture Sourcebook. It has also recently published the Training manual

FAO'S COMMITMENT TO GENDER EQUALITY

The goal of FAO's policy on gender equality is to achieve equality between men and women in sustainable agricultural production and rural development for the elimination of hunger and poverty. To reach this goal, FAO works with countries, other UN agencies, civil society organisations, bilateral and private sector partners to make progress towards achieving the following objectives by 2025:

- Women and men equally participate as decision-makers in rural institutions and in shaping laws, policies and programmes
- Women and men have equal access to and control over decent employment and income, land and other productive resources
- Women and men have equal access to goods and services for agricultural development, and to markets
- Women's work burden is reduced by 20 percent through improved technologies, services and infrastructure
- The share of total agricultural aid committed to projects related to women and gender equality is increased to 30 percent.

The minimum standards set by the FAO's policy on Gender Equality were designed to contribute to the standards of the UN System-wide Action Plan on Gender Equality and the Empowerment of Women (UN-SWAP). FAO "met" or "exceeded" a 93 percent of all UN-SWAP performance indicators in 2017.

[How to Integrate Gender Issues in Climate-Smart Agriculture Programs](#), as well as [the Climate-Smart Agriculture Sourcebook](#)⁸.

Gender-transformative approaches seek to transform gender roles and promote gender-equitable relationships between men and women. The aim of gender equality is for men and women to have equal participation in decision-making; the same access and control over productive resources, services and technologies; equal benefits from project results and the same opportunities to access decent employment and livelihood systems.

The purpose of this paper, *Good Practices for Integrating Gender Equality and Women's Empowerment in Climate Smart Agriculture Programmes*, is to build on these and many other efforts to guide practitioners and planners on the development and implementation of gender responsive CSA programming, based on existing evidence and lessons learned from many development programs carried out worldwide.

FAO's approach to Climate Smart Agriculture integrates the economic, social and environmental aspects of agricultural production⁹ by working at three levels:¹⁰

- 1 **Adaptation** – to sustainably increase agricultural productivity and incomes by reducing vulnerability to climate change.
- 2 **Resilience** – building capacity to recover from climate shocks.
- 3 **Mitigation** – to reduce and remove greenhouse gases where possible.

Women, men, boys and girls are impacted in different ways by the effects of climate change. Gender is an important factor in people's resilience to climate change and disasters. In particular, women's workload, their limited decision-making power and unequal access to and control over resources, services and local institutions can prevent them from adopting effective strategies to prepare, adapt and respond to climate change.¹¹ A gender-responsive or gender-transformative approach can be beneficial to food and nutrition security and broader development outcomes by simultaneously addressing the interconnected challenges of gender inequality, resilience to climate change and disasters, and improving agricultural productivity and livelihoods through climate-smart agricultural development.

THE CLIMATE-SMART AGRICULTURE SOURCEBOOK

The [Climate-Smart Agriculture Sourcebook](#) draws together a wide range of knowledge and expertise on the concept of climate-smart agriculture (CSA) to better guide responses to climate change and food insecurity. The [updated edition](#) of the sourcebook reflects new scientific insights as well as valuable CSA implementation experience obtained since the publication of the first edition in 2013.

- Agriculture and food systems must undergo significant transformations in order to meet the interlinked challenges of achieving food security and coping with climate change.
- Increasing resource use efficiency is essential both to safeguard food security in the long term and to contribute to reduced greenhouse gas emissions.
- Preparing for uncertainty and change requires building resilience to climate risks across human, environmental and economic dimensions.
- The efficiency and resilience of food systems must be considered together, from farm to global level and across environmental, economic and social perspectives.
- CSA is a way to guide changes needed towards food systems that are both productive and sustainable. It is neither an agricultural system, nor a set of practices.
- Implementing CSA is a concrete way to contribute to the achievement of the Sustainable Development Goals.

CSA can help guide the changes needed towards food systems that are both productive and sustainable. It is neither an agricultural system nor a set of practices, but can rather contribute to the achievement of the Sustainable Development Goals. **Building on practices such as conservation agriculture (CA)¹² and community-based adaptation (CBA),¹³ CSA aims to guide actions needed to transform and reorient agricultural systems to effectively ensure food security in rural farming systems.¹⁴** CSA enables practitioners and decision-makers to assess a range of options and identify context-appropriate solutions at farm, landscape and national levels.¹⁵

ABOUT THIS PAPER

This paper focuses on a set of agricultural practices implemented by small-scale food producers in developing countries.¹⁶ The expected results of this document are that FAO staff members and agriculture development practitioners globally will be provided with guidance, tools and examples of the successful integration of gender equality and women's empowerment (GEWE) into climate-smart agriculture work, by demonstrating:

- The necessity and benefits of incorporating a GEWE approach in CSA work;
- Strategies for enhancing the engagement of women and particularly vulnerable groups in CSA work and people of all genders through GEWE;
- Practical examples of gender considerations in CSA projects;
- Tools and resources to support GEWE within CSA projects.

Women and men have different knowledge and perceptions of agricultural sustainability deriving from the gender division of labour, to which CSA promoters should be attuned if they want to ensure their interventions are appropriate to the needs of women and men. The identification, design, financing, delivery, monitoring and evaluation of projects, programmes, strategies and policies – from project investment to the enabling environment – needs to consider how gender equality will affect sustainability, and the impact of any intervention or strategy.

With a view towards accelerating the impacts of country programmes in meeting these targets, FAO and CARE have jointly developed this paper to help policy makers and practitioners meet the ambitious goals of the SDGs and Agenda 2030. This guidance document is intended to help development organisations, public institutions and local organisations target how investments, projects and policies can be more gender-responsive.

FAO and CARE's experience demonstrates that ***gender-transformative approaches, which create opportunities for individuals to actively challenge existing gender norms, promote positions of social and political influence for women in communities, and address power inequalities between persons of different genders, are key to addressing the threats posed by climate change, especially threats to women and girls in developing countries.*** Despite compelling evidence that gender-responsive programming delivers faster development outcomes, and recent policy frameworks, and government and intergovernmental statements that assert the importance of gender equality in agriculture, few design processes, implementation or monitoring

frameworks actually include authentic gender responsiveness, much less gender-transformative strategies. Designing interventions that address the differential needs and capacities of women, girls, men, boys and most vulnerable groups, while transforming their social positions, is critical in meeting the food and nutrition security needs of an expanding population in an equitable and sustainable way. A gender-responsive approach to climate-smart agriculture programmes can also narrow and eliminate the gender gap in agriculture. Engaging women as equal participants when enhancing the productive capacity of the household will also lead to overall improvements in the food and nutrition security of the household and community.

METHODOLOGY

The field of Climate Smart Agriculture (CSA), and the broader area of Climate Change Adaptation (CCA) are relatively new. Thus, there are a limited number of multi-year, rigorously evaluated projects that generate clear evidence of the gender dynamics of CSA, and of the mix of practices that generate climate-resilience. Therefore, the approach taken in this study was the following:

- 1. Literature Review** – the existing literature on gender and CSA practices provides the context (and a limited amount of direct evidence) for anticipating how GEWE affects CSA adoption and climate resilience. The literature review examined two questions: what is the state of the evidence for promoting GE and WE in CSA, and what is the state of the evidence for the ways in which gender dynamics impact CSA. A detailed summary of the literature review is presented in Annex 2.
- 2. Review of programmatic evidence** – project evaluations and design documents from FAO, CARE and other organisations were reviewed to identify good practices that lead to successful and sustainable results in terms of productivity, income and the resilience of production processes to climate change and risks). Specifically, projects selected demonstrate the need for:
 - a. sex-disaggregated data;
 - b. analysis of how GEWE leads to adoption, scaling and impacts on CSA Programmes;
 - c. evidence of how the programme addresses gender barriers in one or more challenges related to gender roles (e.g. women's time and labour burden). These projects are presented as case studies in Section 1.
- 3. Alignment with existing CSA guidance** – this guidance uses the practice areas outlined in the [CSA's Guide](#) and [FAO sourcebook](#), and CARE's [Adaptation Learning Programme good practices checklist](#).¹⁷ From this, a comprehensive list of gender-transformative CSA practices was identified and analysed in consultation with a variety of experts in the areas of CSA, CCA and GEWE. Section 2 of this guidance elaborates on the elements of gender transformative programme design, listed below:

TABLE 1. SUMMARY OF GOOD PRACTICES

Title	Good Practice
Risk, vulnerability and capacity	Analyse climate risks, differential vulnerability and capacity of people, ecosystems and institutions.
Participation, inclusion and gender equality	Ensure participation, agency, transparency and inclusion of all groups.
Climate information and uncertainty	Incorporate management of uncertainty and use of climate information by women and men.
Planning and decision-making processes	Promote anticipatory, flexible and forward-looking adaptation planning and decision-making processes.
Innovation, local and indigenous knowledge and technology	Support innovation, local (including traditional and indigenous) knowledge and gender-sensitive technology.
Sustainable economies	Promote empowerment, market synergies and opportunities, increase access to financial resources and products, promote social enterprises.
Institutional linkages	Establish institutional arrangements and linkages that facilitate multi-stakeholder engagement.
Learning, capacity building and knowledge management	Integrate learning, capacity building, monitoring and knowledge management processes.
Scaling up and sustainability	Support ongoing and sustainable adaptation at scale.



STATE OF THE EVIDENCE

SETTING THE CONTEXT

The impacts of climate change are evident in many forms, from rising sea levels and more extreme weather events, to changing rainfall patterns and shifting seasons, to glacial melt and ocean acidification. Climate change affects poor and vulnerable people the most, particularly women and girls, as the existing structural inequalities that they face in many rural societies are further exacerbated by the effects of climate change on their lives and livelihoods. The vulnerability to climate change is shaped by the capacity of men and women to adapt, to access resources, information and alternative livelihood options, and by existing decision-making processes and power dynamics that impact the social distribution of resources or support. In its fifth assessment the IPCC (2013) clearly establishes that climate change hazards “increase or heighten existing gender inequalities, thereby contributing to the greater climate change vulnerability of many women”¹⁸.

Climate-smart agriculture (CSA) has the potential to sustainably increase agricultural productivity and incomes, help individuals and communities adapt and build resilience to climate change and reduce greenhouse gas emissions, where appropriate. However, the “implementation of CSA will fail to benefit women, and in fact may entrench existing inequalities, without an adequate understanding of how gender roles and tasks in households and the community may be affected by new CSA technologies and practices”. Given women’s major role in agriculture in the Global South, it is important that all CSA interventions are gender responsive and aim at transforming gender inequalities.

GENDER-TRANSFORMATIVE CLIMATE-SMART AGRICULTURE

All small-scale farmers need fair access to resources and opportunities to be resilient to the impacts of climate change. Yet various groups of women, men, vulnerable and marginalised people and rural youth face many and various constraints in implementing climate-smart agricultural strategies. Frameworks like CARE’s Gender Equality and Women’s Voice articulate the structural and underlying causes of these constraints and vulnerabilities, emphasising that truly transformational change is necessary to achieving equality between women and men in sustainable agricultural production and rural development for the elimination of hunger and poverty. FAO’s Policy on Gender Equality guides the organisation’s work on promoting gender equality and women’s empowerment as a key to eradicating hunger and poverty worldwide. This involves eliminating all forms of discrimination against women under the law, ensuring that

access to resources is more equal and that agricultural policies and programmes are gender-aware, making women’s voices heard in decision-making at all levels.

THE GLOBAL IMPACT OF CLIMATE CHANGE

The period from 1983 to 2012 was likely the warmest thirty-year period of the last 1400 years (IPCC 2014). The IPCC “Physical Science” report shows that global temperatures are increasing, global sea level rise is accelerating, oceans are warming and acidifying, rainfall patterns are changing and both glaciers and Arctic sea ice are in decline. The impact of climate change is evident in altered weather patterns like El Niño, which has resulted in the worst drought in thirty-five years in parts of East and Southern Africa. Worldwide more than 60 million are affected, and 23 million people are severely food insecure and require immediate emergency assistance.

Severe weather has decimated the food supply in many parts of the world. In Niger, farmers are being forced to find new sources of income as climatic changes make rearing livestock impossible. In Peru, highland communities that have for centuries relied on regular water supplies from Andean glaciers must now cope with shifting water availability, which is affecting their ability to grow food to feed their families and make a living. In Thailand and Indonesia, coastal communities tackle threats to land and sources of income posed by rising sea levels. The impacts of climate change are causing migration and displacement of these communities and, as a result, societies affected by climate change may find themselves locked into a downward spiral of ecological degradation, resulting in the collapse of social safety nets while tensions and violence rise.

Gender-transformative CSA programmes advance gender equality through activities targeting changes in the following three domains: **building agency, changing gender relations and transforming structures** (CARE GEWV, 2016). The table below illustrates how each of these domains translates into practice.

Domain	Practice
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).

Evidence from FAO and CARE programming, and other models around the world, demonstrates that this type of framework for engagement leads to a sustained change in both attitudes and behaviours. For example, the Farmer Field and Business School model used by CARE's Pathways to Empowerment programme synchronises gender dialogues (alongside dialogues about market, agriculture and nutrition) with the agricultural calendar, and creates structured spaces for reflection on gender social norms, beliefs and practices at both the community and household levels. This programme **transforms gender relations**. The village savings and loans association models also facilitate the creation of networks at higher levels up to the national arena, addressing the specific needs and priorities of women. The programme also **builds agency and transforms structures**¹⁹. Another example is the International Fund for Agricultural Development (IFAD) project in Mauritania, which engaged couples in joint agricultural activities and, through that process, changed male spouses' perceptions of women's capabilities and roles within agriculture²⁰. By working with demonstrative families, a FAO project in El Salvador was also able to redistribute the gender roles within the household and reduce gender-based violence. These projects all **changed gender relations and enhanced women's agency**.

Another successful experience is that of the FAO Dimitra Clubs, comprised of groups of women, men and young people, who organise themselves and work together to bring about changes in their communities. They meet regularly to discuss the challenges they face in their daily lives, making decisions and acting to resolve their problems. The Dimitra Clubs help women and men to become more aware of gender inequalities and act to address them, particularly to change the roles and responsibilities within households and the community, working together to **transform gender relations**.

The *Caisses de résilience*, supported by FAO, offers another relevant approach to empowering and increasing the resilience of rural men and women and the most vulnerable households, by strengthening technical, social and financial capacities that build on local economic opportunities. This approach works mainly through women's associations, and focuses on the adoption of sustainable agricultural practices, enhancing community-managed savings and credit and reinforcing community dialogue, social cohesion and governance. This has proved to be a successful approach to improving gender relations and supporting the socio-economic empowerment of vulnerable women and agro-pastoral communities by strengthening the resilience of women and their preparedness to climate risks and natural disasters.²¹

Gender transformative CSA programming is not simply about gender parity or giving women and men equal resources. Rather, it is about adopting, integrating and promoting good practices to address all three domains of gender equality (building agency, changing structures and transforming gender relations). Indeed, programmes are most sustainable and impactful when all three areas of gender transformation are considered simultaneously, resulting in more robust adaptation and disaster mitigation strategies, with equitable and sustainable impacts.

CSA is not only about promoting a specific practice or even a set of practices. Rather, supporting the adoption of CSA implies developing agriculture systems that are climate smart. The good practices that organisations introduce among small-scale farmers need to be integrated along agri-food value chains and go beyond just improving production. Viewing CSA holistically, as a process that facilitates productivity, adaptation and mitigation in every aspect of small-scale agriculture systems from production to delivery, and that considers the gender-related impacts of

each intervention along the way, can be a sustainable approach for small-scale farmers.

There are many factors that affect the full participation of women, men, girls and boys in CSA programming. The review of best practices and evaluations from FAO, CARE and other organisations suggests that, what is almost as important as providing the knowledge and tools for female farmers to adopt CSA approaches, is to address the **constraining factors** in engaging the entire household, community and enabling environment to sustain continued application of CSA practices.

It is important to address the gender-based constraints to better adapt CSA, and to address the specific concerns of women. Therefore, power and agency, as well as access to productive resources and assets and access to agricultural services, play a major role in the adoption and dissemination of CSA practices. Through the examples described below and the results of the literature review, it becomes clear that women do not have the same opportunities as men to develop CSA, and it is essential to identify and address the gender-based constraints they are facing.

VALUING WOMEN'S WORK

"The burden of unpaid care and domestic work disproportionately falls on women and girls in every region of the world".

The 2017 High Level Political Forum (HLPF) Thematic Review of SDG 5 found that women spend 19 percent of their time on unpaid care work, compared to 8 percent for men. Rural women experience a triple work burden in the productive, reproductive and social spheres and, unlike men, their work is mostly unpaid and unrecognised. This means that women and girls work longer hours and have less time to engage in income-generating activities or attending school.

Labour-saving technologies can help ease the burden women face in productive capacities. However, without also addressing their access to and control over resources, and their decision-making ability over their own work burden, women and girls will continue to take on a disproportionate share of unpaid care and domestic work.

POWER AND AGENCY

It is important to analyse the power relations existing between men and women within households and communities, and to provide them with equal economic opportunities in order to improve their

well-being (agency), which is the ability of women and men to take up economic opportunities to improve their individual and household well-being. In this context, agency includes the skills, knowledge, confidence, self-esteem and aspirations (non-formal sphere) and capabilities (formal sphere). Individual agency is a key part of empowerment whereby empowered individuals take steps to achieve their rights. Choices to adopt CSA practices are undertaken in gender-unequal contexts where men usually bear greater authority over decisions relating to agricultural production and have more control over resources and services. As a result, women are often excluded from opportunities to participate in and benefit from CSA, even when they are key producers of household subsistence crops. Gender norms surrounding the division of productive and reproductive labour between men and women also have a significant influence on CSA adoption and outcomes. For example, in Ethiopia, this gendered division has created a barrier to women's ability to engage in on-farm adaptation measures.²² Moreover, among agro-foresters, women bear most responsibility for household work, limiting their available time for adopting new or additional practices, and for travelling to market for agricultural and agroforestry products.²³ The literature on fisheries and aquaculture strongly emphasises patriarchal gender norms as limiting women's involvement in the sales of their catch/product, as well as their full participation in innovation opportunities in the sector. This gendered division of labour underlies and exacerbates the unequal gender dynamics of each of the other seven areas described below.

Capabilities: To better understand the differences in CSA adoption choices made by women and men, and vulnerable/marginalised people, it is necessary to analyse household decision-making patterns. Moreover, it is important to analyse women's education and literacy levels, and their access to and control over information sources and public spaces, which are often very different from men's. These are not social issues that are peripheral to agriculture systems but, rather, are essential to increasing the adoption of CSA practices of women as well as vulnerable and marginalised people. Moreover, even if women are equitably included in training, the existing education gaps can sometimes make it difficult for them to grasp relevant information in an actionable way.²⁴ It is thus essential that information be delivered in a way that is comprehensible to people of all literacy levels. Special efforts are needed to provide women and men with equitable access to information on production practices, weather, access to credit and other key areas required for them to have equal opportunities for success in CSA.

Self-Confidence: By building agency, programmes can support women and girls in increasing their confidence, self-esteem, knowledge, skills and capabilities. This also contributes to strengthening their leadership and negotiation skills so that they can more actively and effectively participate in decision-making, and make their voices heard. However, what works to transform the lives of women and girls in one context may not have the same impact elsewhere. Moreover, while actions to improve women's lives may not be transformative on their own, they may constitute an important step within a long-term process of transformation.

Decision-making: Even though women tend to be more responsive to the changing needs of their households, they are often left out of decision-making spheres, where they could influence communal practice. The literature suggests that women are not involved in the same way as men in decisions related to climate-smart interventions.²⁵ In Uganda, researchers reported that men control agroforestry decisions, limiting women's ability to adopt CSA.²⁶ The gendered division of labour more broadly tends to result in women's exclusion from decision-making over production, including CSA adoption. Even within a household that benefits from gender-transformative approaches, women and men observe that increasing women's participation in household decision-making increases productivity and food security. However, men are still seen to retain primary decision-making authority²⁷.

ACCESS TO ASSETS, PRODUCTIVE RESOURCES AND SERVICES

Women and girls in rural agriculture systems often lack adequate access to productive resources and services. This presents a significant challenge to the adoption of climate-smart practices, for example, extension, trainings and policies are not tailored to the specific needs of women and girls involved in farming activities. Existing biases in these activities can sideline women, and specific interventions that are not responsive to gender needs may harm women rather than benefit them.

Land and water: Across regions, rural women face greater constraints than men in accessing productive resources, and are under-represented in local institutions and governance mechanisms. For example, in Nigeria, women are sole owners of only 8 percent of all plots, while men are sole owners of 71 percent. Many disparities still exist in the distribution, tenure, governance and management of these resources, which constitute a primary constraint to achieving sustainable agriculture production. The

insecure land access represents a significant barrier to the adoption of CSA practices. There is persistent inequality in the formal and informal tenure regimes. It is not only a matter of women's limited ownership of land, but also of the poorer quality of the land they can access. Indeed, when women do not own land, they have little incentive to invest in adopting new agricultural methods, and when the risk of losing land access is high, women are less likely to adopt new practices.²⁸ Moreover, where women own land, they do not necessarily have decision-making control over its use, particularly when their sharecroppers are men, as found in an Ethiopian study.²⁹

Institutions responsible for water access and management, such as the water users' associations or district water authorities, still too often tend to marginalise or exclude women, who are greatly affected, and carry a work burden due to inadequate infrastructures.

Forest and fisheries resources: Besides land, tree, pond, pasture or other natural resource tenure shapes women's potential to adopt and benefit from CSA in the agroforestry, aquaculture, livestock and other sectors. Gendered tree tenure refers to the fact that men often have ownership and access rights to commercial uses, and to the part of the tree that has a higher commercial value.³⁰ Meanwhile, women tend to have rights to fodder, fuelwood, fiber, fruits and mulch,³¹ and to manage plots with lower tree density.³² "Pond tenure" in the aquaculture sector is also highly gendered. Due to restrictions on their mobility, women tend to be managers of backyard aquaculture ponds. However, they have a more limited role in catch fisheries, as they are often culturally expected to stay close to the shoreline where commercial fishing may not be feasible.

Labour: In agriculture, livestock management and agroforestry women have greater difficulty than men in accessing sufficient labour for climate-smart practices. Men have greater ties to existing social networks, through which they can access productive agricultural labour.³³ Women face more difficulties in accessing additional farm labour due to social and financial constraints, but need it to perform physically arduous tasks.³⁴ The aquaculture sector is an important exception, where additional labour requirements from backyard ponds are considered minimal, and do not significantly impede CSA adoption. Promoting access to labour through labour markets, family or social networks could be a significant positive influence on women's CSA adoption.

Equipment and Technologies: Climate-smart technologies are often designed without considering and addressing the differential needs of women and men, making them unfit for the concrete necessities of women, and more difficult for them to utilise. Overall, technological practices such as minimum tillage can be done with animal traction systems using tools such as *magoye* rippers (Zambia), chisel-tined rippers (East and Southern Africa), animal-drawn direct seeders and the *maresha* plow (Ethiopia).³⁵ However, the development of these and other technologies often does not take women's differential physical needs into consideration, their affordability, or the social constraints that may prevent women from using these technologies. The difficulties women face in accessing production technologies are likely to be replicated for climate-smart approaches.³⁶ In some contexts, however, women have begun to use new labour-saving technologies, including the *njansang* kernel extraction machine in Cameroon,³⁷ and technologies to improve soil fertility.³⁸

Networks: By changing the power relations that influence people's lives, women and girls will have more say and choice in taking decisions about priority issues that affect them. Mobilising women and increasing their participation as group members of a community-based adaptation project can increase their access to training not only on technical aspects of the project, but also on leadership development and gender equality. This can help members (especially women) to gain influence and control at the household and community levels. Working on service delivery with government and other powerholders (including state, private sector and traditional leaders) can improve the ability of service providers and duty bearers to be more responsive, transparent and accountable to marginalised groups, particularly women.³⁹

Training: Rural advisory services can help close the gender gaps in agriculture by making information, new technologies, skills and knowledge more relevant and accessible to female farmers. Still, too often are women and marginalised groups bypassed by agricultural extension programmes, due to poor levels of education and a lack of acknowledgment by extension agents of women's significant contribution to agriculture development⁴⁰. Moreover, there is a historical bias towards men in extension services, and information on agroforestry techniques and⁴¹ sustainable livestock management mostly focus on large animals, which, together with livestock breeding, are traditionally considered a men's domain.^{42, 43} Integrating more women among extension staff

can also increase the access of female producers to advisory services. However, fodder-productivity interventions are an important exception, and tend to acknowledge and support women.⁴⁴ Constraints on women's mobility, access to radios and media and lower literacy levels further limit their opportunities to receive and act upon climate information that is relevant to their farming.⁴⁵ A study on Nicaraguan women farmers has shown that gender norms limit their participation in such group trainings for community-based fisheries management for climate-smart agriculture,⁴⁶ and for livestock breeding.⁴⁷

Inputs: Inputs are more difficult for women to access than men. Cultural norms often influence the use of machinery⁴⁸ and draught animals,⁴⁹ making women more vulnerable to the impacts of erratic weather patterns as they cannot rely on accessing the agricultural inputs to help them adapt.⁵⁰ Women's access to inputs such as improved seeds, fertilisers and pesticides is limited by their access to extension services. Government-subsidised inputs to small-scale farmers are often distributed through cooperatives. Women are rarely members of cooperative, and often lack the money needed to purchase inputs even when they are subsidised.⁵¹

Finance: Across sectors, women have less access to and control over the credit required for acquiring productive resources and adopting innovative climate-smart practices, while men can generally more easily access the cash needed to adopt CSA practices.⁵² A CCAFS study found that access to credit did not contribute to CSA adoption, except where it was gained by women, who used credit towards irrigation, water harvesting and managing manure from livestock.⁵³ The establishment of micro-savings groups amongst women aquaculturalists has allowed them to expand their production.⁵⁴ CARE's experience demonstrates that households that are able to participate in saving groups tend to have more income stability and the ability to diversify on-farm, off-farm and non-farm livelihoods to build a greater resilience to shocks affecting any source of income. Therefore, access to flexible finance is a critical factor to support the adoption of CSA practices. Additionally, women are often excluded from borrowing when they do not have collateral (i.e. land or property).

The application of CSA practices can lead to increased incomes for female and male producers, which can also foster their greater engagement and economic empowerment. In the United Republic of Tanzania, a study conducted with a small sample of men and women showed that they report having

more free time and income after adopting CA.⁵⁵ However, women are more likely to experience poverty and income inequality, which can impede them from obtaining sufficient credit to adopt CSA practices (see below). Households that are prone to recurrent shocks are unlikely to participate fully in CSA programming, or to experience the attendant benefits from continued application of CSA practices.

The evidence base on the different access of men and women to the credit and finance required to adopt CSA practices is also limited. However, experience from CARE's programmes suggest that the failure to integrate financial access and literacy into the design of agriculture programmes can create lasting barriers to the adoption of good practices for both women and men.

To conclude, women will remain largely information-starved and neglected by service providers and development interventions unless their differing needs, preferences and constraints are adequately identified and addressed right from the design of CSA programmes and policy-making. Gender issues should be integrated in research and projects, and the design of tools and interventions should be more gender responsive in order to accelerate progress towards achieving various development objectives, whilst enabling women to become agents of their own empowerment and resilience building for their households and communities.

WHAT IS A GOOD PRACTICE IN CSA?

The approaches identified in this paper are elaborated based on the case studies described below, which are classified according

to the type of agricultural system (crops, livestock, fisheries etc.). This paper presents a series of good practices for helping to develop gender-transformative CSA programmes in each agricultural system. The approaches highlighted in this section were adopted in projects and programmes that have produced successful results in achieving gender equality and women's empowerment. The below described projects build on existing practices within each agricultural system, engage a relevant set of stakeholders and are implemented in an integrated manner. They represent good examples of how to develop gender-transformative CSA programs in different contexts.

Instead of focusing on specific technical on-farm interventions, these good practices focus the attention of practitioners towards a host of integrated practices and processes that are needed to build adaptive and resilience capacities, mitigate GHG emissions from agriculture and increase productivity for small-scale farmers, while focusing at every stage on gender equality and women's empowerment. These good practices incorporate many relevant CSA cases that have been developed and identified through other established processes.

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CONSERVATION AGRICULTURE, INTEGRATED SOIL MANAGEMENT AND WATER-SMART AGRICULTURE

Conservation Agriculture (CA) includes a set of on- and off-farm practices like minimal or no soil tillage, mulching, retention of crop residue, soil protection and soil conservation techniques, use of manure and other organic fertilisers, use of crop rotation to ensure increased yields, organic farming and other improved soil and ecosystem health-related practices (most of which are often grouped under the term Integrated Soil Management). Water management practices include rainwater harvesting, small-scale, drip or supplemental irrigation, contouring, alternate wetting and drying. These CA practices, which rely heavily on community mobilisation and participation, can increase soil moisture content and organic matter, reduce erosion and prevent nutrition loss. By employing a minimal or no use of chemical fertilisers, pesticides and fungicides, they decrease the environmental impacts.

Common elements in this CSA practice include interventions geared towards improving water quality for cropping cycles, nutrition and livelihoods and building resilient landscapes. Along with on-farm interventions aimed at effective and equitable use of water and increasing soil quality, there are off-farm activities, such as providing trainings to farmers for agriculture and non-agriculture-related skill development, holding dialogues and creating spaces such as learning alliances for farmers to interact with power holders and service providers, and improving gender equality through behaviour change or other interventions.

Greater unpredictability around precipitation due to climate change is resulting in either too much or too little water around the world. Many small-scale farmers depend on rainfall to grow their crops, and even small changes in precipitation patterns can have dramatic consequences on their livelihoods and food security. Combined with hazards such as high levels of pollution of surface water and decreasing groundwater levels, the increasing use of harmful agricultural inputs and practices degrading soils, causing a loss of forest cover and higher runoff causing more erosion can put the ecosystems at higher risk, and the people who live in and depend on it.

Moreover, there is the risk that conservation agriculture can be labour intensive and require long-term investments in the farm

that may not result in short-term gains. Thus, the labour burden on women from CA interventions, as well as the ability of women to make long-term investment decisions on access to assets and information, is critical.

In the design and adoption of CA practices, special attention should be given to addressing the barriers to the socio-economic empowerment of rural women to overcoming their limited access to labour-saving technologies and productive resources such as credit, and their poor participation in decision-making. This entails gathering the perceptions of both male and female farmers, and ensuring their adequate participation (for example, through a fixed quota for women) in the testing and adoption of CA practices and strategies adapted to the local context. Specific issues to also be considered are how much women control the income produced from that practice, and the amount of time required until benefits are realised. It is important to take into account the existing gender relations within the specific social context, the gender roles in decision-making over technology adoption, the form of farming practised (plough- or hoe-based) and women's specific roles in the production system. Cultural norms and gender-biased access to productive resources, such as livestock or mechanised equipment, affects women's roles differently in animal-drawn tillage systems, as opposed to mechanised tillage systems.

CASE STUDY

ZIMBABWE LIVELIHOODS AND FOOD SECURITY PROGRAMME (LFSP)

The Zimbabwe Livelihoods and Food Security Programme (LFSP) aimed to improve food security and nutrition of small-scale farmers and rural communities in Zimbabwe. Funded by DFID and managed by FAO with a consortium of partners, the programme was implemented in eight districts, and sought to help 349,000 Zimbabweans through a combination of livelihood support aimed at increasing productivity and market development to link farmers with commercial markets, as well as stimulating the demand and supply of affordable, nutritious foods.

The LFSP-APN considered gender inequality to be a critical factor that negatively impacts food security, nutrition and household income. Consequently, gender mainstreaming aimed at promoting the drive towards gender equality and women's empowerment, has been placed at the centre of LFSP-APN. Part of gender mainstreaming implies addressing set norms and traditions. This is not always easy, as it concerns a questioning of the status quo. However, through the application of tested gender methodologies, some attitude changes and shifts in norms have been witnessed. Specifically, the use of the GALS and Women's Empowerment Framework were applied in a bid to address such norms.

The use of GALS has been promoted across the programme as an effective means of transforming gender relations.



A lead farmer using the GALS methodology in Zimbabwe.

At project inception, each cluster had its own gender mainstreaming methodology. However, based on lessons learnt, a recommendation has been made that GALS be used across clusters with modifications where appropriate, in order to suit the context.

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. This 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. Ninety-one percent of households surveyed on the third cohort study were in receipt of agricultural extension services.

Farmers in Mutasa, where rainfall is very erratic every farming season, are fully aware of the poor performance of maize in drier periods. However the frequency of droughts has increased in recent years, and most farmers have been unwilling to take up the production of small grains, which are not locally consumed.

"Here in Mutasa it is taboo to grow millet. The chief won't allow it at any cost and should any farmer try to do so they will be thrown out of the district in broad day light", said one of the Agriculture extension workers jokingly.

Following the trainings facilitated by the LFSP project on CSA, 15 farmers decided to experiment on the use of "zai" pits, a practice where planting stations are 60 cm diameter holes, 30 cm deep and fertilised with fully decomposed organic material mixed with top soil. Six to eight plants are planted per station.

David Kudumba (pictured above) is one of the farmers who has taken up the zai technique – with impressive results.

"I wouldn't want to take all the credit for this work; instead I will attribute it all to my workaholic wife. We all referred to this work as her little experiment, and little did we know that this was going to be the most successful crop this season. We now wish we had planted a hectare under these zai pits", said David with a smile.

The programme works 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 can contribute meaningfully; The result is that women take up leadership positions, speak at public gatherings and are consulted by community leaders. There is also a shift in gender social norms at the household level, as evidenced by increased household productivity, and women's increased control over assets and income. Some male participants reported that they now give most of the household income and make joint decisions on household expenditures. Anecdotal evidence of male GALS champions suggests that there is more sharing of household work like cooking, washing, fetching water and working in the fields. At institutional level, the programme raised community awareness on the provision of laws and policies that support LFSP-APN objectives on gender



Promoting the growing of fodder for livestock.
Photo taken in Zimbabwe under the Livelihood Food Security Programme (LFSP).

equality (GE) and women empowerment (WE), such as the new Constitution, the Domestic Violence Act and laws relating to wills and inheritance.⁵⁶

WHAT WORKED

Understanding the context

The programme developed a gender strategy, which informed of the core actions that the programme must take to promote gender equality under the specific socio-cultural context identifying the different constraints and opportunities of local men and women. Tailoring the approach to meet the needs of both women and men in the community set the ground for how programme activities should be designed within a gender framework.

Empowering women with tools and resources

LFSP-APN made a concerted effort to adopt agricultural technologies more appropriate for women, and organised gender-sensitive training for female extension workers, equipping them with bicycles. The project focused both on farm productivity and the promotion of conservation agriculture techniques.

Setting up structures to promote sustainability

Beyond promoting women's active participation at the farm level, the LFSP-APN programme also mobilised resources to enable small-scale female farmers to invest in farm enterprise diversification, productivity-enhancing technologies and non-farm economic activities and livelihood strategies contributing to food security.

At community level, the rural finance component of the programme is enhancing the capacity of farmers to save their livelihoods and assets, whilst ensuring that they are indeed able to access financial services. The three-pronged approach, combining provision of technical assistance, credit line and risk sharing mechanism in the form of a portfolio guarantee, progressively produced some positive results.

This programme has mentored and mobilised over 4 000 groups (about 44 071 members, according to the latest report). In 2016, the female members of the groups accounted for 78.45 percent of the total group members. The introduction of smart subsidies was considered a key entry point for women to acquire assets and improve their productivity.

CASE STUDY

GLOBAL WATER INITIATIVE (GWI)

The Global Water Initiative East Africa (GWI EA) was a five-year programme of action research, advocacy and policy influencing carried out in Ethiopia, the United Republic of Tanzania and Uganda, both nationally and locally. Funded by the Howard G. Buffett Foundation and implemented by CARE, the GWI EA programme goal was that small-scale farmers would achieve greater food security through more sustainable access to and productive use of water.

Female farmers are responsible for small-scale agricultural production in East Africa. At the core of any future transformation in agriculture, it is crucial to strengthen, through policies and practices, the roles played by rural women as farmers, resource managers and investors. Given that women comprise more than 50 percent of the population economically active in agriculture in sub-Saharan Africa, and provide the bulk of labour and marketing for both food and cash crops, GWI EA focused on their empowerment to enhance their voice within decision-making fora and institutions.

GWI EA employed action research to identify technologies and practices around water management that can reduce vulnerabilities and enhance productivity and food security among small-scale farmers. The programme engaged local officials, community organisations, researchers and other stakeholders under the Learning and Practice Alliances (LPAs). These alliances create action research groups to test technologies and practices of water for agriculture, working closely with champion farmers selected in partnership with LPA members. The programme engaged women and developed more tailored products and services that are appropriate for the context and driven by the demands of female farmers.

These farmers form a research cohort over the life of the programme, and support the sharing and dissemination of best practices within their communities and districts. A key factor in understanding how successful technologies and practices can be scaled up is the affordability of different options. Based on this understanding, GWI EA helped partners to identify investment models and approaches that can form the basis for advocacy and policy influencing at national and regional levels. The programme

Before GWI EA, I had insufficient knowledge about soil and water conservation and vegetable production. I implemented the practices with support from GWI and hosted a study tracking the performance of tomato varieties under soil and water management, using manure, raised beds and soil cover, using mulches on my land. Last season, from my tomatoes, I earned USD 350 from a 600 sq. metre plot. If I cultivated an acre, I would earn over USD 1,420 in the space of 3 months.

—Anna Anyinge, Uganda

supported the progressive development of small-scale farmer capacity, particularly of women, to engage them in decision-making so that they can raise their concerns and priorities in the efficient utilisation of water for agriculture.

GWI EA also works with champion farmers who are selected in close coordination with members of the LPA. Criteria for becoming a champion farmer include their willingness to be part of the action research, the capacity to learn and innovate, and their commitment to further disseminate good practices and experience to other farmers working within the district. Most of GWI EAs champion farmers were women, reflecting the programme's specific commitment to supporting small-scale female farmers given the particular challenges they face and the critical role they play within the farming sector in East Africa. The programme worked closely with these farmers over a period of years, building a deep understanding of ways in which investing in water for their agricultural production can help underpin food security for their households and communities.

The results of investing in knowledge intensification, particularly with women farmers, are remarkable. Female headed households' income on average showed an increase by 414 percent. Their average income earned from sale of crops more than tripled in the current production year. During the baseline year, 15 out of the 66 champion farmers were food insecure, experiencing food shortage from one up to four months' in a year. All except one of the 15 were women. At the end of the project, the number of champion farmers who experienced months of food shortage dropped to 5 percent.



Yeshume's Growing Fortune

Yeshume Chekole is a 20-year-old single mother of one. Before joining the GWI EA programme she had limited knowledge of how to make a living from agriculture to sustain her 3-year-old daughter.

"After my husband left, life became very difficult. I had to borrow food and money from friends and relatives to sustain my family.

As a champion farmer, I received training on water-smart agriculture, poultry management and how to operate a motorised irrigation pump, to help me continue crop production even in dry seasons. I also learned about the agronomy of planting in rows and using improved seed varieties for better yields. With the knowledge and skills I acquired, I planted improved varieties of potatoes, tomatoes, hot pepper and maize on 1.2 acres. From the sale of my produce, I have purchased three sheep and constructed a house.

As a member of the LPA, I have attended meetings where women farmers communicate with government and key decision makers to discuss issues related to water for agriculture. I believe that there is a great opportunity for women small-scale farmers to boost agricultural production, ensure food security and augment household incomes if they embrace irrigation and conservation agriculture techniques."

WHAT WORKED

Investing in women

GWI elevated the status of women as champion farmers and increased investment in smarter, affordable and innovative solutions for small-scale farmers, particularly women. Evidence from Uganda showed that income doubled among champion farmers (mostly women) over 18 months, and yields increased from 1 340 to 3 079 kg/acre.

Generating Evidence

LPAs provided evidence that improved practices and uptake of technologies increase both yield and income potential, as well as the average crop diversity among practising farmers. Additional evidence in Uganda demonstrated the potential for household cost recovery of investments made in improved practices and technologies targeting female farmers, giving special attention to the political set up, through changes in policies and plans that were more relevant to the needs of women at local, national and regional levels. Evidence of women's increased participation, decision-making power and empowerment amongst small-scale female farmers, also showed a correlation with increased food security at the household level.

Increasing Voice and Influence

Champion farmers, particularly women, tested and adopted effective water-for-agriculture approaches in their own contexts, which demonstrated the viability of and return on investments – both to other farmers and policy makers. This approach increases the voice and influence that women have within the institutions responsible for access to and control over water for agriculture.

CASE STUDY

PATHWAYS TOWARD WOMEN'S EMPOWERMENT

The Pathways towards Women's Empowerment (known as Pathways) programme seeks to increase poor female farmers' productivity and support empowerment in more equitable agriculture systems at scale. Funded through the Bill & Melinda Gates Foundation, Pathways' work is implemented by CARE in Malawi, Ghana, India, Mali and the United Republic of Tanzania. Through this programme, 47 000 women farmers have been able to increase their yields of food by more than half a million tonnes as compared with traditional practices. The December 2016 cost-benefit analysis carried out by the [New Economics Foundation](#) showed that for every USD 1 invested by the Pathways programme, communities get a USD 31 return on investment.

The number of shocks that households experienced during the five years of programme implementation increased in each country except for Mali. However, even during the El Niño year, where climate change impacts were exacerbated by extensive drought, agricultural production increased by as much as 56 percent for some crops. In places where national yields were dropping by 30 to 50 percent (like Malawi), the yield of farmers targeted by the Pathways programme largely stayed constant or went up. Compared to three previous years, households in Ghana, India, Malawi and Tanzania more likely benefitted from diversifying their livelihood activities and applying climate-smart practices, such as the use of drought-tolerant or early-maturing crops, and development of small-scale irrigation infrastructure. Purchasing additional livestock is now more common amongst households in India and the United Republic of Tanzania. Participants in all the countries cited village savings and loans (VSLAs) as the most impactful intervention, and usually considered that the access to credit provided the best outcome from the project. Reports show that farmers could mobilise USD 1 885 693 in loans through VSLA, and an additional USD 66 736 in loans from formal institutions

One of the most successful approaches of the programme was to challenge the false dichotomy between men as breadwinners versus women as caretakers. Recognising women as farmers during farmer field days, especially through images of women as demo farmers, was a crucial step. This was reinforced through government extension workers and input suppliers, to acknowledge their important role and their potential as buyers and consumers. Communities say that the programme helped change their minds about how to better treat female farmers.

The gender analysis conducted by Pathways both explored the roles and responsibilities of women and men related to agriculture and marketing, and evaluated all the domains of a woman's life. A gender-sensitive value chain analysis identified different entry points at which both women and men could be integrated. The analysis showed where women and men are concentrated (at less value-added stages) and identified the need to evaluate the existing power relations at each node in the value chain, including the hidden household-level power relations that disadvantage women (i.e. less access to information, time).

Women's access to extension services more than tripled in every country where Pathways worked in. Farmer Field and Business Schools (FFBS) were a particularly important way to increase the access to information (including on climate-smart practices) and extension services for farmers. In India, Ghana and the United Republic of Tanzania, seed replicators and agri-kiosks have lowered costs, and were able to overcome the barriers of high-quality inputs for farmers. In every country, access to inputs went up by at least 10 percent, and in India and the United Republic of Tanzania it more than doubled. In Ghana, the United Republic of Tanzania and Malawi, the number of women with access to markets where they could sell their crops also doubled.

A critical transformative approach within Pathways is to address – not just accommodate and work with – the fundamental inequalities related to land rights. The programme focused on the access as well as the control and tenure security. The programme recognised that this cannot change overnight, but requires the addressing of legal and customary frameworks. In Mali, the existing Farm Bill provision was used to provide groups with secure medium-term contracts of three years. For the first time, written agreements were signed between traditional authorities and groups. The combination of efforts to reclaim land, provide access to climate-resistant seeds and teach farmers techniques like conservation agriculture and micro-dosing all addressed the specific problems of coping with climate change and the lack of access to inputs. As a result of these efforts, 236 71 hectares of rice were cultivated, and income from rice cultivation during the six-month growing season totalled USD 326 423.09. The income per woman participant during this six-month period was USD 894.31; and daily income increased by 300 percent, from USD 1.25 to USD 5.

The number of women who meet CARE's definition of empowerment,⁵⁷ according to the Women's Empowerment in Agriculture Index,⁵⁸ more than doubled in Ghana and the United Republic of Tanzania, and women's empowerment scores increased by an average of 14 points in Mali and the United Republic of Tanzania, and six points in India, Ghana and Malawi. Women's ability to influence household decisions on assets increased by about 25 percent, and women in leadership positions reached 20 to 60 percent, depending on the country. Teaching numeracy skills, and particularly market calculations (the cost of production, etc.) has transformed women's abilities to negotiate. This is especially so in Malawi, where women can now bargain more comfortably and challenge crooked traders.

The significant changes in terms of women's empowerment are partly a result of their increased income as farmers, and the recognition and value of their crucial role. But they are also a

result of dialogues to examine the relationships between men and women, and identify ways to improve gender equality. Male champions played a critical role in all the programmes to involve other men and support women, treating them more equally both as partners and as farmers.

Empowering female farmers has been crucial to producing more food and increasing their resilience to the impacts of climate change and other stresses and shocks. Due to increased yields, farmers produced an extra 537,498 tonnes of food than they would have employing traditional practices. During the project implementation, women were able to mobilise USD 7,240,676 in income from improved yields and better marketing. Compared to the baseline evidence in most places, income from farming went up between 40 and 165 percent. Where farming income did not increase, there was still an increase in the overall household income.

WHAT WORKED

Facilitating women's access to information

A women-focused extension approach can help female farmers build the required skills to grow more food, but also increase their access to markets to sell at a profit. Models like FFBS (Farmer Field and Business Schools) help governments fill the gaps in their own extension systems, and increase the access to quality extension services for female farmers.

Engaging men

This was crucial to the success of this programme. Pathways has promoted more equal relationships and decision-making in the household. In all the project areas, women and men told stories of how they now work together to increase the income and food security.

Promoting women's economic empowerment

Pathways worked at all levels to transform gender relations within the household; by developing women's leadership skills; expanding their access to services, assets and inputs; creating a more enabling environment for gender equality and improving the extension and market systems.



AGRICULTURE VALUE CHAINS

Developing functioning markets and ensuring that the critical components of different agriculture value chains are improved helps ensure that broad CSA outcomes are met. Though sustainable intensification⁵⁹ is important for any given value chain to analyse all aspects of production, harvesting, post-production and consumption. The Markets Work For the Poor (M4P) approach, applied to market and value chain development, takes a systemic and comprehensive approach to agriculture value chains so that small-scale farmers, particularly women, vulnerable and marginalised groups can also better benefit from them. This approach recognises that markets are often structurally set up so as not to favour poor and marginalised producers and consumers. It helps to have a coherent and comprehensive understanding to provide a more efficient and sustainable support to poor women and men. Moreover, climate change and other stressors or shocks can have strong implications for the smooth functioning of markets, and effect producers and consumers in that system. M4P focuses explicitly on stimulating a change in the behaviour of market players – public and private, formal and informal – so that they are better able to perform important market functions in a more effective way. The M4P approach is a very relevant value chain development approach, where CSA considerations are optimally integrated.

In the context of CSA programming, sustainable intensification and value chains development work together. They work to increase income, support gender equality and women's empowerment, build resilience and sustainability for male and female farmers, achieving this through market development, asset creation or on-farm diversification. This can help to build the adaptive capacity of men and women, and provide new opportunities for many households. The promotion of SI, with a focus on markets, benefits the successful implementation of interventions that ensure long-term sustainability, increase productivity and promote equality through short-term increases in farmer yields. In the context of improving agri-food value chains, women can be stuck in underpaid, low-skill and more insecure work, while men get higher remuneration and status. Many factors affect why this happens, even though most formal and informal institutions, policies and the systems in place across most societies are systematically biased towards women. Women and girls are often employed as wage labourers in production,

FAO GUIDANCE ON GENDER-SENSITIVE VALUE CHAIN DEVELOPMENT

FAO is committed to ensuring that current processes of growth and commercialisation in the agriculture sector do not lead to further disempowerment of women and girls and contribute instead to the sustainable development of agri-food systems. The inclusiveness of agricultural food systems depends on the extent to which they allow the most vulnerable groups of men and women (such as smallholders, small enterprises, and women- and youth-run enterprises) to access the resources and services they need, to participate in and earn a living wage from their activities. Working towards inclusiveness, social justice and gender equality in agri-food systems entails addressing each level of the value chain, from the individual producer to the end market, and ensuring a comprehensive understanding of the issues and constraints that lead to the exclusion and marginalisation of certain stakeholders along the chain.

FAO has developed two documents for practitioners to guide gender integration into value chain programmes:

[Developing Gender-Sensitive Value Chains: A Guiding Framework](#) – this document provides guidance on facilitating the systematic integration of gender equality dimensions into value chain development programmes and projects.

Developing gender-sensitive value chains: [Guidelines for practitioners](#)– provides guidance to ensure that gender equality dimensions are more systematically integrated into VC development interventions.

processing and packaging. In more formal value chains, women are frequently unable to access labour unions, and their rights may not be well protected. Women who engage successfully in agricultural value chains can be pushed out by men who see higher returns and economic empowerment.

Improvements along the value chains are achieved through interventions such as advances in weather resistant food storage systems, strengthened systems and capacity development for cooperatives, farmers' groups, self-help groups and business capacity development.

CASE STUDY

ENABLE WOMEN TO BENEFIT FROM AGRI-FOOD VALUE CHAIN DEVELOPMENT IN THE TIGRAY REGION

The component of the Multi-Partner Programme Support Mechanism (FMM) on gender-sensitive value chain development was specifically designed to enable women to benefit more equally from agri-food value chains. Under this programme, FAO has provided technical assistance and policy support to address barriers that hinder rural women's access to and benefits from local, national and global markets. By developing women's capacities and fostering an enabling institutional environment, the programme aims at expanding women's economic opportunities and benefits from more efficient and inclusive agri-food chains, triggering multiplier effects on food and nutrition security, education and health. The programme focuses on eight countries, and is structured around a tri-fold approach: support field-level activities targeting women's associations and individual enterprises to access labour- and time-saving technologies; enhance the skills in on- and off-farm activities, business management and enterprise development; and assist policy makers in designing tools that increase women's participation in the higher-value segments of the value chains.

In Ethiopia, the programme supports women's associations and cooperatives already engaged in the production and marketing of fruits and horticulture in the Tigray region to diversify their activities and sources of income. The tomato value chain was selected as one of the most promising, in view of the high engagement of women, the potential local market demand for semi-processed and processed products in and out of season and its positive impacts on nutrition.

Tomato is the second most common horticultural crop among small-scale producers in the region, and is generally planted twice a year. The tomato production is characterised by low productivity, due to a variety of factors ranging from lack of irrigation, poor access to agricultural inputs (including seeds) and inefficient agricultural practices. Post-harvest losses are also significant, due to poor handling, storage, transportation and the lack of a processing facility in the region. This value chain employs large numbers of women, mainly in production and small-scale market retail, while transportation and wholesale distribution, including intermediation, is male-dominated. Too often do women in the

tomato value chain remain relegated to those segments that do not require significant financial investments, such as small-scale open market retailing in urban areas. In most cases, they are unable to find time to balance domestic care-work with taking care of their fields. Most of their income is utilised to rent the land. Married women face mutually reinforcing challenges: the burden of domestic care work, limited mobility, poor control and decision-making over household assets. Women are also more reluctant to adopt new technologies because they lack trust in their own ability to engage in economic activities.

The FMM initiative on gender-sensitive value chain development in Tigray started at the end of 2015, with a focus on the upgrade of products and processes along the tomato value chain. Five women's associations established under the umbrella of an Irrigation Scheme Association were initially identified for FMM support, and three were selected for being engaged in tomato processing, totalling 100 members. FAO's role was to facilitate partnership and collaboration between public institutions, a national NGO (Women in Self Employment – WISE), the establishment of three processing units; give access to equipment and organise capacity development activities for institutions, women's associations and service providers in several domains.

The project built on the engagement of public institutions to address gender issues hampering agriculture and rural development. FMM invested in the capacity development of institutions at different levels to promote gender equality in value chain and women's enterprise development for better sustainability. This was crucial to increasing women's access to land, facilities, inputs and coaching in improving tomato production and post-harvest operations for loss reduction, and establishing three tomato processing units. FMM also engaged WISE, and the *Association de Coordination Technique pour l'Industrie Agro-Alimentaire*, to reinforce the capacity of both public institutions and beneficiaries in women's enterprise development; business skills development; technology management, food safety and hygiene. These interventions proved to be very effective in terms of developing the capacities, self-confidence and commitment to support the operations of the processing units.



WHAT WORKED

Strengthening partnerships between public and private institutions with a focus on the technical content. Training was organised for institutions on how to ensure the equitable engagement of women in the tomato value chain, which increased awareness of specific constraints faced in accessing resources, services and employment opportunities, and helped to better integrate them in the value chain.

Enhancing women's capacities by strengthening their business skills in the tomato value chain, so that they could move beyond being end processors selling only at local markets. Enhancing their capacity to understand market demand and developing their skills in business literacy ensures that women are better able to negotiate fairer prices and increase their incomes.

Focusing on High-potential value chains for both gender equality and nutrition security impact. The tomato value chain was selected not only to provide new business opportunities and income-generation along a chain where women are predominantly at the low-value segments, but also to explore the potential

of tomato processing, to both increase the availability of this product out-season and to ensure hygiene and food safety for consumers' health and nutrition improvement.



Graduation of the training participants to WISE training on Basic Business skills (February 2017, Mekele)

CASE STUDY

WOMEN'S EMPOWERMENT: IMPROVING RESILIENCE, INCOME AND FOOD SECURITY PROGRAMME (WE-RISE)

The Women's Empowerment: Improving Resilience, Income and Food Security (WE-RISE) programme aims at improving household food security and building resilience by empowering women, particularly through increased agricultural productivity. Funded by the Australia Africa Community Engagement Scheme (AACES) and implemented by CARE in the United Republic of Tanzania, Ethiopia and Malawi, WE-RISE assisted over 39,500 rural households in improving their access to food and increasing their income.

The WE-RISE programme has achieved some staggering outcomes during its implementation in three countries. In Ethiopia, women's access to food in the household increased by 32 percent, achieving equality with men, and in the United Republic of Tanzania, the women's empowerment index rose by 37 percent. There was a 91 percent increase in women's self-confidence, and a 56 percent increase in their access to decision-making within the household. In Malawi, a 43 percent increase was observed in the number of families with non-agricultural income. In addition to diversifying their sources of income, household asset values increased by 42 percent in Ethiopia, 31 percent in Malawi and 26 percent in the United Republic of Tanzania.

Village Savings and Loans Associations

The success of the WE-RISE programme was mainly linked to the establishment of Village Savings and Loans Associations (VSLAs) in the communities. Collectives,⁶⁰ such as VSLAs, offer an essential gateway for women to access services, particularly financial services, but also to access other social services and activities that promote their empowerment. Prior to WE-RISE, saving was not a common practice; mothers often found themselves without funds to provide for their families, and were forced to sell off assets during difficult times. The participation in VSLA activities has proven to be instrumental in accounting for a very substantial change in savings behaviour, which was estimated to be between 94 and 99 percent at the end of the programme. While the amount saved in a VSLA is often small, participation in a savings group has allowed women to invest in small livestock and other income-generating activities, pay for educational expenses, purchase food and cope with emergencies. Participation in VSLAs provided both women and men with new income-generating activities, and created opportunities that contributed to achieving gender

equality and learning new skills such as saving and spending wisely, and social skills such as speaking in public.

Leadership Positions

Participation in and leadership of VSLAs is changing women's engagement in decision-making in their communities. As a result of more women holding leadership positions within a successful VSLA or other group, men pay more attention to women's decisions. More women are represented in village development committees than before, and more women are active contributors. Although the trend is still for male household heads to control most household resources and assets, and to have final decision-making power, the changes resulting from WE-RISE activities are slowly shifting the structures that influence women's choices. There is evidence that female WE-RISE participants are making inroads into traditionally male leadership positions by running for elective office and other prominent positions; in many areas, it was the first time that a woman has stood for a local political office.

Inclusion of Men in Gender Awareness-Raising Activities

WE-RISE's inclusion of men in gender awareness raising activities is crucial to the success of women's empowerment efforts. WE-RISE provided new business opportunities, such as sheep and goat farming, honey production, crop management and even soap making. At first sceptical of allowing women in their communities to control businesses, men's attitudes shifted as the businesses proved successful. Men more readily appreciate that women's empowerment benefits them not merely financially, but through a stronger partnership and greater harmony in the household. In Malawi, a strong link was observed between household participation in WE-RISE gender discussions and the fight against gender-based violence from both men and women. In Ethiopia, the project has increased awareness of and reduced gender-based violence and harmful practices such as female genital mutilation (FGM), rape and early marriage. Each WE-RISE country programme utilised local models for addressing traditional gender roles and supporting women's empowerment.

In the United Republic of Tanzania the positive impacts of the programme on women's livelihoods can be demonstrated through cassava and sesame value chain interventions. By promoting



CSA practices such as mulching, minimum tillage and planting in rows, and the use of quality seeds, women increased sesame production from 213.6 kg/ha to 569.3 kg/ha (166 percent) between 2012 and 2015. Their average annual income increased from USD 165 to USD 215 (30 percent). Cassava yields also increased from 573.3 kg/ha to 648.6 kg/ha. Many more women can now access agricultural extension services and output markets, and 80 percent of women now report control of household and agricultural assets, compared to 54 percent reported at the baseline in 2012. Furthermore, 73 percent of women in male-headed households have greater control over income and expenditure, compared to prior to the project (42 percent), demonstrating that the programme is having an influence over household dynamics, fostering a more equitable domestic environment.⁶¹

Extension Services

Nevertheless, an important lesson from this project is that yield increase alone does not contribute to gender equality. The project engaged directly with district agriculture extension officers and organised training for extension paraprofessionals (two from each village – one male and one female – ensuring more gender-responsive extension services) to better engage both male and female farmers. This was considered critical, as all Farmer Field and Business Schools were under the guidance of these paraprofessionals. Supporting the dissemination of seasonal

weather information through the application of a participatory scenario planning,⁶² which is a process for collective sharing and interpretation of climate forecasts, was also considered critical for success.

Female farmers often have limited access to markets, and poor to no linkages to larger buyers, with little financial capacity to wait for formal buyers to purchase their crops. WE-RISE made a deliberate effort to improve their access to productivity-enhancing inputs, such as seed and fertiliser, via collective purchase, establishing stronger linkages with input suppliers and supporting the VSLA groups/members to operate as input suppliers. Although many women in the United Republic of Tanzania rely heavily on local markets for selling their agricultural products, many now also sell in bulk through producer groups, while fewer go through the middlemen or use the warehouse receipt system. Women's control over work, assets and income tends to depend on available resources close to and around the homestead, which does not involve selling productive outputs at a major market. These include access to poultry, milk and butter from livestock and gardening activities. To the degree that these can be sold in local markets, women are often involved – especially if they are living near these markets. The more distant they are from the markets the greater the involvement of men, due to women's more limited mobility. In Malawi, the number of female farmers who reported reliance on inputs they

themselves produce increased by almost 15 percent. Coupled with the dramatic increase in the use of compost and manure, female farmers are optimising their utilisation of on-farm resources, and minimising the use of expensive purchased inputs. In the

long run, this can increase their own short-term farm profitability by lowering production costs; improve long-term sustainability by decreasing surface and groundwater pollution and protect household health by reducing pesticide residues in food.

WHAT WORKED

Building and strengthening collectives

WE-RISE worked with groups – especially VSLAs – to promote a dialogue between men and women, provide a platform to engage with extension services, receive training on improved conservation agricultural practices and help families reduce dependence on high-interest informal loans.

Engaging men

Core to the success of the programme was the involvement of male members of the household and community. Fostering a dialogue aimed at promoting gender equality and women's economic empowerment has reaped benefits for the entire household, while also promoting the adoption of improved conservation agriculture practices, which were more readily accepted and adopted by women. In the United Republic of Tanzania, the number of farmers using adaptive practices more than doubled, and those utilising improved agricultural practice more than tripled.

Increasing women's access to resources

The project more than tripled women's access to extension in Malawi, and saw significant improvement in all countries. In Ethiopia, women doubled their access to and control over loans, while in the United Republic of Tanzania, women more than doubled their access to agricultural inputs and weather information.

CASE STUDY

FAO PROJECT

ENABLING WOMEN TO BENEFIT MORE EQUALLY FROM AGRIFOOD VALUE CHAINS

This FAO project entitled “*Enabling women to benefit more equally from agrifood value chains*” is part of the Multipartner Programme Support Mechanism (FMM) and provides technical assistance and policy support in selected value chains, to improve rural women’s access to local, national and global markets. Funded by the Kingdoms of Belgium, Netherlands and Sweden, and Switzerland, projects are implemented in eight countries: Burkina Faso, Côte d’Ivoire, Ethiopia, Ghana, Kenya, Morocco, Rwanda and Tunisia. The programme focuses on a variety of value chains relevant to each context. By developing women’s capacities and fostering an enabling institutional environment that supports gender-sensitive value chains, the project contributes to expanding women’s economic opportunities, and benefits from more efficient and inclusive agri-food chains. This can trigger multiplier effects on food and nutrition security, education and health more broadly.

In Côte d’Ivoire, cassava is the second main staple crop, after yam. Resistant to different weather conditions and poor soils, cassava represents an important crop for ensuring food security. Since 2014 cassava production has increased considerably, reaching about 4.5 tonnes in 2016. However, the cassava value chain is still mostly informal and does not require that the resources be competitive in regional and international markets despite the fact that Attiéké, a cassava product resembling couscous, is popular in the country with demand growing regionally. This value chain is dominated by women, specifically at the last nodes of the chain during processing and commercialisation.

A core focus of the FMM project was to develop inclusive business models throughout the cassava value chain. FAO conducted a training to bring together stakeholders involved in the development of cassava value chains, to raise their awareness on how to identify and address gender-based constraints that impede women’s full participation in the chain. FMM also conducted training of trainers with national rural extension agents, to guide their interventions with core value stakeholders (producers, processors and traders), reinforcing their capacities to address gender inequalities and providing efficient services for women in agri-food value chains.

In addition to the capacity development activities, women producers of *attiéké* from 40 associations have been engaged

in field visits, and training modules related to their activities in the value chain were developed. The field visit to the Regional Center Songhaï (a reference centre in agroecology based in Benin) enabled *attiéké* women producers to better understand integrated production concepts, such as how integrated practices between cassava production and processing, and aquaculture, can have a positive impact on the environment. Women have been trained on the management of cassava waste water to address sanitation and hygiene issues, including environmental pollution, by using improved equipment and waste water for fertilisation of fish-farming waters and production of biogas. This valorisation could also provide an additional source of income for women.

Building on the field visits, 300 women from seven locations received practical training on the use of improved equipment developed by Songhaï, which reduces their labour burden and adheres to hygiene standards. The training also focused on the diversification of production through the addition of nutritional inputs as well as adding value to sub-products.



Women processing cassava couscous in Ivory Coast the framework of the Project FMM/GLO/103/MUL aimed at Enabling women to benefit more equally from agri-food value chains.

FMM also reached women's associations, and provided training and coaching on basic economic management. Knowing how to set and negotiate their prices and the costs of production gives women a deeper understanding of potential economic opportunities so that they can maximise profits from activities in the cassava value chain. Training and coaching on marketing techniques is provided to the most advanced cooperatives to strengthen their understanding of the market dynamics and needs. As a result, female farmers can better target niche markets, which are more structured and safer than traditional street markets as they guarantee payment and allow women to negotiate better prices.

Traditional products present a unique opportunity to link to origin, local know-how, culture, history and heritage. An awareness-raising training on the value of traditional products was conducted with ten women's associations that produce *attiéké* from two different areas, Grand Lahou and Dabou. As a result, the *attiéké* produced by women are of high quality and are popular with national consumers. This presents an opportunity for women to distinguish their product, while also targeting niche markets. FMM also organised an institutional seminar to promote and coordinate the legal framework of geographical indications at national level, so that women are connected to end markets and have the legal recognition to sell to those markets.

WHAT WORKED

Introducing gender sensitive technologies

The project leveraged the use of techniques tailored to the specific needs of female farmers, which reduces their labour so that they can increase productivity and incomes.

Increasing women's competitiveness

Female producers and processors received multiple trainings on different issues, including improved production practices to business and marketing skills. A better understanding of the opportunities in the market and their unique advantages in the value chain enables female farmers to be informed on how to be competitive in the market, and to ultimately increase their profit from the sale of cassava products.

Strengthening institutions to become gender responsive

FMM trained extension officers on how to identify gender-based constraints, and analyse and address the impacts related to gender. Institutional capacity development, even through formal legal representation of women's cooperatives, ensures that while reinforcing the individual capacities of female farmers the enabling environment is also supportive and inclusive of women in the value chain.

CASE STUDY

STRENGTHENING DAIRY VALUE CHAINS (SDVC)

Since 2007, CARE's SDVC (Strengthening Dairy Value Chains) has worked with the support of the Bill and Melinda Gates Foundation to improve the livelihoods of dairy farmers by increasing milk production and collection systems, and facilitating their access to market through improved transportation networks and better quality services. More than 36,000 smallholding and landless milk producers' households in Bangladesh have benefitted from this programme.

The project seeks to double the monthly income of the targeted small-scale producers and create more sustainable livelihoods for the beneficiaries by incorporating them into a strengthened dairy value chain. It also generates commercially viable employment and business opportunities for poor households, other value chain operators (e.g. collector, milk traders, dairy processors etc.) and supporters (e.g. Livestock Health Workers input suppliers, and government and non-government institutions) in the target areas. These activities were chosen due to the increasing urban demand for fresh milk, growing investments in infrastructure and processing capacity of the private sector, the high number of poor households already involved in the dairy enterprise and the potential for doubling the income of the targeted groups. The project had a greater gender impact because of women's traditional role in dairy production and their interest in becoming more engaged. The activities were carried out in the proximity

of the household with relatively low labour requirements, and had the potential to build upon a cultural legacy that valued women's engagement in dairy production as an economic activity that could decrease the current norms of male dominance in the dairy sector.

SDVC builds the resilience of households and communities, promotes gender equality and accountability and improves household livelihoods by enabling poor and chronically food-insecure households to increase their income and dairy consumption. The project works at multiple levels to increase women's engagement in the dairy value chain. SDVC provided training and education for 36,000 farmers, and 1 162 producer groups were able to increase the productivity of their cows and improve their marketing skills. It also facilitated access to innovative technologies to improve dairy production – such as fat testers and cooling equipment – and transport. Group mobilisation was a crucial aspect in creating a marketable and uniform product linked to the value chains. The average daily household production increased by up to 22 percent, and milk prices received by farmers increased from the baseline by 12 percent. The average monthly income from milk sales increased from USD 9 to USD 20. Around 60 percent of their savings are invested in different dairy activities, and reinvesting in some credit within group members.



SDVC increased participants' access to resources, linking them to feed and medicines, artificial insemination and savings institutions. The project created a successful network of women-owned small businesses that brought essential inputs to the communities. This micro-franchise model has turned into its own set of businesses: Krishi Utsho. There are now 48 shops operating under the Krishi Utsho network, including 15 fully branded shops and 33 shops at various stages of conversion. Each Krishi Utsho shop recorded average monthly sales of USD 1 285 USD in June 2014, the highest monthly sales in the last fiscal year.

The SDVC also worked with collectors and collection systems to create new market linkages. Other materials that increased the value of the product, such as digital fat testing meters and lactometers, became accessible to participants, guaranteeing a product of high quality to supply market demand. The project worked with private sector companies, especially BRAC dairy, to establish upward market linkages for producers. Most farmers adopted a strategy to sell to multiple buyers to ensure that their milk could be sold consistently and at fair prices. This flexibility allowed farmers to be more resilient, despite the inconsistency of formal sector buyers, and to be better able to cope when geography and climate limited access to formal sector processors, and throughout the flush season when formal sector

demand is lower. A total of 308 milk collectors and 201 livestock workers were able to obtain quality products and market access.

SDVC has increased women's empowerment by making them key players in the value chain. A study by The International Food Policy Research Institute (IFPRI) on SDVC revealed that women's access to and control over inputs has increased significantly, and changes are emerging in community and value chain actor perspectives on women's role. CARE had originally planned to organise farmer groups with at least one male farmer leader, because social norms made it easier for men to travel to markets to buy inputs or sell milk. However, over 80 percent of the farmers with whom CARE worked in north-west Bangladesh were women, and the final evaluation found that the most productive and profitable groups had women serving in leadership roles. On average, input shop owners make USD 681 per month (men making USD 550 per month and women USD 812). The income of women who own shops is higher because they sell feed to the local community, and because female farmers find it easier to interact with other women. To promote a more gender-inclusive value chain and increase women's control over resources and decision-making, 114 service providers (70 LHWs and 44 input shop owners) have participated in gender awareness raising sessions.

WHAT WORKED

Investing in women's capacity

The SDVC project has been successful at engaging large numbers of women as producers and farmer leaders, livestock health workers and milk collectors. It is estimated that women represented 82 percent of producers, 71 percent of farmer leaders and 23 percent of livestock health workers in the project.

Increasing women's access to inputs

SDVC facilitated access to resources, linking them to feed, medicines and artificial insemination. The project created a network of women-owned small businesses that brought essential inputs to the communities. This created additional economic opportunities for women engaged in micro-franchise input shops that sold products in the community.

Giving women more access to markets

SDVC producers have both strong producer groups and ties to markets that help them access information from multiple sources. The dairy collection points created by SDVC serve as hubs to provide relevant market and extension information, and to increase access to markets for women in rural settings, who were previously constrained by limited mobility.

AGROFORESTRY AND LANDSCAPE MANAGEMENT

Agroforestry often involves using landscape-based approaches to manage rural forests and farming areas, by integrating trees into farmlands, communal areas, backyards and homesteads. Combining trees with agriculture can help the flow of various types of ecosystem services. Farmer (or community-managed) natural regeneration (FMNR) is a low-cost and sustainable land and forest regeneration approach that can be used to rapidly and efficiently make degraded croplands and grazing lands more resilient and productive. These approaches can help restore biodiversity and increase the resilience of farming livelihoods against climate change or severe weather events. Farmer- or community-managed regeneration can produce continuous growth in trees that can then be used for fuel, building materials, food and fodder, without the need for frequent and costly replanting.⁶³

Forests host nearly 60 million indigenous people and support millions more with various ecosystem services, with significant impact on both people and landscapes. They are sources with significant economic value, from timber they produce to various non-timber forest products and the biodiversity present in them, and their tourism potential. For many small-scale farmers around the world, farms and forests are part of complex systems that support their livelihoods through the provision of various types of ecosystem services. When such services come from healthy ecosystems, they can play a significant role in building the capacities of people to respond to different shocks and stresses from a changing climate. However, due to high rates of deforestation forests are also dwindling quickly, with devastating consequences for the world's biodiversity and the communities that depend on them. Forests store carbon in their biomass, and cutting them down releases heat-trapping gases such as carbon dioxide into the atmosphere. Land use changes that transform deforested or degraded lands into agriculture land, both industrial and small scale, can further release greenhouse gases (GHGs). Indeed, industrial agriculture can release high levels of GHGs, often due to unsustainable practices aimed at increasing yields. However, small-scale agriculture, using certain practices such as slash and burn, are also a source of GHGs. Additionally, charcoal production for use as fuel can lead to increased deforestation and the release of GHGs into the atmosphere.

Agroforestry and associated practices help to increase the resilience of the forest ecosystem, thus improving the ecosystem health, and the livelihoods and well-being of people who depend on these systems. Women make substantial contributions in terms of labour in agroforestry systems, and often disproportionately bear the costs of tree management. Nonetheless, when it comes to receiving the benefits, women only receive a fraction of the

total of men's earnings, and their participation in decision-making is generally limited to already degraded tree resources. Indeed, women are generally not equally involved in all aspects of the timber and non-timber value chains, as they work in the least profitable areas. Being the primary cooks, women suffer the most from the exhalations of firewood used for cooking purposes. The time savings from the efficient production and collection of firewood and fodder can give women more time to spend on taking care of their children and enhancing food security and nutrition for the whole household. Agroforestry practices can also play a significant role in building the leadership of women in community decision-making around forest management and agriculture production. Moreover, there is evidence that women's participation in agroforestry decision-making is linked to the success of community forestry.⁶⁴

Healthy and diverse ecosystems have proven to be more resilient to climate change. Farmer or community-managed regeneration helps the growth of trees and forests, as evidenced through practices in the Sahel and community forestry approaches in Asia. Common elements include alley cropping, silvi-pasture, natural regeneration through the management of shrubs and seedlings by farmers and communities and planting trees in farmlands. Additionally, community-based forest management, sustainable tourism initiatives, sustainable timber management and value addition to NTFPs are other approaches often used in forest management. Delivery approaches often tend to be community or farmer driven (Community-Based Forest Management) and include activities such as the development of home gardens for vegetable production, community group mobilisation, strengthening community organisations, convening facilitated dialogues and multi-stakeholder discussion platforms, along with actual on-farm interventions around tree and crop management.

CASE STUDY

HIMA PROJECT (HIFADHI YA MISITU YA ASILI YA JAMII)

The HIMA Project, funded by the Norwegian Ministry of Foreign Affairs and implemented by CARE, is a REDD+ programme, located in the Zanzibar Archipelago on the islands of Pemba and Unguja. Although once heavily forested, Zanzibar's forests have been subject to widespread exploitation, and remaining forests are being lost at an estimated rate of 1 percent per year. The HIMA Project emphasises the importance of community-based natural resource management, reducing carbon dioxide emissions from land-use activities, improving community livelihoods, especially those of women, and contributing to biodiversity conservation by protecting standing forests and assisting in the natural regeneration of forests as a means of improving wildlife habitat in the project area.

Today, natural forests in Zanzibar are mostly found on areas left behind during the establishment of coconut and clove plantations. These forests are rapidly disappearing due to local people's dependence on firewood for both personal use and as a source of income, and the clearing of land for agricultural fields and infrastructure. As most forests are considered public property, there is little motivation for people to use them in a sustainable

way. Planting trees is one way of reducing the pressure on forests, and provides households with an alternative source of income. With HIMA's support, the number of trees planted by community members has risen from 1 000 in three seasons, to nearly 1 000 per season. Planting more trees was just the start of a much more comprehensive approach to community forest management.

At the start of the project and twice during the first four years, HIMA conducted some gender assessments to evaluate the barriers to gender equality. These assessments highlighted crucial issues related to women's important roles in forest management and decision-making, and provided recommendations to ensure that they effectively participate in and benefit from the REDD+ Project. HIMA worked to facilitate the conservation of their neighbouring forests by both the men and women of Zanzibar, so that they could share the rewards of managing them in a sustainable way. HIMA is testing whether such rewards can include carbon revenue from Reducing Emissions from Deforestation and Forest Degradation (REDD) in ways that equally benefit both men and women, and do not harm any section of the community. In addition to expanding tree nurseries to increase wood lot production, the community supports equitable decision-making in community forest management, developing alternative sources of income and exploring new ways of reducing their own firewood consumption, such as through improved stoves.

HIMA established a benefit-sharing mechanism whereby grants of USD 200 000 were distributed among participating communities. Seen as pilot incentive payments to encourage community participation in conservation efforts, the project provided communities with resources to support alternative income-generation activities, including beekeeping, butterfly farming, crab fattening, tree nurseries, efficient woodstoves, drip irrigation, crab fattening, tree planting, and greenhouses for growing vegetables, while simultaneously developing alternate sources of income. Most of the target beneficiaries were women, who received 139 of the total 197 grants. The HIMA programme established farmer field schools to increase agriculture productivity, by widely disseminating activities such as agroforestry and conservation agriculture. This project activity also involves crop diversification, increasing the availability and utilisation of improved crop varieties and digging wells to increase access to irrigation. Alternative livelihoods were



Fauzia Said Sleiman in a replanted mangrove area.



Participatory mapping to establish a forest governance structure. Women comprised 42% of the leadership committee.

introduced so that households could secure income without the need to further clearing the forests. Training workshops were organised through the Farmer Field Schools to improve the knowledge of production, and provide grants to increase access to resources and inputs needed for these activities.

As the main caretakers of the household in Zanzibar, women directly benefit from conservation efforts such as developing energy-efficient cooking stoves. For example, the project developed woodlots managed by the community, creating alternative sources of fuelwood and reducing pressure on existing forests. This activity specifically targets women who most commonly gather fuelwood. Planting of woodlots through on-farm tree production using agroforestry helped the community to both increase wood supply and improve agriculture production. These woodlots were planted on degraded land, managed mostly by women, and provided communities with a sustainable source of fuelwood for clean cooking stoves. Because they produce less smoke, these stoves help reduce CO₂ emissions and respiratory diseases, which primarily affect women and children due to their proximity to the stoves in confined spaces. “Before using this stove, I used to collect firewood three times per week,” a HIMA participant, Asha Vui Juma said. “But now I can just pick a few from the surrounding areas. And because of that, I now have time to

farm vegetables, and can sell vegetables. I also provide training in town for other community members in making the stoves.”

Reducing the amount of firewood also lessens the long-term pressure on local forests. Community members can use the trees they are planting through the HIMA Project, thus conserving the natural forest and allowing it to regenerate more quickly. This benefits households in two ways: by selling the trees for different purposes such as building poles or firewood, and indirectly contributing to the income the community will receive from the carbon through conserving its natural forests.

The HIMA Project also worked with the government of the United Republic of Tanzania to strengthen land tenure in communal forest areas. It renegotiated agreements between the communities and the government to accommodate REDD+. This included securing government approvals for the crediting period of the project, and ensuring that agreements include explicit carbon rights. Community forest management groups implemented participatory boundary demarcation to define the project area. Each community formally recognised the leaders under the governance structure, and established clear responsibilities for forest use, reporting, rights, appointment of enforcement officers and procedures for offences, and ensuring the equal participation of men and women.

Communities were trained in participatory law enforcement, community mobilisation and other support services. With the goal of improved enforcement to decrease illegal activity in the

project area, the communities have organised regular village patrols, again with the full participation of both male and female members of the community.

WHAT WORKED

Engaging both men and women

The project engaged both men and women, and promoted women's equal participation and leadership in community management of forest resources. In this way, the HIMA Project facilitated equitable decision-making between men and women, by engaging women in both conservation activities and in the sustainable management of forest resources.

Investing in women

As the main caretakers of the household, the project deliberately engaged women in every activity, from promoting clean cooking stoves, to managing woodlots, to engaging women in new livelihoods such as bee-keeping that were gender sensitive.

Supporting collaborative learning

Through the Farmer Field School, the project trained both men and women on new conservation agriculture and forest management techniques to develop new income-generating activities on their own small plots of land. Over just a six-month period, a total of 70 farmers (30 women and 40 men) in ten sites across Pemba, were engaged in the production of food crops and vegetables using conservation agricultural practices.

CASE STUDY

DRYLANDS DEVELOPMENT PROGRAMME (DRYDEV)

The Drylands Development Programme (DryDev) is a farmer-led programme to enhance water management, food security and rural economic development in the drylands of Burkina Faso, Mali, Niger, Ethiopia and Kenya. Led by the World Agroforestry Centre (ICRAF), DryDev is funded by the Directorate-General for International Cooperation (DGIS) of the Ministry of Foreign Affairs of the Netherlands. The focus of the programme is for households to transition from subsistence agriculture and emergency aid to sustainable rural development, through improvements in food and water security, greater access to resources and the empowerment of women and marginalised groups. In Niger, the project works with 51 336 people (50 percent of whom are women) in five communes.

The programme puts women's Village Savings and Loan Associations (VSLAs) at the centre of planning activities, and mobilises community support through Community Innovation Platforms. The VSLAs work with watershed committees, local governments, community groups and local farmers to organise trainings, change behaviour, and regenerate community natural resources through creating and supporting 33 watershed management plans. Instead of a traditional cash-for-work programme, DryDev provides specific support for innovation platforms to reinforce the watershed management plans.



Introduction of potato crops using conservation agriculture techniques in Droum commune

Since 2013, these community groups have mobilised more than 12 000 volunteers to regenerate 509 hectares of land, created *zai* pits for an additional 700 hectares of land,⁶⁵ planted 23 000 trees and put 5 352 hectares of community land under sustainable NRM practices. Communities report that the water levels in local wells have risen dramatically, and that getting water is less burdensome than it was when the programme started. All these activities were accomplished for 19 percent of the cost of traditional cash-for-work programmes.

In addition to improving practices on communal land, more than 16 246 producers are using new rainfall harvesting and conservation agriculture techniques on their fields. 73 percent of these producers use at least two new practices. Growing in local seed businesses has improved, and shorter-variety seeds have been able to produce 60 tonnes of improved seeds for farmers to source locally. This has led many farmers to see the yields on their fields double – or more.

In addition to improved techniques, the community platforms mobilised membership dues to provide interest-free loans to 800 extremely vulnerable farmers, so they could get the inputs they needed to adopt new techniques. An additional 6 200 women and 2 118 men got access to a cumulative USD 40 000 of credit through VSLAs, and 4 707 farmers were able to access formal credit. The innovation platforms mapped local input suppliers and made connections for communities, so that they could get high quality inputs at reasonable prices. Sometimes, the innovation platforms even offered loans to input suppliers, so that they could acquire higher-quality supplies and better meet producer's needs.

Communities are also engaged in monitoring the programme results. Forty-eight commune-level surveillance committees track results and ensure that plans are carried out. They sign agreements with local experts to provide services, and report back to community stakeholders on progress toward goals.

ALTINE'S STORY

Altine sold a goat so that she could buy a donkey-pulled plough and improved millet seeds. The new seeds, which mature in 70 days, were available through the DryDev Community Innovation Platform. "I was the first person to finish the labour of getting my fields ready in my village. I used the time I saved to get my rice field ready, and to help train other producers in the new techniques that could benefit them. Before, I only produced a tonne of millet, which covered about eight months of my family's needs. This year, I produced more than six tonnes of millet, which more than covered our food needs for the year. I'm going to sell the excess into the market. Now I've become a model for my whole village."

WHAT WORKED

Making sure women have access to credit

DryDev used women's VSLA groups to help farmers, especially women, get access to credit they desperately need to invest in improved agricultural inputs and practices. The VSLA groups also extended credit to non-members, especially young farmers. Without this start-up capital, the investments that new techniques require would be out of reach for most women or young farmers.

Investing on VSLA women's leadership and skills

The project was able to draw VSLA members into the platforms at the start-up stage, which provided them with the space to influence the platform's first steps in a way that both benefited them and also further developed their leadership skills. For example, platform bylaws set a minimum quota of 40 percent representation of women among the village thematic group delegates, giving them a strong voice in ensuring that the platform's action plans include activities that benefit women. The VSLA women also helped by tapping into their social capital and community networks, which builds ownership and creates sustainability.

Building on farmer expertise

The project focused on the identification of farmer innovators (both men and women) and their innovations as the starting point for creating platforms to develop and promote both. It recognised that farmer innovators who have taken their destiny into their own hands and wrestled with technical, economic, financial, ecological and organisational constraints, to develop locally adapted and replicable practices, will resonate with other farmers to create engagement and ownership for the platform and its action plans. By having communities generate the goals, plans and implementation strategies, and by supporting those plans when needed, the project achieved bigger results, with only 19 percent of the costs of a traditional cash-for-work programme.

LIVESTOCK MANAGEMENT

Livestock defines the lives and livelihoods of many rural men and women across the world, including millions living in dryland conditions, playing an important role in helping to satisfy the nutritional, economic, social and cultural needs of these people and their families. Traditional livestock systems are the major source of livelihood for 200 million rural families, and provide food and income for some 70 percent of the world's rural poor. Dryland ecosystems are characterised by conditions of uncertainty, fragility and variability. Pastoral communities, who in particular depend on livestock and opportunistic farming for their livelihoods, are the hardest hit by the impacts of climate change and climate variability. Climate-smart agriculture interventions in such areas aiming to build the adaptive capacities of vulnerable people must be rooted in livestock and dryland natural resource management.

Because of social norms, household decision-making power and their access to credit and assets, men usually own and manage large animals, such as cattle and buffalo, while women are almost always responsible for poultry and small ruminants, such as goats and sheep. In fact, their livestock is often one of the few sources of income over which women have complete control, and owning such smaller livestock can have significant implications for household nutrition, income and health. Due to a lack of access to rights and assets, women having very limited access to larger cattle – in some cases, when a woman's husband dies, the ownership of cattle transfers to the family rather than to her. Women also do not have equal access to trainings and other resources for livestock rearing, as extension systems are often insensitive and unresponsive to the production needs of women and girls.⁶⁶ Exposure to and impact from various livestock diseases can also be strongly gendered. Men's incomes can be severely impacted by diseases that affect cattle and larger animals, while women and girls are more exposed and at risk from diseases like avian influenza.

Climate change is adding an extra layer of stress to these unequal conditions, increasingly impacting available water sources and the pasture ecosystems upon which livestock depends. Along with improvements in water management practices, feed and pasture management to ensure the availability of feed during times of stress is a critical area of intervention. Moreover, climate change is also increasing the frequency of various vector-borne livestock diseases, as well as introducing new diseases that did not exist in some area before. This requires improving the capacity of veterinary services to respond to such diseases, as well as ensuring that these services have access to new vaccines, drugs and knowledge of improved practices.

Major activities include rangeland planning and management, improved access to information (including on climate), resources and services, improved extension, access to technology, improvements in feed, animal vaccination programmes, preventing

parasites and vector-borne diseases, management of herd size and age, increasing heat tolerance of animals through breeding programmes or introduction of new breeds and installation of specific cooling technologies for livestock. Increasingly counting as livestock insurance, early warning systems for various hazards, climate change and community-based adaptation planning have emerged as essential activities to managing livestock under changing climate conditions.



CASE STUDY

PASTORALIST AREAS RESILIENCE IMPROVEMENT THROUGH MARKET EXPANSION (PRIME)

PRIME is a five-year United States Agency for International Development (USAID)-funded project implemented across three of Ethiopia's pastoral dryland areas: Afar, Oromia and Somali regions. The project, implemented by Mercy Corps and CARE, aims at increasing the incomes of 250,000 households, while also enhancing their resilience to climate change through market incentives and opportunities. In a context where pastoralists have experienced particularly intense dry seasons, the subsequent lack of grazing options has weakened livestock – which in turn means less food, reduced income and/or social status and diminished nutrition. This scarcity has led to a breakdown of the traditions that provide structure and stability to these communities. In this context, PRIME employed some innovative techniques to preserve traditional strategies for adaptation by elevating the roles of women in adapting to climate change.

In Ethiopia, rangeland councils oversee management of natural resources and related activities. However, councils grew fragmented after changes in the national government led to prioritising politically defined borders rather than the ecologically defined ones that rangeland councils had traditionally been organised by. PRIME organised meetings to conduct community rehabilitation activities such as thinning bush and clearing invasive plant species, establishing community dry season grazing reserves and rehabilitating water points such as wells and rainwater collection. PRIME intentionally facilitated the inclusion of women and youth in these traditionally elderly male-dominated rangeland governance institutions. Through the VSLAs and women's savings-led enterprises, and revitalised rangeland councils and subcommittees, pastoral women were integrated into local resource and conflict governance institutions, thereby gaining power, access to and control over community resources. Engaging women in what was once considered a traditionally male role, while revitalising this traditional body, is intended to help better manage the rangeland environment, thus enhancing the entire pastoralist community's adaptation to climate change.

Climate-change adaptation and disaster mitigation strategies in Ethiopia's drylands are primarily led by men. However, pastoral women are key agents in climate change adaptation and livelihood development. PRIME recognised that women have unique knowledge, lived-expertise and perspectives, and



Daniel and Sara were especially talkative during an SAA meeting. They seemed excited about regularly using their SAA group to reflect on the changes taking place in their community. They described how before the PRIME project, people would simply move when the climate caused grazing to get bad, and how, as climate challenges grew, animals grew weaker and options became more limited. It was clear to them something had to change.

"Now we can discuss options with forecasters, and make a plan," said Sara. "We can map ways to manage our water reserves leading up to a dry period, store crop residues for animal feed, make land enclosures to save grass for grazing and be strategic about selling a few animals to put money in the bank. We can even get early maturing seed varieties that will allow us to harvest earlier and cut risks that way, too."

When women like Sara got engrossed in new ways of doing things, it sometimes created friction with their husbands, who were used to having their wives and older female children spend more time inside the home, managing household duties like cooking and childcare.

"At first, my husband said, 'You are getting crazy; you need to stop.' But now he sees the money our small herd brings in – and that we can invest that money in other businesses. And he's starting to say it's a good idea."

that including them in the decision-making process will result in more robust adaptation strategies. In order for households and the community to benefit from women's unique expertise, PRIME used a tool developed by CARE called Social Analysis and Action (SAA) as a way for communities to discuss how social attitudes and behaviours create challenges for the uptake of climate adaptation strategies, and then determine how to address them.⁶⁷ Through the SAA approach, PRIME succeeded in facilitating change by provoking communities to help them to realise how their behaviours contribute to their own vulnerability to climate change and poverty. Challenging communities involved working with them to slowly uncover attitudes and behaviours that were leading to increased vulnerabilities from maladaptive practices (conspicuous consumption of chat and a lack of saving culture) and inequalities in resource access and household decision-making.

Another way that PRIME is promoting the leadership of women in pastoralist communities is through participation in VSLA groups. The project has established 197 VSLAs, the members of which are mostly women, with the aim of empowering women and increasing resilience. VSLA participation has increased women's confidence, increasing the chances that their ideas and concerns may be heard in the group, in the community and in the household. Women VSLA group members reported that they have positive relationships with their husbands, who regularly consult them on household investment decisions, including the sale of camels. Participation in women livestock producer groups and savings and loan associations is encouraging women to engage in women-led enterprises, such as in animal fattening and marketing, milk collection and fodder production. Incomes from the sale of dairy products provides women with a regular flow of income, while the marketing of fattened shoats provides contingency funding for managing household-level shocks (purchase of food and non-food items, covering medical expenses, etc.). Participation in local saving groups, women associations and livestock marketing groups encourages women to voice their thoughts and achieve greater degrees of participation in decision-making processes. Even at community- and local government-administration levels, women are increasingly playing a more public role. Women are finding that alternative or parallel forums are more effective than trying to break into male-dominated customary ones.



Zehara is a 40-year-old pastoral Afari woman in the Dewe village in south-central Ethiopia. She is married with seven children. Her husband works partly as a migrant labourer in Djibouti, and she manages the homestead in his absence. The household has 20 goats, two sheep and a donkey. Each year, she sells six medium-sized goats at the market, and four bags of ghee. In the past four years, she describes her life as having "significantly changed" by being part of a VSLA.

Zehara leads one of the VSLAs in her *kebele* and describes the powerful influence this has had in promoting new ideas about women, as they successfully learn to save, lend, start trading and take household and community leadership positions. She describes such trading endeavours as becoming "increasingly common" in Dewe and the surrounding villages. She emphasised that social change was now "visible", as VSLA women in particular are becoming decision-makers at the household level, and are involved with the local *kebele* Committees, take assigned positions in *woreda* administrations and actively inspire other women to do the same. She describes VSLA women as even challenging the status quo, in particular the tradition of cross-cousin marriage. As she describes, "household decisions are made by the heads of the household, usually the husband. But a VSLA group member can make a decision on the use of the money loaned from the group independent or jointly with her husband."

WHAT WORKED

Utilising women's knowledge

Women and girls are **stewards of natural resources** and livestock, but their valuable role is only partially recognised. PRIME engaged them in using customary laws and social norms to manage community resources, and increase their agency.

Transforming social norms

Empowering women requires addressing the social norms, structures and practices that govern their lives. The project identified gender-responsive and transformative ways of addressing issues of power, social structure and relations that define interactions between women and men.

Promoting women's decision making

Participation in local saving groups, women's associations and livestock marketing groups encourages women to achieve greater degrees of voice and participation in decision-making processes.

CASE STUDY

ADAPTATION LEARNING PROGRAMME FOR AFRICA (ALP)

The Adaptation Learning Programme for Africa (ALP) aims to reinforce the capacity of vulnerable households in sub-Saharan Africa to adapt to increasing and uncertain climate change and climate variability. Funded by DFID, CARE has since 2010 implemented ALP to work with communities, government institutions and civil society organisations in Niger to implement community adaptation action plans (CAAPs). CAAPs built community capacity to analyse, make decisions and plan adaptation actions, as well as to integrate climate change information into the vulnerability monitoring and early warning system.

In Niger, the programme developed innovative community-based adaptation (CBA) approaches and strategies with farming and pastoralist communities, and promoted their integration into local and national government systems and programmes. As part of this process, each community analysed the most effective strategies regarding the changing of gender roles and relations. They assessed the implications for women, men, households and the community as a whole, in terms of time, labour, resources and social relations. Different roles and responsibilities were then negotiated between women and men in the communities to encourage a more sustainable and equitable division of labour for increasing the adaptive capacity of the community. It is also important to look for synergies between CBA strategies, short-term investments for quick wins and long-term investments to reinforce the capacity and work towards social change. An example of integrated interventions is providing Village Savings and Loans, institutional capacity-development, training and improved access to climate information. These interventions worked together to improve women's livelihoods and place in society in Niger.

In pastoral communities in Niger, the major concern is the effect of climate shocks on livestock, most notably the impact of drought on the availability of water and pastures, and the resulting consequences for animal health and productivity. Each successive drought makes it more difficult for households, and herds must travel farther to find green pastures. The impacts of climate shocks have challenged their mainly pastoral lifestyles. An increasing number of nomadic communities are settling down in the southern parts of Niger to grow crops.

In 2014, good rainfall enabled excellent harvests of millet and cowpea, which are some of the climate-resilient livelihood strategies that communities identified in their CAAPs. ALP-supported communities implemented warrantage – a strategy that helps farmers store their surplus crop production and receive credit to satisfy their immediate needs. Approximately CFA franc 12 702,500 (USD 25 405) has enabled 464 women and 429 men to store more than 70 tonnes of millet and cowpea in warrantage cereal banks. Many communities in non-ALP sites are now requesting to be part of warrantage groups in ALP communities. Cereal banks in the warrantage system in Niger are breaking the cycle of debt incurred by vulnerable people after selling their agricultural produce at low market rates. Access to credit through warrantage is providing capital for investment in diversified and lucrative livelihood activities such as the fattening of sheep and goats that is mostly done by women; sale of sugar, tea, chocolate and sugar cane; and the transportation of goods and agricultural by-products within the communities and to weekly markets. ALP supported the capacity of 52 CBOs (warrantage and VSLA groups) to develop their organisational frameworks and succeed in fulfilling requirements for legal recognition. Legal registration is also enabling the warrantage groups from opening bank accounts and accessing formal financial savings and credit services. Economic power also raises confidence to have a say in decision-making. This has reinforced their voices, particularly those of women, and promoted the inclusion of community CBA plans in the commune development plans.

By participating in several income-generating and savings group activities, women have gained new opportunities to meet together and more frequently, with major increases in their confidence and unity as well as economic power. They have been able to save and are becoming more financially independent, which has allowed them to make their own investments in farm inputs and activities. Based on this women are also participating and speaking more in community meetings, are members of management structures (committees, groups) and take part in decision-making. Men have become more willing to involve women in community activities although deep-seated cultural norms still limit this. This is a significant change in socially conservative Niger.⁶⁸

Across the communities where ALP is working, access to communication technologies has improved following the expansion of cellular services and radio. Communities claim that “The cell has changed the world”. The potential of mobile technologies to improve women’s ability to adapt is important. In Niger mobile phones can empower rural women, compensating for their restricted physical mobility, giving them access to information and strengthening their social networks. ALP has promoted communication technologies for women through mobile phones and radios, with mobile phones being used

to access and share climate information, a critical variable in climate change adaptation and any agriculture programming that claims to be climate smart. These women saw mobile phones as a way to take control from men or from the older generation, including their mothers-in-law. However, some persistent issues reinforce inequitable access to communication technology, and the information it makes available. Women’s lower levels of literacy, their restricted access to technology (like mobile phones and radios) and their workloads limit their ability to make use of these new sources of information.



WHAT WORKED

Understanding the context-specific gender dynamics and working with all members of the community through CAAPs allowed the project organisers to understand the role that women could play in the CBA, including in promoting women’s visibility in the community. This has increased the accountability of women’s groups in local governance and resilience, while also building strong ownership of local planning and integration of climate risk into their practices.

Equipping women with information for risk management was crucial to increasing their participation in paid on-farm and non-farm activities. Some women have used savings from the VSLA to buy solar kits for recharging mobile phones. The payments they receive for a mobile phone charging service provide extra family income. The ability to charge mobile phones also means that people can share weather forecasts and early disaster warnings more regularly and easily.

Empowering for adaptation means that women felt that ALP had “awakened” them to a different potential future, and that this awareness was irreversible. Their aspirations reflect a coherent strategy for risk prevention through empowerment, improved literacy, access to information and communication technology, improved agricultural and farm animal production, reduced workloads and reduced risks connected with early and frequent childbearing.

CASE STUDY

MATA MASA DUBARA (MMD)

Niger is the birthplace of CARE's VSLA model for women's economic and social empowerment, where the groups are known by the local name *Mata Masa Dubara* (MMD) meaning roughly "enlightened women" or "women on the move". The simple and appropriately adapted savings-based approach makes sustainability and replication of the associations easy to achieve. Since the early 1990s approximately 17 000 MMD groups have been created in Niger, constituting a grass-roots movement that is constantly expanding its portfolio of activities and accomplishments by both creating and seizing opportunities. Due to the overwhelming demand for the product, CARE's role has evolved from service provider creating the associations, to a facilitator that trains local animators who are then paid by the village women to train them. CARE estimates that there is a minimum of 200 000 practicing members with over 3 million francs in savings.

In 2011 a project funded by CARE Denmark in Niger, "Initiative for Women and Land" (*Initiative Femmes et Terroirs* – IFETE), was conceived to implement a variety of actions with MMD groups to address the problem of defeminisation of agriculture in the densely populated Maradi region of Niger. One of the activities supported by the project was the development of a social enterprise for the management of a degraded pastoral area of about 50 hectares in the community of Tambaraoua. The activity was initiated by the women of the MMD group, and a community management committee was also created, including both men and women, to operate the enterprise.

From 2011 through to 2014 the project supported the community's actions to restore and manage the area by clearing 50 hectares of degraded land of an invasive weed (*Sida cordifolia*) that had rendered the area useless for fodder production. They reseeded the area with locally available grass species useful for fodder, and planted planting the area with 31 640 *Acacia Senegal* seedlings to produce gum arabic.

Even though CARE's support to the enterprise concluded in 2015, IFETE continued operations independently. Annual economic and financial results include:



October 2012, the site entirely infested with *Sida cordifolia*



October 2015, the site reseeded with grasses and planted with *Acacia Senegal*

- producing approximately 2 tonnes per hectare of fodder;
- feeding approximately 620 Tropical Livestock Units of cattle;
- selling 6 tonnes of grass seed; and
- generating net receipts of approximately USD 725 from grass and seed sales (less costs of labour and other costs of restoration) for revenue sharing, as stipulated above.

The village has also observed the return of wildlife that had disappeared from this area, including birds, squirrels, rabbits and snakes. In the near future, the women will start harvesting the gum arabic for sale in Nigeria, which will be used to purchase fields for the women's MMD groups.



WHAT WORKED

Building women's management skills

The MMD women brought ten years of experience managing savings groups to the enterprise implementing a variety of income-generating activities, both individually and collectively. These management skills helped them develop a business plan for the operation, and translate it into a sustainable reality. They employed village men, women and youth to implement annual weeding, seeding and grass cutting. They also established a village surveillance committee to protect the area from illegal grazing or cutting, and generated income for the activity by selling fodder to community members through a cut-and-carry system. Utilising the skills that they learned through MMD, women created a revenue-sharing mechanism that covers the operational costs of managing the area and shares sales revenues between the enterprise, the protection committee and local authorities, including governmental technical services and the village treasury. They furthermore established bylaws to codify the enterprise's governance and revenue sharing.

Including men in the management committee

While the MMD women's management skills are particularly adapted to running the social enterprise, managing the community's lands is traditionally an affair for men. The women were careful to create a village management committee with a majority of men, thereby ensuring their buy-in and support for the action. The women reserved key management positions within the committee for themselves that would give them control of critical elements of the enterprise's governance, especially as concerns financial management.

Ensuring equitable and inclusive sharing of benefits

Receipts from the sale of fodder under the cut-and-carry operation were used both to cover labour costs and create employment, and to compensate efforts of all the major stakeholders, thereby encouraging their buy-in and defence of the potentially sensitive issues of benefits and revenues sharing.

FISHERIES, AQUACULTURE AND FARMING

This practice area includes activities to enhance the management of coastal and inland fishery and aquaculture ecosystems by sustainably intensifying production, using better integrated systems, improving fish stocks and reducing losses from disease. Capture fisheries and aquaculture support the livelihoods of 660 to 820 million people around the world. Over 150 million tonnes of fish produced per year comes from such systems, and 85 percent of this production is used directly for food.

Climate change, however, threatens both productivity and livelihood security of people dependent on this sector. Increasingly frequent extreme events, increased variability of rainfall, changes in temperature regimes, salinisation and sea level rise are having more detrimental impacts on these systems. Overharvesting, pollution and the increased use of chemical inputs are adding extra strains on the systems already under stress. Small-scale fisheries and people who depend on these resources are at increased risk of losing their sources of livelihood. Since small-scale fishers can move in and out of an area based on local needs, these systems have been acting as significant safety nets for households during times of economic, environmental or social shocks.

Though women are involved as fishers, and represent half of the workforce of this sector, there still face many constraints and barriers to their full engagement. National statistics are responsible for the significant undercount and undervaluation of women's contributions to the sector, in part because their fishing activities are often undertaken on or close to the shoreline (e.g. gleaning) or are misrepresented as "help". Since they do not often go on bigger boats that can result in larger yields and greater profits, their contribution is consistently undervalued or not paid. While women are highly engaged in all types of fisheries (fish, seaweed, crab and shrimp) they tend to be involved in less profitable components of the value chain, such as post-harvesting work and vending. The lack of access to capital and to the resources required for refrigeration can result in higher losses and lower quality of products among women entrepreneurs, gradually undermining their efforts.

USING A GENDER-SENSITIVE LENS

Social relations and power dynamics shape sensitivity, adaptive capacities and some exposures. The position of individuals, households, age and social groups, determines how vulnerable they are to specific risks, shocks and stressors.

For example, as fisheries policies and investments restructure processes (for harvesting, processing and marketing products) or limit access (e.g., through marine protection mechanisms), it cannot be assumed that men and women are equally sensitive or equally able to adapt to the changes. Any approach to analyse and act on vulnerability as a means to support inclusive small-scale fisheries governance systems and higher value returns to small-scale fishers must address diversity and be prepared to disaggregate coastal communities and households along gender and other lines (CARE-WWF Resilience in a changing world 2014)

This practice includes various activities related to feed management, access to higher value markets, diversification of livelihoods and flexible capture strategies to allow for change in fish distribution. Community-based small-scale fisheries management, mangrove management, supporting diversification strategies for coastal communities, marine and coastal ecosystem adaptation planning, and waste management from aquaculture were also included. Building the physical or biological defences to manage sea level change and storm surge risks, improving weather forecasting to manage the risk of extreme events and short-cycle production and water management systems for greater incidence of drought were also implemented in different contexts.

CASE STUDY

WOMEN'S EMPOWERMENT MAINSTREAMING AND NETWORKING PROGRAMME (WEMAN)

“It does not take generations to change gender relations”

(a participant of the GALS training)

It is exactly this belief that led to the development of the Gender Action Learning System (GALS) as part of Oxfam's WEMAN programme. GALS is a methodology for community-led empowerment that aims at promoting gender equality and pro-poor livelihoods improvement, and it involves a win-win collaboration with private and public actors.

The GALS application in Vietnam

The International Collaborating Centre for Aquaculture and Fisheries Sustainability (ICAFIS) and the Centre for Marine Life Conservation and Community Development (MCD), with the support of Oxfam's GRAISEA programme, work in two provinces in the Mekong Delta that contribute significantly to national shrimp production. The project is designed to empower women in the shrimp value chain through promotion and application of Corporate Social Responsibilities (CSR) framework and practices of multi-stakeholders, as well as the demonstrated adoption of responsible shrimp aquaculture practices in term of the economic development of households and under the context of climate change. ICAFIS and MCD worked with 22 farmer groups that used various shrimp farming systems: from extensive to semi-intensive to intensive.

Men dominate shrimp farming in Vietnam, while the workers in processing factories and collectors are mainly women. Managers and owners of processing factories are mainly men. Typically, women carry out most of the household chores and care for children, sick and elderly. Though men borrow money, women handle daily finances and buy daily supplies at the market for the household. Despite this, women have less access to training and commune meetings than men.

GALS was introduced in Vietnam at the end of 2014, and applied in the chicken, pork and shrimp value chains from mid-2015, aiming to promote gender equality and economic development for small-scale farmers involved in these value chains. Through the PhotoVoice Project,⁶⁹ women and men in communities, who are normally invisible, are put in the spotlight as examples of how their actions facilitate gender transformation. GALS starts with visioning, mapping and self-analysis. Individual women and men in communities, organisations or institutions draw visions for their lives. Participants then analyse their current situations and identify opportunities and challenges that may affect the realisation of their vision. After that, they identify their targets and milestones, and then set activities on the road towards the achievement of their vision.

Through the implementation of GALS, the community was able to identify the main challenges to the full engagement of women in shrimp farming. Oxfam has promoted a Poverty and Social Impact Analysis (P-SIA) tool aimed at analysing, together with all different stakeholders, the positive and negative social impacts of shrimp aquaculture. It was discovered that women have little say in the sale of products, and practically no say in investments in shrimp farming, the buying of feed and dealing with risks. Adolescent or adult sons, for example, have more say in these matters than their mothers. In many cases, the introduction of GALS was the first time that women were invited to discuss shrimp farming with men. Farmers groups usually comprise of men, and meetings are therefore attended by men only. GALS mobilised both groups to address issues together.⁷⁰ However, while men are more dominant in household and economic decision-making, women tended to analyse issues beyond shrimp farming and money, and identify more practical solutions than men.

THE GENDER ACTION LEARNING SYSTEM (GALS)

GALS is a structured community-led empowerment methodology aimed at constructive economic, social and political transformation. It gives women, as well as men, more control over their lives to catalyse a movement for gender justice. GALS is not a simple tool or methodology, but it includes a wealth of instruments and visual diagramming tools that can be adapted in various ways for empowerment. For achieving change at scale, GALS is implemented at three levels:

Household/community level

Community-led gender action learning to change gender relations and social norms, and create collaborations that lead to more equal redistribution of decision-making power.

Organisational level

Strengthened CSO capabilities to integrate methodologies into their work, and facilitate gender equitable win-win collaboration with businesses and local government bodies.

Donor/investor level

Advocate for community-led empowerment methods to be integrated into policy, programme design and implementation.



Ms. C carefully monitored the man who was buying shrimp at her house to ensure that he accurately weighed them. Afterwards, she carefully wrote down each shrimp's weight to compare with his notes at the end. This method helps avoid mistakes. In the past, women like Ms. C did not participate in selling or farming shrimp. All of these tasks were done by their husbands. Since participating in the trainings (GALS/ WEMAN), women's behaviour has changed drastically. Ms. C asked her husband to show her how to feed and sell shrimp, and then started doing it herself, ultimately taking over the task of selling shrimp from her husband. Ms. C and her husband now work together, and support one another in their family business.

WHAT WORKED

Elevating the voice of women

The project has collected the stories of successful women in the PhotoVoice book, documenting the changes that the participation in the GALS has had in their lives. Many women are seeing themselves as shrimp farmers for the first time, despite having worked in the industry for decades.

Working with local institutions

The project is working with the Department of Agriculture and Rural Development, and has made efforts to provide training to women to reach them beyond the spheres where mostly men participate in trainings.

CASE STUDY

BAROTSE FISHERIES PROGRAMME

In the Barotse Floodplain in Zambia, where there are high rates of poverty and hunger, fishing is an important source of food and income for the region. Nevertheless, around one-third of the region's total fish catch is lost every year. WorldFish research shows that these fish losses affect female and male fishers, processors and traders in different ways, with women processors experiencing higher post-harvest fish losses and getting lower returns on their financial investments than men.

To overcome this challenge, WorldFish helped design and test improved fish processing technologies, and introduced a social change intervention to improve the livelihoods and gender relations in rural fishing communities in the Barotse Floodplain. This was done in collaboration with the Department of Fisheries, University of Zambia and private sector partner NoNo Enterprises, as part of a research project in late 2014 to early 2017 funded by the International Development Research Centre (IDRC) and the Australian Centre for International Agricultural Research (ACIAR) through the Cultivate Africa's Future (CultiAf) fund.

In the traditional socio-cultural context of Zambia men are expected to be responsible for fishing because people believe that women lack the physical skills needed to fish. Meanwhile, women represent 60 percent of the people involved in fish processing, the value chain stage at which most of the fish is lost. Of the one-third of fish lost during processing, most (70 percent) come from the degradation in the quality of the fish, causing traders to offload fish products at lower prices. This results in lost revenue for the woman-dominated processing sector, which already has the lowest gross margins (2.6 to 5.5 percent) compared to fishing (21.5 percent) and trading (12.2 to 13.8 percent). But even compared to male processors, women lose far more fish and, subsequently, have lower gross margins (2.6 percent compared with 5.5 percent for men). This is partly because women have less access to government extension services and training, which implies that their technical and business skills are often lower than men. Also, women do not individually own important assets for fishing, or, unlike men, must transport the fish to the market, and have less time available to process fish due to unpaid household responsibilities.

To combat these barriers, in 2015, the CultiAf project introduced four improved fish processing technologies – salting, ice, improved smoking kilns and solar tent dryers – and trained 12 extension officers from the Department of Fisheries to facilitate the piloting of new technologies with value chain actors. Over two fishing seasons (2015 and 2016), 256 male and female fishers, processors and traders from six fishing camps tested the new technologies. This was done using a participatory action research (PAR) approach, where women and men selected one technology to use and modify to their individual or group needs. The PAR approach enables people to solve their own problems through reflection, action planning and learning-by-doing.

Recognising that existing social and gender norms could limit women from fully using and benefiting from the new technologies, the project partnered with the Zambia Centre for Communication Programmes to design and test gender-transformative drama skits in three of the fishing camps. The thirty-minute skits were performed by a local drama group for all fishing camp members who wished to participate. The skits encouraged men and women to critically reflect on their harmful norms and unequal power relations that impact value chain actors, especially the female processors.

Together, these technical and social solutions have had positive impacts, particularly for women. The improved technologies were found to reduce losses, as well as the time and work burdens of processors; research results showed that salting drastically reduced losses and the time it took for women to process the fish, while solar tent dryers diminished losses while maintaining a high-quality product.

Overall, attitudes about gender equality improved from the project's baseline to the end-of-the activities. Participants in the drama skits showed a two-fold increase in their attitude scores – measured using the Women's Empowerment in Fisheries Index survey – compared to those from camps where the drama skits were not performed. Men especially showed a significant shift in their attitudes and behaviours around ownership of fishing and processing assets – 44 percent said they jointly-owned the fishing gear at baseline, which increased to 76 percent at the end of the



A woman sun drying fish in Baratose.

project. Women who participated in the skits also experienced a number of positive behaviour changes. Their involvement in fishing activities increased from 5 to 75 percent, and a greater percent of women reported making large inputs into decisions about income generated from processing fish (increased from 45 to 94 percent).

The research project's impacts show that combining technical and social interventions is crucial to enabling poor women dependent on the Barotse Floodplain fishery to benefit more equally from new technologies, and to improving the livelihoods of women and men in developing countries.

WHAT WORKED

Tailoring the extension services to women's specific needs

The project invested in training extension agents to specifically target the needs of women. By recognising that not all techniques are appropriate for both men and women, the project was able to tailor information and services to focus on women's productivity in the fish value chain.

Facilitating the dialogue between men and women

Getting women and men to discuss social norms that might erode gender relations in an informal setting allowed them to confront negative practices in the context of improving productivity.

CASE STUDY

TUNISIA CLAM FISHING PROJECT

The Tunisia clam value chain is characterised by the overwhelming involvement of women from fishing/collection to landing. The subsequent downstream operations are male middlemen-dominated. About 4 000 women (officially registered/having a fishing license) are involved in the fishing of clams in Southern Tunisia, in the Gulf of Gabes, the major clam producing area in Tunisia. Italy and Spain are the main importing countries of these “luxury” products and absorb more than 90 percent of the national production; the domestic demand in clams rarely exceeds 2 percent of the landings.

The work carried out by women is done under precarious and difficult working conditions. Women must bend for more than five hours a day in sea water to reap a meagre return from their activities. The product purchased from them at under USD 3 per kg costs between seven and ten times more than that on the European market. The value chain analysis conducted in 2010 within TCP/TUN/3204 “Renforcer le rôle de la femme dans la filière pêche à pied de la palourde en Tunisie”, and then confirmed in 2016 in another study commissioned by the FAO FMM “Enable women to benefit more equally from agri-food value chains” project,⁷¹ revealed very critical shortcomings in terms of participation, transparency, equity, human dignity, empowerment and rule of law.

The involvement of a multitude of intermediaries who charge irrelevant service fees has resulted in the primary producers – women fishers – earning barely USD 45 per working month, equivalent to 70 percent of the national legal wage in the agriculture sector, while the middlemen earn three times this amount. The depuration centres and direct conveyors of the clams to the international market argued that they were not aware of the price paid to the women by their representative middlemen. Besides, the latter have built intricate relationships with the women collectors that keeps them in a cycle of poverty, vulnerability and marginalisation. The middlemen act as their financiers (advance payment in food and any other goods), and service providers in their fishing activity, enforcing unfair and to some extent illegal charges that are deducted from the sale price of the women’s clams. The transportation fees are charged separately (1 to 2 Tunisian dinars or USD 0.5 to 1 per kg of clams or per day) in the two major production sites (Gabes 2 and Sfax 5).

Moreover, the middlemen have established a practice of charging for the weighing of the clams that they are buying at the landing site using their own scales. The latter amounts to 0.5 Tunisian dinar (slightly more than USD 20 cents)/kg of clams or per day depending on the site.

Women in the clam fishing sector in Tunisia had minimal organisational development, and therefore weak bargaining and advocacy power. In 2011, the TCP project restructured the GDP,⁷² and initially reluctant women were then willing and able to participate in the Board of the GDP. Finally, a new autonomous association of women (*L’association féminine de la pêche des palourdes et de développement* (AFPD)) was created to strengthen their bargaining power and advocate for their interests and rights. The project effectively linked women directly to producers and markets, cutting out the middlemen who reduced the amount of profit earned and bargaining power of women in the clam fishing sector. These actions were the first steps in a process towards empowering the women clam collectors. It should be acknowledged, however, that the Arab Spring that followed later impacted the operational status of both the restructured GDP and AFPD.

With the implementation since early 2016 of the FMM project the AFPD is now being empowered to drive significant changes for the benefits of women clam fishers and serve as an entry point for other groups along the Tunisian coast. In this regard, a partnership has been established with the Association of Continuity of Generations (ACG), a nongovernmental organisation. Making the clam fishers aware of their rights and getting them involved in the decision-making process, developing their entrepreneurship skills, engaging them in protecting biodiversity and responsible fisheries and providing opportunities for diversification of their outlets and alternative income sources.

FAO is also promoting a dialogue with the central and local governments to ensure transparency and social justice in the clam fisheries. One of the noticeable commitments, for which these partners have been positively gauged on the eve of the major clam fishing season, involved the clam weighing levies imposed by the middlemen for many years. An affirmative political will was shown through a formal administrative act that deters these practices.

A further intervention by the project would be to provide the community with weighing scales (free of charge) and create the conditions to manage these efficiently.

Once the above is achieved, the next target will be to examine transportation fees. A harmonisation across the fishing zones of the transport fees for women fishers and lifting the fees for the transportation to the depuration centres of clams bought by

the middlemen would reduce the burden on women and increase their income.

It is foreseen that the women clam fishers' empowerment further drives the process of establishing a strong apex association or any relevant legally constituted group whose status enables under the Tunisian law, a direct commercial linkage with an EU importer of clams.



Gulf of Gabes, Tunisia - Women digging for clams in the framework of the FAO Project: TCP/TUN/3203 (08/II/TUN/207) aimed at empowering women in clam fishing.

WHAT WORKED

Engaging women in decision-making

The project created new spaces for women to exercise their decision-making power, and enabled them to advocate to strengthen their bargaining power and for their own interests and rights.

Integrating women into the value chain

FAO developed a strategic partnership with the private sector to improve women's income by creating more direct access to valuable markets. A fixed price set in advance guarantees the predictability of payments and receivables for both the importer and the women collectors throughout the harvest season, while mandatory cash payments are paid by on-site purchasers to the women collectors. In addition, the existence of a premium fee, to be received by the women collectors, rewards them for only taking larger sized clams, leading to a more sustainable production system.

Advocating for change

FAO's advocacy at the policy level triggered a more transparent environment for marketing transactions published each season in the country. This is especially true for the traceability of the process from the landing, weighing and purchase of clams to the delivery to the clam exporters, as highlighted in the ministerial circular in 2016/2017. This is a transparency provision mainstreamed for the first time in the history of these institutional circulars published each season in the country.



CLIMATE CHANGE ADAPTATION AND DISASTER RISK REDUCTION

Small-scale agriculture systems are extremely vulnerable to different types of natural hazards and to the impacts of climate change. Such systems are often rain-fed and include individuals and households that are marginalised and deeply impoverished. Changes in rainfall patterns, rising heat levels, sea level rise and storm surges, and increasing extreme weather events can have dramatic impacts on them. Between 2006 and 2016, the agriculture sector absorbed approximately 23 percent of the damage and losses caused by natural hazard-induced disasters in developing countries.⁷³ Climate change adaptation and disaster risk reduction activities in such contexts can help to lessen the negative impacts of these hazards, and ensure that farmers continue to do well despite uncertain changes. Thus, investing in disaster risk-reduction activities and climate change adaptation remains a critical part of managing and reducing risks, and building the resilience of small-scale farmers, particularly in the context of CSA programming.

A Community Based Adaptation (CBA) approach, which includes Disaster Risk Reduction (DRR) activities, has proven to be an effective way to build the capacities and systems needed to help people adapt. Instead of a set of predetermined and technology driven options, CBA as an approach aims to empower vulnerable communities and their local governments and service providers to understand and analyse how the current and future climate will continue to impact their lives, act on priority adaptation options and constantly adjust their livelihood and risk management strategies in response to new and uncertain circumstances

Many women and girls in small-scale farming systems are disadvantaged in social power relations, often lacking control over their own bodies and different types of resources, and not having a say in decision-making processes. Vulnerability to climate change and variability can be locally specific, impacted strongly by other existing social inequalities, and change over time. Climate change impacts interact with social inequalities in multiple ways, creating gender-sensitive vulnerabilities and capacities that are nuanced and defy broad generalisations. A gender transformative CBA approach can effectively help address some of these locally specific vulnerabilities by addressing the social norms that drive the differential vulnerabilities of women and girls.

Men and women have different roles, responsibilities, limitations and capacities in agricultural work, and specific needs and

capacities when it comes building their resilience to diverse types of disasters. Ongoing gender inequality around labour division, access to productive assets, roles and participation in decision-making processes, existing social norms and control over their bodies play significant roles in shaping the impact of disasters on women.

The common elements of increasing resilience to disasters and climate change include developing interventions along the entire spectrum of disaster risk-reduction activities, from increasing preparedness to disasters through to contingency planning, improving monitoring and anticipation of hazards by developing early warning systems, using climate information for making agricultural decisions, mitigating risks from hazards through various risk-reduction activities (such as slope contouring, flood and water management, etc.), setting up community response groups on search and rescue and first aid, responding to actual disaster impacts by providing immediate relief, working to increase resilience to future disasters by working on strengthening livelihoods. It also means setting up an enabling environment, by developing partnerships, advocating for changes in national and international policies to increase funding for risk reduction activities, and inclusion of poor and vulnerable people in how policies are shaped. Engaging women in the above DRR activities has increased their resilience to future shocks and helped programmes reach and target a larger number of vulnerable women and girls.

CASE STUDY

SHOUHARDO II

The SHOUHARDO II Programme, implemented by CARE in Bangladesh from 2009 to 2014 with funding from USAID's Office of Food for Peace, focused on improving food security and addressing the underlying causes that include social injustice and discrimination, lack of participation and voice, and the factors that increase vulnerability to natural disasters and climate change. SHOUHARDO II works in four areas, namely Northern Char, Middle Char, Haor and the coastal areas. The term *char* refers to land within the active channels of the major rivers. Communities living in Char and Haor areas face numerous hazards, including regular flooding and cyclones that result in major challenges for poor and extremely poor (PEP) households to develop their resilience, especially when disasters strike.

The success of climate change initiatives depends on understanding the differences in adaptive capacity between women and men and between different social groups, and designing adaptation strategies that ensure vulnerable people have equal access to resources, rights and opportunities. Women are more vulnerable to climate change impacts than men as they are generally poorer, rarely have an equal say in household decision-making and typically lack secure access to the resources required for adaptation. To address this gap, the SHOUHARDO II programme applied the CVCA methodology to identify adaptive capacity by recognising differential vulnerability within communities and households and identifying who is vulnerable and why.

The programme trained Village Development Committees (VDCs) in community-based planning and in the use of Climate Vulnerability and Capacity Analysis (CVCA). As an outcome of this planning, the programme trained Union Disaster Volunteers (UDVs) on disaster preparedness, contingency planning, search and rescue. The adopted strategy was to ensure that 50 percent of the UDVs were women, with the office bearers (chairperson, vice chairperson, secretary) often being shared between men and women. Women can approach other women and access households more easily than men, to provide guidance on disaster preparedness. Similarly, the programme trained a School Based Teenager Brigade, also comprised of 50 percent female students, to work with schools during a disaster. With their knowledge of PEP households in communities and the

contingency plans, the UDVs and VDCs as well as the school-based teenager brigade could target female-headed households for emergency assistance during the 2014 flood.

The Union Disaster Management Committees (UMDC) were supported by the Union Disaster volunteers, who took an active role in the floods. They disseminated warning messages to UP members and around their area, and advised households to prepare for the flood. They arranged a portable mechanism to stock up on dry food and fuel, and organised households to move to higher locations such as a nearby flood shelter or raised homestead. For those in need, the volunteers arranged transport or provided assistance with moving.

The programme incorporated contingency planning by analysing potential events or emerging environmental threats, such as flooding, and advance planned to enable timely, effective and appropriate responses to such events and situations. The contingency plans, prepared as part of the CVCA process, were utilised during the 2014 flood to identify priority areas and plan relief efforts. The planning involved organised and coordinated courses of action with clearly identified institutional roles and resources, information processes and operational arrangements for specific actors so that they can anticipate and solve problems that could arise during crises. Contingency planning was an important part of overall preparedness plans and were organised by the village development committee specifically targeted at the most at-risk households, including those with infants and pregnant women, sharing messages through mother's groups. Training sessions were provided on health in emergencies to motivate households, particularly those with pregnant mothers, to save for emergencies (e.g. for pregnant mothers to be able to pay for a boat to the health clinic).

SHOUHARDO II focused most of its DRR capacity development efforts on communities and local government institutions, mainly at the union level and, to a lesser extent, at the sub-district level. To improve disaster resilience at the community level, the programme enhanced the capacity of communities and local government institutions to influence policies and actions at union, upazila, district, regional and national levels, based on the community's experiences. The programme worked

at national level to develop organisations involved in disaster risk reduction and management, including the Department of Disaster Management and Bangladesh Water Development Board (BWDB) Flood Forecast Warning Centre. The outputs from the community-based planning and CVCA provide insights into the inequalities within communities and households that make certain people, especially women and PEP, more vulnerable. The insights obtained by this process provided a platform for communities to identify and design activities to improve their disaster and climate resilience. SHOUHARDO II built the capacity of the 16 PNGOs by providing training on Emergency Preparedness Plan, and the PNGOs used the plans in dealing with the 2014 flood.

SHOUHARDO II ensured that women were also involved in infrastructure construction. For example, in Sirajganj (Mid-Char) Region, the construction of raised homesteads provided 27 492 workdays, out of which 47 percent were for women, who received the same wage as men. This work involved raising homestead compounds above the highest flood level, by adding 0.75 metres and providing a flood-free homestead area. A raised homestead provides more dry space for domestic activities, a reduction in diarrhoea and skin diseases, more scope for homestead



A Raised Homestead

gardening, a reduction in building maintenance costs and a dry place to keep livestock during floods, as well as providing a place for non-raised households to take shelter during floods, removing the need to evacuate. Construction of infrastructure improved the disaster and climate resilience of PEP households for both men and women, both in the short (by providing employment) and the longer terms (by creating a safer environment).

WHAT WORKED

Identifying the differential vulnerability of men and women

Using CVCA to determine where to focus efforts enabled the project to contextualise interventions to target the most vulnerable households and individuals in each community. This was also useful in developing the local government capacity to respond to the specific needs of men and women in the community.

Engaging women to reach other women

The SHOUHARDO II programme recruited and trained women to provide disaster response, and assisted the community to prepare for an emergency. Individuals and households that would ordinarily not be involved in this planning, including female-headed households and pregnant women, were specifically targeted for these efforts, as they are the most vulnerable during emergencies.

Hiring women to build the community resilience

The programme deliberately hired women to help build raised homesteads and support infrastructure projects for emergency planning. In this way, the voices and needs of women were also raised, along with the homesteads.

CASE STUDY

GRADUATION WITH RESILIENCE TO ACHIEVE SUSTAINABLE DEVELOPMENT (GRAD)

The GRAD (Graduation with Resilience to Achieve Sustainable Development) programme has a goal of “graduating” 65,000 households from the government safety net (PSNP) to longer-term food security. In the context of drought-prone Ethiopia, the programme employs climate-resilient approaches to diversify households’ livelihoods, build assets and link to financial services and markets. Funded by USAID and implemented by CARE, GRAD has deliberately placed an emphasis on empowering women and girls. The final evaluation of the programme reported that nearly 80 percent of GRAD households graduated with government support. Participants reported an increase in average household income from USD 418 at baseline to USD 771 (84 percent) at endline, and an average household savings increase from USD 12 to USD 141 (1 075 percent).

What made GRAD’s approach successful was to combine gender-equality messages with the creation of economic opportunities, using a small and localised group of participants from a Village Economic Savings Association (VESA) who know each other. The VESA was used as a platform for raising awareness and organising dialogues, encouraging both spouses to participate in these platforms, and using male and female role models.

The GRAD Project has used CARE’s Climate Vulnerability Capacity Assessment (CVCA) tool to guide activities in addressing the causes of vulnerability to climate change, both at household and community levels. The increasingly unpredictable weather patterns had a negative impact on agricultural production and household income. This project was challenged to identify workable adaptation strategies that do not undermine their primary productive assets. A value chain analysis carried out under the project focused on weather and climate-related risks. For example, one of the first crops selected by project communities – red peppers – was severely damaged by sudden-onset rains. But since the communities had already factored in this potential risk, they were able to rapidly adjust crop selection and livelihood options, without a significant loss.

According to the IR Assessment Report for 2014, it was calculated that 84 percent of households have adopted at least two practices associated with climate change adaptation, compared with 75 percent of the year before, and 96 percent have adopted at

THE STORY OF MESERET

“I am a widow caring for two children. I have been on PSNP for the past ten years. Recently, I was told that I will no longer be supported by the Productive Safety Net Programme (PSNP). But now when I see what I have managed to earn and the amount of assets I have built, which I have never had in the past ten years, I ask myself, ‘Why did I stay for so long on that support programme?’ I didn’t realise that I had such potential, and the skill to make money and lead groups. It is as if I’m switched on!

After I joined the GRAD Project, I have become engaged in the VC of honey production, which I found less labour-demanding for my situation. In my last harvest of honey, I earned much more than what I have come to expect. I bought a cow, which recently gave birth to a calf. I also bought salon furniture. I have an income-generating activity that I run from my home with a minimum income of Birr 300/week. Other than the savings I have in my VESA, I save Birr 100/month and Birr 10/week in a village saving group, which we established with fellow women in the village. I am the chair of that non-GRAD VESA by tapping the experiences I learnt in the VESA. The trainings that I get from GRAD are invaluable. I learnt a lot in the VESA groups, and they helped me so much in building a different perception about my own capabilities. Now I share what I learnt at VESA with my fellow sisters at the saving meetings.”

least one practice. By establishing that all members of the household need to participate equally in livelihoods activities, enhance their adaptive capacities and transform social norms, households are now better equipped to prepare for and respond to climate change. The VESA platform enables all members of the households to have more options and apply more adaptation measures than they had previously. Giving women access to VESA and MFI finance has encouraged the whole household to pursue new and diversified income-generating activities, while also building the social capital through VESA membership.

The mid-term evaluation of the programme showed that the VESAs provide an effective entry point for transforming existing gender norms and values. First, they offer a platform for discussions around priority issues for farmers and their communities. This alone, however, will not induce changes, but it becomes effective in combination with the economic benefits from the savings and

credit activities supported by VESAs, where women are given the opportunity to take on new roles within the household and the 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.

GRAD has demonstrated the importance of having a well-formulated gender strategy in place at the start of the project, to guide implementation of the gender-related activities component. The programme also included a gender advisor, who mainstreamed gender issues across all objectives. Targeting the specific needs and capacities of the communities in which GRAD works has resulted in an overall improvement in the self-esteem of many women. Relations between husbands and wives in targeted households have also improved, and spouses now work together much more closely. Women's voices in household decision-making have also become louder, not only because they are empowered, but also due to the strong engagement of men in the whole changing process.

GRAD has transformed relations between men and women. Husbands are now contributing to household labour by doing



Beleta Hode has been involved in the GRAD programme for ten months. "Since taking part in GRAD, my family is healthier. I bring value to my household, and I share my learning with my uncle's family. We are happier and our future is brighter."

chores that before were not widely acceptable for men in the community. Relieving women of part of their workload has given them more time to engage in income-generating activities, which increases the household income – a benefit in and of itself – and reduces the stress on men to produce and income and provide for their families.

WHAT WORKED

Conducting an analysis of gender, value chain and climate vulnerability

This helped to contextualise the project activities. One of the most important contributions GRAD has made in advancing gender equality and women's empowerment was by creating a safe space for husbands and wives, other men and women, and the community in general, to start exploring and discussing relevant gender issues.

Engaging men and increasing women's access to information

Engaging men was crucial to the success of this programme. The establishment of social networks that included men through the VESAs supported women's engagement in productive activities, increased their access to information and financial resources, and fostered greater collaboration between men and women. As a result, at the end of the project, women represented 51 percent of the executives in VESAs, 36 percent of VESA members and 38 percent of value chain groups.

Increasing women's access to resources

Women's empowerment outcomes are not easily reversible, and require a greater collaboration within households and the community. VESA savings groups have provided women with more access to financial resources, and increased the household's ability to cope with climate change by improving financial safety nets and input availability.

CASE STUDY

RESTORING AGRICULTURAL LIVELIHOODS IN CONFLICT-AFFECTED COMMUNITIES IN NORTH COTABATO PROVINCE IN PHILIPPINES

Mindanao is considered a major regional contributor to the Philippines' agriculture sector. However, protracted conflicts, worsened by shifting climatic patterns and extreme weather conditions, have affected more than 32 000 households in the Bangsamoro areas, including the province of Cotabato. In the municipality of Pikit, Cotabato alone, 3 000 households farming more than 2 200 hectares of land were affected by recent fighting between the government and armed insurgents. This resulted in production losses amounting for more than 4 700 tonnes of corn and more than 3 600 tonnes of rice. In addition, farming households in ten municipalities in Cotabato lost their productive livelihoods, worth approximately USD 2 million, because of heavy flooding in low-lying areas.

The Philippines is highly prone to natural disasters, and reducing disaster impact is a high national priority. In this context, FAO is working with the Department of Agriculture and the Office of the Provincial Agriculturist in Cotabato, local government units (LGUs), and other pertinent government agencies to support the rehabilitation and restoration of agriculture- and fisheries-based livelihoods. The project enhances sustainable farming capacities and increases farm productivity to ensure household and community food security of households, including soon-to-be decommissioned combatants and women. The aim of interventions is to increase the resilience of farming, fishing and related livelihoods against multiple hazards.

Gender-sensitivity was recognised as a cross-cutting concern for the project, and the increased participation of women was advocated. As they were targeted among the main beneficiaries, gender mainstreaming was addressed throughout the whole project, by organising specific gender capacity development activities.

A Training of Trainers on disaster risk reduction for agriculture and inland fisheries was conducted for staff of the relevant line ministries at regional, provincial and municipal levels, and NGO partners. Approximately half of the selected participants were women. Gender issues were integrated in the training programme. Through the identification of gender issues and gaps in disaster preparedness and response, participants could support the inclusion of activities aimed at addressing the specific needs of women and men in the municipal DRR plans.

Moreover, specific trainings on alternative livelihoods, including fish processing, handicraft making, and culture mushroom production, were organised. The aim was improving the wellbeing of disadvantaged women and reducing gender disparity. For this purpose, a series of trainings tailored at women's organisations and rural improvement clubs were organised, to enhance their technical knowledge and distribute required supplies and materials. At the end, the project contributed to the improvement of food security and nutrition and provided another source of income for the community.

Special attention was also given to gender concerns in the inputs distribution, by making available special lanes for women, especially pregnant women, the elderly and those with disability. Inputs distribution and activities aimed at disaster risk reduction were organised by the project in safe locations and at a time convenient for both female and male participants.

Gender workshop that aimed to analyse gender roles in farming households (i.e. daily activity clock) demonstrated the unequal burden that women face in engaging in both domestic care work and productive activities, including childcare and work on the farm. On the other hand, men were mainly involved in farming activities, which are less time consuming.



WHAT WORKED

Enhancing the role and participation of women

This was done at household level or community level DRRM, and was extended to natural resource management.

Providing assistance to targeted beneficiaries of the project

This was intended for the establishment of alternative livelihoods options for both men and women. The replacement of productive assets lost or damaged helped them rehabilitate and restore their agriculture-based activities (cropping, livestock/poultry rearing and fishing).

Providing training for beneficiaries

This promoted efficient and effective use of the different agriculture inputs provided by the project. Thus, trainings to apply climate-smart agriculture practices, to improve livestock management practices and to increase capacities to carry out alternative livelihoods and product value addition permitted women's empowerment, and especially concerning the application of CSA.



GUIDANCE ON INTEGRATING GEWE INTO CSA PROGRAMME

HOW TO DESIGN AND DELIVER A GENDER-TRANSFORMATIVE CSA PROJECT – GOOD PRACTICES

This section presents a model checklist of good practices for developing gender-transformative Climate-Smart Agriculture (CSA) programming, summarised in Table 2. Each of the practices and their criteria are thereafter described in more practical detail in the remainder of the section. A more elaborated list of gender considerations in CSA practices can be found in Annex 1. Links to resources relevant to implementing the practices are provided in the *Tools and methodologies* sections for each practice.

The checklist does not attempt to identify specific CSA practices due to their highly context-specific nature. Rather, the checklist aims to ensure that adequate consideration is given to enabling environments and processes critical to designing and implementing successful gender-responsive CSA programming in a variety of ecological contexts and agricultural-market systems, in a way that is also responsive to ongoing climate change and variability, risks, vulnerability and impacts. Depending on the scope and scale of proposed interventions, not all good practices may be appropriate or necessary, but broad-based initiatives should consider all.

TABLE 2. SUMMARY OF GOOD PRACTICES

Title	Good Practices
Risk, vulnerability and capacity	Analyse climate risks, differential vulnerability and capacity of people, ecosystems and institutions
Participation, inclusion and gender equality	Ensure participation, agency, transparency and inclusion of all groups
Climate information and uncertainty	Incorporate management of uncertainty and use of climate information by women and men
Planning and decision-making processes	Promote anticipatory, flexible and forward-looking adaptation planning and decision-making processes
Innovation, local and indigenous knowledge and technology	Promote innovation, local (including traditional and indigenous) knowledge and gender-sensitive technology
Sustainable economies	Promote empowerment, market synergies and opportunities, increase access to financial resources and products, promote social enterprises
Institutional linkages	Establish institutional arrangements and linkages which facilitate multi-stakeholder engagement
Learning, capacity development and knowledge management	Integrate learning, capacity development, monitoring and knowledge management processes
Scaling up and sustainability	Support ongoing and sustainable adaptation at scale

UNDERLYING CONCEPTS

Climate change risks and impacts are highly diverse and context-specific. Planning for adaptation therefore needs to be locally driven and across sectors, and incorporate appropriate local and external resources, expertise and knowledge in response to changing needs. Different groups have differing levels of vulnerability and capacity within and across populations and communities that need to be considered. As a result, differences in gender, social status, wealth, ethnicity, natural resource base, marginalisation and religion, among others; all affect people's ability to adapt and are important aspects to consider.

Timescales matter. Climate changes occur in short to long-term timescales, with direct and indirect changes and impacts. Institutions and systems must consider the linkage of adaptation work across time scales and integrate continuous learning on adaptation to climate change and climate variability.

Uncertainty. Climate change and resultant risks and impacts are difficult to predict with certainty. A framework must be developed with the appropriate flexibility to evolve with the changing climate risks, uncertainties, opportunities and impacts. Adaptation must go beyond being reactive to climate impacts, to focusing on anticipatory and precautionary measures so as to be prepared for future unknowns, while also reducing vulnerability.

Adaptive capacity. The adaptive capacity of vulnerable people, ecosystems and institutions is a critical determinant of successful adaptation and risk reduction in the face of an uncertain future climate. Strengthening control of and access to knowledge and assets, strong institutions and linkages, innovation, anticipation of future risks and opportunities and above all forward looking decision making processes are the capacities which form the basis for adaptation actions to be identified and implemented now and into the future as the climate changes. These capacities ensure that adaptation technologies are relevant and effective. These capacities therefore require equal attention in terms of resourcing the systems and services that build and maintain adaptive capacity.

Disaster Risk Reduction. Men and women are impacted by disasters in different ways, and often have distinct coping strategies. A gender-responsive approach to DRR should reflect the realities of all community members, promote equality between men and women, and help ensure more successful and equitable resilience of both the agricultural and alternative livelihoods. Therefore, an increased participation of women was required,

recognising their crucial role at household and community-levels in both DRR and natural resources management.

Decision-making processes are at the heart of effective adaptation. The changing climate requires continuous and informed decision-making, reviewing past trends, current conditions and anticipating near term changes and future scenarios. This calls for systems and processes that motivate and sustain anticipatory, flexible, locally contextualised decision-making, in which those affected by climate impacts are fully involved.

Underlying causes and drivers of vulnerability. This especially includes gender inequalities, exclusion or poor governance. Ongoing development and economic growth challenges also all affect resilience to climate change, and may hinder the success of the implementation of adaptation actions. A holistic response which takes these into account together with climate risks is needed in which adaptation is integrated, embedding climate change across all sectors and within all policy settings and decision-making processes.

Climate Information Services. Access to available and useful climate information contributes to increasing resilience and adaptive capacity of vulnerable groups, (eco) systems and institutions to the impacts of climate change. Factors that are key to building resilience and adaptation to climate change impacts include working with uncertainty and different climate scenarios; valuing and integrating indigenous knowledge; interpretation of scientific and meteorological information; engagement of users in creating usable and accessible information and effective communication to those who need it.

Non-climate benefits of adaptation. Adaptation aims to ensure socio-economic development at all levels is climate resilient, hence effective and coherent approaches to adaptation are relevant beyond climate-specific issues and will contribute to key development objectives, increased equality and poverty reduction, as enshrined in the Sustainable Development Goals (SDGs).

Extension matters. Extension, its gendered nature and how this needs to change are all questions that should be considered if CSA activities are to be sustainable and adopted at scale by women, men, vulnerable and marginalised people.

PRACTICE 1

RISK, VULNERABILITY AND CAPACITY ANALYSIS

Analyse climate risks, differential vulnerability and capacity of people, ecosystems and institutions.

An in-depth contextual analysis, including sex-disaggregated data and gender-related evidence, should be the starting point for all climate-smart agriculture interventions.⁷⁴ Farming households and their production systems are changing as their access to productive resources is challenged by multiple factors, including the changing climate. The drivers of change need to be identified and their implications incorporated into decisions made by policy makers and stakeholders. An integral and crucial element of this work is addressing women's unequal position in the household and community, which affects their ability to change livelihoods and the household dynamics in response to the effects of climate change. While broad assumptions in gender relations can be observed across countries and continents, planning local adaptation actions based on generalised assumptions about women or men is ineffective at best, and can be damaging at worst.

Because of their typical roles in the home and family, and high degree of vulnerability, women can be targeted as agents of change in actions on climate change adaptation. While such actions aim to increase women's knowledge about climate risks and impacts, their resilience capacity, and their role in leadership positions, they can add an additional burden to women's already heavy workloads if the underlying structural and relational aspects of gender inequality are not addressed.

Often differential vulnerability to climate change is a result of:

- inequality between men and women in the asset base, which can determine their ability to be proactive, innovative and take risks;
- exclusion and lack of voice particularly for ethnic minorities, younger generations or poor, uneducated women lacking a voice in decision-making around land use, development planning and DRR;
- lack of access to information (on weather, early warning, markets or climate), education and training often due to language and gaps in access to crucial information;
- differential exposure and sensitivity to climatic hazards depends on the types of crops farmed, livelihood activities, time use and how gendered such activities are and, finally;
- climatic shifts and social change, including transitions in and out of livelihoods, changes in labour division and erosion of community safety nets, etc.

HOW THIS PRACTICE SUPPORTS GEWE

Climate vulnerable people are targeted and defined by livelihood assets and strategies, social groups, ecological and climatic zones, land use and environmental management, gender and wealth differences.

Assessments and risk surveillance systems include the study of climate risk; social, economic and ecosystem vulnerability; people's knowledge and capacity; underlying causes of vulnerability; existing systems to manage risk at different timescales.

Institutional mapping identifies the range of community, local and national organisations involved in the management of climate change risks and impacts; analyses organizational capacity and linkages.

Analysis results inform the next steps of participatory planning and choice of CSA and related adaptation strategies.

UNDERSTANDING GENDER ROLES AND RESPONSIBILITIES

The Adaptation Learning Program in Niger has shown that understanding the gender dynamics of any particular community-based adaptation context is not so much about establishing general, broad trends as it is about qualitative information, i.e. understanding the local gender roles and rules from the beginning and deepening this understanding over time.

In the Department of Dakoro in Niger, both women and men believe that domestic tasks, such as childcare, maintenance of the house and food preparation, are the domain of women and cannot be undertaken by men. On the other hand, the expectation is that men will provide all of the household income, so women do not need to engage in economic activity (although they contribute through their unpaid work). Girls are often taken out of school at an early age, either to help at home or to be married, and as a result are less educated than boys. Women are burdened with childbearing and parental responsibilities at a very young age through early marriage. Combined with religious and cultural norms about

women's position in society and inheritance practices, this leads to reduced freedom of movement for women and power imbalances in decision-making, and limits women's access to and control over livelihood resources. Women in Dakoro are largely excluded from farming and markets.

Some women have more freedom, mobility and decision-making power than others. Older women, for example, have more freedom to go to market and to participate in meetings and other community events. However, women who are widowed, divorced, young or unmarried are disadvantaged when it comes to control over productive resources, freedom of movement and access to opportunities for education and economic development. Men are typically in charge of livestock or crop production and the cash from sales; women are typically responsible for domestic tasks such as food preparation and fetching water for household use. These roles reflect the expectation that women's lives will be focused on, if not constrained to, the domestic sphere – and that this work will be unpaid. But these roles differ between communities.

TOOLS / METHODOLOGIES

Effective CSA is built on an understanding of the dynamics of vulnerability and opportunities for change in communities. It addresses immediate priorities, while also developing the capacity for longer-term adaptation. An essential part of a gender-focused CSA programme is a context-specific analysis, considering both the practical/immediate needs and strategic/long-term needs of men and women. CARE's Gender Sensitive Climate Vulnerability and Capacity Analysis (G-CVCA) is a tool that can be used to ensure both women's and men's participation, and also asks questions about gender issues in relation to climate vulnerability and adaptive capacity. Assessments in the context of CSA activities may also include a separate gender analysis as the starting point for CSA actions. Commonly used participatory tools for vulnerability and capacity assessments, such as seasonal calendars, hazard maps, historical timelines etc. should be facilitated in a gender-sensitive way. However, adding some gender-specific tools can help accelerate learning and create a deeper understanding of gender dynamics.

CARE's Gender Toolkit:

<http://gendertoolkit.care.org> <http://gender.care2share.wikispaces.net/CARE+Rapid+Gender+Analysis+Toolkit>
<http://www.fao.org/3/I7654EN/i7654en.pdf>

The FAO Capacity and Vulnerability Analysis (CVA) Matrix tool can help programmes understand the resources and needs of men and women, the underlying vulnerabilities of different groups to disasters as well as the existing capacities for responding to crisis situations. Gender analysis is embedded in CVA to understand women's and men's roles in decision-making, their access to and control of resources and social systems of exchange. This tool is useful during the development of the situation analysis, as it provides information on the current situation, as well as for framing and defining the strategic areas of action, helping to clarify areas of existing strengths and those requiring additional support. <http://www.fao.org/3/b-i6096e.pdf> (pages 42–44)

CARE's revised gender responsive CVCA manual is forthcoming (June 2019).

<http://www.fao.org/3/I7654EN/i7654en.pdf>

PRACTICE 2

PARTICIPATION, INCLUSION AND GENDER EQUALITY

Ensure participation, voice and inclusion of all groups across all project activities

Gender is a determining factor in defining power relations between men and women: what people do, what they have, who decides, who uses and who controls. Efforts to enhance agricultural productivity and profitability have been limited by the inability of overcoming existing gender disparities in participation, and in accessing inputs or services. The choices to adopt CSA practices are still too often undertaken in gender-unequal contexts where men bear great authority over decision-making in farming. To better understand the differences in CSA adoption choices by women and men, it is necessary that household decision-making patterns and power dynamics are adequately considered. Moreover, it is important to analyse women's education and literacy levels, their access to and control over information sources, public spaces etc. that are often very different from men's. These are not social issues that are peripheral to agriculture systems but rather are central to developing effective CSA systems.

Even though women tend to be more responsive to the changing needs of their households, they are often left out of decision-making spheres where they can influence communal practice. Identifying and supporting women's roles as active participants of the farming systems (as farmers, processors and users of products), while strengthening their decision-making power and capabilities, are key aspects in promoting women's economic and social empowerment and consequently provides a way to enable rural women to break the cycle of poverty and become agents of change and resilience building.

Achieving real and lasting progress toward gender equality and women's and girls' empowerment requires proactive work with men and boys across the project lifecycle, and alongside work with women and girls. Engaging men and boys often involves first coming together to reflect on gender relations and their own expectations (masculinities) and act to transform oppressive gender norms and promote gender equality. Activities aimed at women's economic empowerment should be mindful that household decision-making is mostly dominated by men, and that efforts that focus solely on their empowerment with the goal of improving family well-being may inadvertently reinforce norms that women are caregivers and invested in their families, while

men are assumed negligent. Men react in diverse ways when their female partners and programmes that engage men as allies in the process and consider their own realities and needs (and do so in a way that does not cause harm to women) will be more successful in promoting women's economic empowerment.

HOW THIS PRACTICE SUPPORTS GEWE

The analysis in practice 1 involves a diverse range of socio-economic groups of people and includes: Analysis of gender, power dynamics and relations among men, women, boys and girls of different social standing and vulnerability, wealth and ethnicity; how they affect risks, vulnerabilities, workloads, adaptive capacities and opportunities to participate in CSA and related adaptation decision-making.

Mechanisms are incorporated for vulnerable groups to continually and actively engage in CSA and related adaptation decision-making at the most appropriate levels: All groups and actors are supported to organise together, participate, identify their livelihood or sector aspirations, needs and priorities, and assess them against the context and future climate scenarios.

Gender equality is an explicit goal: Underlying causes are addressed and gender-equitable access ensured, as well as the control and accumulation of assets, information, CSA and related adaptation benefits and adaptive capacity strengthening.

Strengthening the rights and agency of the full range of actors, as well as gender and diversity representation: This is done across sectors, levels and activities to achieve inclusive local ownership over decision-making processes and implementation, and fully transparent communication.

EMPOWERING WOMEN TO IMPROVE CSA

Participating in CARE's Pathways Program's VSLA and producer groups helped women (and other members of their households) improve their knowledge in many critical areas, increase important skills and build relationships, self-confidence and conviction related to their role in farming. The main skills and knowledge gained by women relate to agriculture: planting early maturing and higher yielding varieties; spacing; crop rotation; soil erosion prevention; timely weeding and the construction of box ridges for water retention. Spillover of farming skills and knowledge is also apparent among women who are not members of the collectives, essentially benefiting whole communities. Women participating in Pathways collectives are transitioning their identities into agricultural growers with a market orientation. They are feeling more confidence and conviction that they have an important role in small-scale farming for income. This change of attitude is a pre-requisite for changed practice required to increase crop productivity and profitability.

Through capital available from VSLA participation (loans and savings), women can purchase (or rent) productive assets such as land, small livestock and tools. Women are managing family land devoted to soya and groundnuts and if husbands will not allocate family land, women are increasingly taking the initiative to collectively rent land for this purpose. Participation in a Pathways VSLA is a key reason that financial access to fertiliser and seed improved – most women use VSLA capital (loans or share outs) to purchase agricultural inputs, especially fertiliser for maize, even though there is consensus that these inputs are extremely expensive.

Net annual income from the agriculture production activities that women participate in substantially increased over the past three years. Survey and qualitative findings show that women strongly link increased agricultural income to their participation in the Pathways project.

TOOLS / METHODOLOGIES

Working on gender equality does not necessarily mean a narrow focus on working with women only. It requires critical engagement with wider society, in particular with men and boys, to change traditional structures, behaviours and values. Increased gender equity must not mean inaction for some men, or negative activities on the part of men and boys to actively discourage the empowerment of women and girls. Changing behaviours and existing structures requires sustained engagement over periods of time but can lead to truly transformative results.

CARE resources for engaging men and boys in programming: <http://www.care.org/our-work/womens-empowerment/what-about-men-boys/technical-resources-engaging-men-and-boys>

VSLAs: Village Savings and Loans utilise a savings-led approach to microfinance rather than a credit scheme, which is difficult for very poor people to participate in. CARE's VSLA

methodology is based solely on member savings and small, self-managed groups. Groups of on average twenty women are trained using a financial literacy curriculum. They elect leaders; tailor the system of savings, insurance and credit to meet their needs; run savings and credit meetings and manage savings and loans. Village Saving and Loans schemes are recognised as one of the most effective and simple means of reaching poor, rural households and the social and business case made for investing in groups of women is well established, as women have proven to be credit worthy and astute in their investments. Small investments made by women often yield significant benefits in terms of family wellbeing, because that is where women invest their earnings. Empowered with financial literacy skills, women can build businesses that improve their financial security. With improved financial security, other areas of women's lives invariably improve: they can afford prenatal care, purchase uniforms for their children and are more likely to play a leadership role in their communities.

PRACTICE 3

CLIMATE INFORMATION AND UNCERTAINTY

Incorporate management of uncertainty and use of climate information

Increased understanding of climate change risks and vulnerabilities is critical for responding to and managing them. This requires an acknowledgment of differential vulnerabilities, and an analysis of the gender-related risks. Often, increasing the ability of communities and households to better understand climate change risks and vulnerabilities is the first step in getting them to act to reduce such risks and take advantage of any opportunities. This ability needs to be supported with increasing the capacity of men, women, boys and girls to have improved access to gender-responsive climate information (seasonal and longer term) for adaptation actions and early warning (short term) for reducing disaster risks.

Generally, there is a need to increase the access of female farmers to agriculture and climate information services (ACIS), as men tend to receive more frequent and consistent support from extension and advisory services, and related information.⁷⁵ This puts women at a disadvantage regarding soil and water conservation or conservation agriculture, for example, as they lack information about integrated weed management, appropriate seeding or rotations, selection of green manure cover crops, biological pest control and other on-farm or agronomic activities. Climate information in the form of weather forecasts or advisories can also be accessed differently – men visit towns more frequently, own the household radio, or interact with (usually male) indigenous forecasters.⁷⁶ A gender-responsive approach can address this systemic discrimination with often little or no additional cost. For example, by applying participatory scenario planning (PSP), or other inclusive and participatory models or approaches, women can be engaged as equals in the generation and interpretation of climate information. More importantly, such approaches allow women to be involved in decision-making based on this information. Where women's priorities may focus on family nutrition, for example, their use of climate and market information will be different from men – making equality of access to this information a critical area for attention.

HOW THIS PRACTICE SUPPORTS GEWE

The initiative supports **planning and decision-making at the most appropriate level** (community, local, sector, national and relevant governance structures), to ensure context-specific, locally determined plans with the participation of men and women who will be affected, will benefit and will provide on-going services and support.

Provisions and budgets are created to ensure that plans and actions are flexible and reviewed regularly, and enable systematic processes for the anticipation of and response to changing conditions, gender-specific needs and the uncertainty of climate impacts.

The planning process is informed by multiple sources and identifies a range of adaptation options such as trends analysis, past information, current conditions, people's aspirations, and anticipation of future climate impact scenarios.

Priority adaptation options are selected through a screening process to assess social, economic and environmental feasibility, gender equality, underlying causes of vulnerability, resilience to expected climate impacts and risks and synergies with existing systems and plans.

COMMUNICATING FOR IMPACT

The FAO-Dimitra project has championed a communication for a development initiative in Niger and the Democratic Republic of Congo (DRC), which provides support to local organisations to set up community listeners' clubs. The principle behind these clubs is simple: groups of women or men, or both, identify and discuss their priorities for change on the basis of what they have heard on radio programmes, then they decide on the action(s) to take. One person – often a woman – is chosen by the group to facilitate the discussions, and is trained for this role. Community or rural radio stations, which are also trained by the initiative, are then contacted to provide information and relay the debates. This mechanism provides the listeners' clubs with an opportunity to exchange experiences, give their opinions on the information broadcast and take decisions for action. In Niger, mobile telephones are also used to facilitate communication. Listeners' clubs have had an influence on:

- ♦ **behavior:** in South Kivu (DRC), women no longer see information and communication as the sole preserve of men, specialists and journalists; they speak more in public and have greater self-esteem and self-confidence;
- ♦ **practices:** in Katanga (DRC), radio stations are broadcasting more and more programmes aimed at women as well as men;
- ♦ **perceptions:** in Borobon (Niger), men's perceptions of women's abilities have changed since they started talking on the radio. The traditional chief has invited women to attend village meetings, from which they were previously excluded.

Communicating Gender for Rural Development. Integrating gender in communication for development, FAO, 2011

TOOLS / METHODOLOGIES

CARE developed PSP based on learning from climate vulnerability and capacity analysis while facilitating communities to make participatory CBA plans. The approach borrows from Regional Climate Outlook Forums, enabling local actors to have better access to seasonal forecasts and advisories on options for action. PSP is as a two-day multi-stakeholder workshop, held soon after national seasonal forecasts are released, bringing together national meteorological and hydrological services, local forecasters, community representatives, government departments, research institutions, NGOs, community-based organisations and others. Seasonal forecasts from the national services and local forecasters are presented. Collectively, stakeholders discuss and merge scientific and local forecasts into a consensus-downscaled forecast for the local area. The interpretation process recognises that, for seasonal forecasts to be usable in planning, they need to relate to local livelihood, disaster risk management, development and adaptation decisions. Additionally, participants develop scenarios and interpret uncertainty so that planning accounts for probabilities in a seasonal forecast and cater for likely and less certain situations in a season.

Advisories are disseminated through a range of channels and enable more informed seasonal decisions on local government

sectoral plans, early warning systems, community adaptation action plans for livelihoods and risk reduction. The focus is on making information accessible, comprehensible and actionable for all stakeholders as it gets disseminated. This integrated approach allows for more coordinated, timely and targeted support to communities that avoids duplication and contradictory efforts and creates a concerted environment for gender-focused programme planning.

Participatory Scenario Planning: <http://careclimatechange.org/courting-complexity-climate-services-lessons-participatory-scenario-planning/>

“Allo Dubaru” ICT farmer information network: Working with the ICRAF Drylands Development programme, CARE Niger is testing an ICT network in collaboration with a telephone company and a Dutch enterprise specialised in automated weather-measurement instruments and farmer information networks. The hybrid system will provide updated weather information to farmers during the rainy season as well as access to market prices, agronomic advice, call-in and messaging services and inter-group communications.

PRACTICE 4

PLANNING AND DECISION-MAKING PROCESSES

Promote anticipatory and flexible adaptation planning and decision-making processes with and by the people affected

The stronger the voice of vulnerable men and women in picking adaptation and CSA options, the greater acceptance of such options, and better fulfilment of immediate and longer-term needs. The Community Based Adaptation (CBA) approach is unique in the way that it enables the development of adaptation programmes and projects that meet basic immediate needs in many places with significant development deficits but also develop the capacity for longer-term adaptive capacities. CBA is successful in doing this because it enables and builds the ability of vulnerable men, women, boys and girls to better understand climate risks, have a say in making decisions and in the implementation of various activities.

Given unequal power relations and marginalisation in the community, vulnerable groups and women are usually excluded from top down decision-making processes that do not take local community needs into account. Moreover, even decentralised processes can be harmful to women and other vulnerable groups if projects reinforce traditional patriarchal community structures.⁷⁷ Women's exclusion from decision-making is being addressed in some agroforestry and aquaculture initiatives.⁷⁸ Even when decision-making is local, local elites and power holders can exclude and marginalise the vulnerable, limiting effective participation. Involving vulnerable groups with improved participation of both men and women can result in improved ownership over the activities and meet the needs of the most vulnerable.

COMMUNITY-BASED ADAPTATION MAKES ECONOMIC SENSE

Research conducted by UK economics think tank NEF (New Economics Foundation) on behalf of CARE International in Garissa, Kenya, found that investing in community-based adaptation (CBA) makes strong economic sense, even in a volatile and evolving environmental context. In virtually all scenarios studying the economic, environmental and social benefits of CBA (where vulnerable communities make informed development and risk-management decisions and actions in response to climate change impacts) far outweigh their costs, suggesting that they are efficient and effective even in the absence of adaptation projects at the national level. Under the most realistic scenarios, investing USD 1 in adaptation generates between USD 1.45 and USD 3.03 of wealth accruing to the communities. Even when using a high discount rate, the costs of intervention were 2.6 times lower on average than the costs of not intervening to address climate change and extreme weather events.

CARE worked with women and men to plan together more consciously and diversify income generation. The number of women attending and actively engaging or participating in planning meetings (PSPs, CAAPs, etc.) has increased. Women now also have access to climate forecasts, and joint planning ensures that men have a market for their produce and women are able to identify what they could invest in in their trade. In some households, this has led to higher incomes now that the women are doing joint marketing and trading and thus getting higher prices for their products, due in part to business development service training provided to both women and men.

Counting on Uncertainty: The economic case for community based adaptation in north-East Kenya, nef, 2014.

http://www.careclimatechange.org/wp-content/uploads/2014/08/Counting_on_Uncertainty_Kenya.pdf

By building adaptive capacity, CBA responds to a socio-economic development objective. A business-as-usual scenario implies that communities will fall under absolute poverty levels (i.e. one dollar a day per capita in purchasing parity prices) as a consequence of adverse climatic conditions and extreme weather events. The latter will also reduce health and educational levels among populations. Avoiding these future costs is a precondition for any successful development policy. Empowering communities through institution-building and enhancing decision-making processes means that any future development intervention in these communities will be facilitated by pre-existing social and institutional capitals. Similarly, economic diversification can protect communities not only from extreme weather events but also from price volatility, such as in food prices. In short, while adaptation interventions are not one and the same with classic development interventions, the synergies between both can be extremely strong.

Socio-economic and Gender Analysis (SEAGA): To address gender issues within its disasters work, FAO draws on its Policy on Gender Equality as well as its Socio-economic and Gender Analysis (SEAGA) Programme. The SEAGA Programme consists of a series of robust data collection tools and technical guidelines that are based on three guiding principles: (1)

gender roles are key; (2) disadvantaged people are a priority and (3) participation is essential. The guide draws on SEAGA methods to link the needs of men and women at community-level to broader-scale planning processes.

The [SEAGA Field Handbook](#) provides tools to elicit the participation of men and women from local communities in the development process. A pocket document is available for emergency humanitarian interventions with key analytical questions for promoting a participatory needs assessment and targeting. <http://www.fao.org/docrep/012/ak214e/ak214e00.pdf>

Adaptation planning with communities: http://careclimatechange.org/wp-content/uploads/2014/08/CBA_Planning_Brief.pdf

Integrating Community-Based Adaptation into local government plans: http://careclimatechange.org/wp-content/uploads/2015/05/IotoAfrika13_Final.pdf

Visioning approach: http://careclimatechange.org/tool-kits/visioning_approach/

Adaptation Good Practices Checklist: Annex 1

PRACTICE 5

INNOVATION, LOCAL KNOWLEDGE AND TECHNOLOGY

Promote innovation, build on local knowledge and practices, and apply gender-sensitive technology

Improving people's understanding of climate change impacts and local solutions is an important element of CSA. While both women and men are vulnerable to different shocks and stresses, women tend to be more vulnerable than men. However, women have unique knowledge, lived-expertise and perspectives that are crucial to building the resilience of rural livelihoods. Effective climate change adaptation and mitigation strategies in different ecosystems should build on the experiences and knowledge of both women and men, who experience climate

impacts differently, and can provide valuable perspectives to better respond to climate shocks.

Often a combination of local and traditional forms of community knowledge with scientific knowhow can help to increase the ability to adapt to climate change. The use of mobile technologies can help women obtain important CSA-related information,⁷⁹ and even disrupt existing power imbalances. Agriculture extension agencies can be crucial to helping expand adaptive capacities by providing better inputs, climate information and agricultural know-how to help farmers adapt to changing circumstances. However, decades of lack of investment in such extension agencies and often the inability of extension agencies to acknowledge women and small-scale farmers results in them not being as effective agents of change.

Despite their ingenuity and ability to utilise whatever materials they have at hand, women in most parts of the world are highly under-represented in the development, testing and dissemination of climate-smart technologies and/or information. Very often such technologies have been designed without giving sufficient attention to the specific needs of women and girls and their limited access to resources, including capital, labour, time or even the right to make decisions. For example, in pastoral communities, water points are often managed by men, who are mainly concerned with providing water for livestock. These water points often have no taps for women to draw domestic water, with the result being that women are forced to collect water at the cattle troughs being used (and contaminated) by animals.

A technology needs assessment should consider male and female end users, both farmers and herders, who face constraints of time, access to credit and information and land. Because technology is not gender-neutral, technology-based strategies for improving CSA practices have different implications for women and men. However, despite the fact that most agricultural technologies are directed towards men – who are regarded as the principal stakeholders and decision-makers as well as the direct users and managers of these technologies⁸⁰ – experience shows that women “are avid users of technology provided it meets their particular needs”⁸¹. In this regard, there is a need to look at CSA technologies through a “gender lens” and promote gender-based and participatory technology needs assessment, and assessment-based technology development and transfer.

HOW THIS PRACTICE SUPPORTS GEWE

The initiative introduces successful innovations and strengthens capacity for continuous innovation/testing

of: adaptation approaches, inclusive social systems, strategies and appropriate technologies by innovative farmers, communities and all other stakeholders, to enable flexible, adaptive, gender-sensitive and relevant responses to current and future climate risks and impacts.

The initiative supports use of local, traditional and indigenous knowledge: as appropriate through i) **access and validation;** ii) **combining** with other knowledge sources for participatory technology development; iii) building **capacity, local confidence and trust** and iv) **contextualising and informing** innovation and technology for CSA and related adaptation actions.

Technology choices consider: climate impacts, trade-offs, synergies between vulnerable groups and ecosystems and equitable benefit sharing, responding to risk, vulnerability and capacity at community and landscape level.

Link research and implementation initiatives: for development of longer-term gender transformative solutions informed by climate science, trends and local conditions and aspirations, providing for continuous updating of available technologies.

UTILISING TRADITIONAL KNOWLEDGE TO EMPOWER WOMEN

A group of non-government organisations in India worked with FAO to study local Aseel production systems in 24 villages of East Godavari and initiated disease prevention and bio-diversity conservation strategies. Activities included training of village poultry health workers and the introduction of basic healthcare practices such as vaccinations and de-worming. The project actively encouraged women's participation and utilisation of their indigenous knowledge. Encouraging use of local herbal remedies in prevention and first aid, the project built women's capacities to effectively manage and feed their poultry, empowering women to access preventive vaccinations from government services and encouraging local poultry asset creation under the traditional Vaata system. A federation of 1 800 women across 80 villages also lobbied for timely vaccination with government agencies.

From 1997 to 2008 there was a remarkable reduction in chick mortality from 70 percent to 25 percent, a threefold increase in income from poultry

and a mass vaccination drive reached 12 000 birds in 45 villages. The value of indigenous Aseel and the importance of traditional practices associated with Aseel was significant in meeting local market demand. By preserving the local breed of Aseel through locally appropriate technologies, the project increased the livelihood security and community empowerment of adivasi women in East Godavari. Moreover, despite livestock care being perceived as a male occupation, women not only took informed, technically sound decisions related to livestock management but also lobbied with government departments to control diseases at the village level. Many women expressed a keen desire to have access to this specialised form of knowledge, which had been denied to them over the years.

<http://www.fao.org/teca/en/>

TOOLS / METHODOLOGIES

Participatory innovation development is a long-term interaction between outsiders and local people, with the aim of generating innovations based on indigenous knowledge and cultures to develop sustainable livelihood systems. More broadly, it deals with natural resources management by strengthening the local indigenous specialists and their communities to carry out experiments in becoming more sustainable and self-reliant through drawing on their local resources. Some fundamental aspects of participatory processes included: consultation and access to information for local communities about the intentions of outsiders; freedom of choice for local people to engage in a process of innovation; empowerment through redistribution of power on the basis of equity and compatibility; mutual trust and respect; distribution of benefits to partners equally; adaptability and flexibility of outside institutions to changing and sometimes unforeseen circumstances. Cf. <https://www.slideshare.net/sathishhs7/participatory-technology-development-15188328> and <http://www.prolinnova.net/content/about-prolinnova>

Identify local adaptive practices: Done through an assessment to describe adaptive agricultural practices and innovations used by small-scale farmers and groups. A participatory analysis of the practices will examine their feasibility, replicability and gender-specific impacts to identify the most relevant ones for participatory

testing and promotion. Promising practices may be examined for sensitivity to external factors to identify “no regrets” practices for climate and conflict resilience. The viewpoints of both women and men should be considered separately as part of this process so that distinctions are made regarding the time and labour requirements for women and men, and the relative benefits or drawback of these practices for them.

Develop technologies that reduce women's labour burden: Smoking and drying fish is primarily the responsibility of women in small-scale fishing communities. The FAO-Thiaroye Processing Technique (FTT-Thiaroye), a kiln that reduces the need for wood for fuel as well as the amount of smoke produced to process fish products. FTT-Thiaroye also allows for the processing of smoked and dried fish that meet better food safety requirements and can be used in any weather conditions, thereby providing a stable source of income for small-scale fishers. FTT-Thiaroye improves the lives of women specifically, as it results in safe smoking conditions and ensures less heat, burn and smoke exposure. Moreover, it enables time savings in processing, which is a significant advantage to women, who conduct fish processing simultaneously with child care and household chores. <http://www.fao.org/3/a-i4174e.pdf>
Building on Gender Agro-biodiversity and Local Knowledge Training Manual: <http://www.fao.org/3/a-y5956e.pdf>

PRACTICE 6

SUSTAINABLE ECONOMIES FOR FOOD AND NUTRITION SECURITY

Ensure sustainable economic participation and benefits for women, men and youth

This practice supports economies which are a) commercially viable; b) inclusive and equitable and c) resilient in the face of shocks, market volatility and climate change to create employment and increase the income of its impact population and contribute to their food and nutrition security. This includes work to support women and their households to make use of markets to enable them to better protect themselves, and to anticipate, prepare for, respond to and recover from crises through helping to build asset bases, develop skills, strengthen networks, increase access to markets and enhance resilience to shocks. Promoting an inclusive value chain approach that is responsive to climate change and the environment should also include a focus on how to integrate women and girls in the value chain. This includes innovative methods for engaging and influencing the private sector to create dignified and fair employment and income opportunities for poor people, and equal spaces for men and women in value chains. We also focus on promoting access to inclusive financial services to catalyse sustainable economic participation for women and men.

HOW this PRACTICE SUPPORTS GEWE

The initiative empowers women, men, girls and boys to evaluate new and ongoing activities, so that they make informed decisions concerning risks, returns and the business environment through, for example, entrepreneurial capacity development, market/climate/technical information systems, knowledge brokering, networking, etc.

The initiative engages with private sector actors within the market system to promote synergies and create opportunities for women, men and youth that increase productivity, income, nutrition and resilience as suppliers, producers, workers, entrepreneurs and consumers.

The initiative expands access to financial resources and products to improve productivity, mitigate risk and build resilience for women, men and youth through, for example, public financing, community financing, loans, inventory credit (warrantage), crop insurance, mobile money, etc.

The initiative promotes agribusiness and food-related social enterprises that have potential to be scaled up and create employment and contribute to food and nutrition security.

AN INCLUSIVE VALUE CHAIN APPROACH

Dairy farming is a traditional occupation of rural households in Bangladesh, and women in particular are involved in production, predominantly at the homestead level. As such, working with female dairy producers directly at the household level is a feasible pathway to increasing engagement of women in a socio-economic activity, increasing their independent income and contributing to improving their status within the household and in the community.

The Strengthening the Dairy Value Chain project (SDVC) did just that to increase the income of 35 000 targeted small-scale and landless milk-producing households, and to create employment opportunities for extremely poor households—especially women. The project took every stage of the value chain into consideration and mobilised farmers into producer groups, gave them training on livestock health, the benefits of cross-breed cows and the use of artificial insemination, feeding practices and financial management. The project facilitated access to quality inputs such as feed and medicine by linking producers to service providers (i.e. veterinarians, livestock health workers, feed sellers and artificial inseminators). To ensure that producers will be able to access fair prices and proper sale outlets for the milk they produced, the producers

were educated about opportunities in the different formal and informal markets and the price ranges they could expect to receive for their milk. Producers were encouraged to sell milk through a collective process so that the larger quantities would attract larger buyers, especially the formal milk processing companies. Milk collectors were also trained to enable group selling and purchasing mechanisms.

SDVC engaged small-scale female dairy producers more formally in the dairy value chain, linking them with input dealers and livestock health services, organising them into groups and linking them with trained milk collectors, chilling plants and the formal milk sector. The project has been successful in allowing women to take on different roles in the value chain other than producers. Eighty-two percent of the producers were women and, through project activities, alternative job opportunities for women opened up. In striving to engage women in non-traditional dairy-related activities, the project worked with the local community and government livestock services department to select and support potential women as Livestock health workers. The average income of female LHWs has increased from USD 19 to USD 110 per month.

TOOLS / METHODOLOGIES

Inventory credit or warrantage, used by European farmers in the nineteenth century, allows farmers to use their harvest as collateral to obtain credit from a bank rather than selling it at once. In return for a bank loan, farmers leave their produce in a locked warehouse with keys held by both the bank and their group. The credit gives the small-scale farmers the means to buy essential inputs for the next planting, and also allows them to hold on to the produce until the lean season – when food stocks start to run low and prices begin to climb. At that point farmers redeem their produce from the warehouse, sell their crop, repay their loan and pocket the difference. Using

part of the credit to finance other income-generating activities, farmers may even repay the loans before selling their crop.

<http://www.fao.org/news/story/en/item/40281/icode/>

Market information systems: Cf. Practice #3 “Allo Dubaru” ICT farmer information network

Developing Gender Sensitive Value Chains – A Guiding Framework <http://www.fao.org/3/i9212en/i9212EN.pdf>

PRACTICE 7

INSTITUTIONAL LINKAGES

Establish institutional arrangements and linkages that facilitate multi-stakeholder engagement

By 2050 water use by agriculture and industry is projected to increase by 19 percent⁸² – at a time when climate change and its consequences are driving soil and other natural resource degradation. The most affected are marginalised local communities and particularly rural women, who carry a great part of the burden of domestic work, which limits their ability to participate in food security and agricultural activities, local governance structures and training opportunities. Women's participation in local institutions is consequently limited.

Policies at the local, national and community levels need to reflect the needs of vulnerable women and men, and have appropriate processes in play to ensure that their needs and concerns around responding to the impacts of climate change are addressed. There is reason to be concerned that gender is not being adequately considered in climate change-related planning. Several researchers have identified gaps regarding gender considerations in national REDD+ preparation documents.⁸³ This is especially the case when responding to the impacts of climate change that cut across different scales from the local to the international. Many women also feel that they don't have the space or standing to meaningfully participate in public decision-making. Often times, when they do participate, it may be in token ways such as to fulfil a quota for under-represented groups within a forum or association. CSA programming needs to foster meaningful participation where individuals may actively contribute to decisions, where their decisions are heard and considered and where they can take part in leadership or decision-making⁸⁴.

Multi-stakeholders platforms can play a central role in sustainable climate-resilient agriculture by promoting inclusivity, providing information, enabling local-level innovation and planning, encouraging investment, offering services and providing market linkages to enable small-scale farmers, women and poor resource-dependent communities to adopt and benefit from climate resilient agriculture. The platforms bring together

a diversity of actors that transcends individual value chains or production sectors, creating a “one-stop technologies and ideas market” for farmers in a win-win partnership with communal level government and services. Platforms are initiated with a survey to identify local farmer expertise, adaptive practices and early adopters related to agriculture, animal husbandry, agro-processing, collective finance/organisation, etc. who form a dynamic core group of people around whom the platforms are set up and opened to all who are interested.

HOW THIS PRACTICE SUPPORTS GEWE

The contribution, roles and responsibilities of all institutional stakeholders in supporting CSA and related adaptation are well defined at different levels, including for coordination and coherent inclusive action.

Inclusion of local and national civil society organisations in CSA and related adaptation decision-making, planning and implementation is promoted, including community-based organisations and NGOs that represent women's interests.

Multi-stakeholder fora are established, broadened or strengthened to enable coordinated cross-sector and intra-sector planning and collective decision-making at different levels to address gender differentiated climate risks and uncertainties.

Governance systems and linkages between stakeholder institutions and sectors are strengthened or established, to ensure institutional arrangements and coordination mechanisms for equitable, sustainable, responsive and accountable planning processes and actions at local to national levels.

SUSTAINABILITY THROUGH PRIVATE SECTOR INVESTMENT

Access to finance is cited as one of the top challenges for businesses in Ethiopia. The financial sector is highly regulated and closed off to foreign investors. Domestic credit to the private sector is constrained by government requirements to invest 27 percent of their gross loans in National Bank of Ethiopia (NBE) bonds and high collateral requirements to bridge this finance gap and increase pastoral communities' household income levels while enhancing their resilience to climate change. Mercy Corps implements the USAID-funded PRIME project, which manages a USD 6 million Innovation Investment Fund (IIF) that supports medium to large-scale enterprises operating within or directly benefitting PRIME-targeted areas in Oromia, Afar and Somali regional states. The fund provides matching grants and technical assistance to sustainably improve enterprises' performance and strengthen the overall market system to benefit pastoral households. The fund leverages local capital for investments in a range of market development activities that improve market linkages, generate employment and increase financial inclusion with the aim of increasing pastoral community household incomes and enhancing resilience to climate change.

PRIME uses a facilitative approach to strengthen the market systems within which households operate. IIF will make

investments in partnership with other stakeholders to catalyse sustainable growth. Through this mechanism, IIF will buy down risk associated with new business ventures or approaches, giving partners the confidence to invest in new initiatives. The overarching goal of IIF is to catalyse sustainable improvements in industry capacity, expand supply chains, increase sector competitiveness and strengthen the financial services industry. To date, the Mercy Corps has signed agreements with six companies with a total value of USD 6 million USD, with private sector cost-share of USD 24.8 million USD (80 percent). Anticipated outcomes in the short-term include:

- Creation of over 4 000 full time and 1 000 temporary jobs
- Improved market linkages for over 500 000 households
- Increased incomes benefitting more than 30 000 households
- Access to financial services for 50 percent of mobile phone owners in the Somali Region
- Establishment of 1.1 million new bank accounts through more than 4 000 mobile agents.
- Facilitation of 12 additional private investment deals

Extracted from PRIME IFF Brief

TOOLS / METHODOLOGIES

Working on gender equality does not necessarily denote a narrow focus of working with women only. It requires critical engagement with wider society, in particular with men and boys, to change traditional structures, behaviours and values. Changing behaviours and existing structures requires sustained engagement over periods of time, but can lead to truly transformative results.

Participatory Scenario Planning: Cf. Practice #3

PRACTICE 8

LEARNING, CAPACITY DEVELOPMENT AND KNOWLEDGE MANAGEMENT

Integrate learning, capacity building, monitoring and knowledge management practices throughout programme design and implementation

In many countries, agricultural extension is the primary way for farmers to access new information on available practices and resources. However, decreases in national investment in agricultural extension services, or limited capacity to reach rural households, are typical challenges to providing access to knowledge about improved agricultural practices. Continued efforts to strengthen agricultural extension are necessary for CSA practices and technologies to be adopted at scale, and effective agricultural extension will need to target the differential capacities of female farmers for sustainable and equitable adoption at scale.

As described in Section Two, women are often bypassed by extension programmes due to their poor educational level or simply because extension agents do not recognise them as true farmers. Men receive information on innovative practices, including CSA, through extension services, which tend to think of farmers as male, and women more likely through NGOs, which tend to think of women as having “unmet needs”. Extension services tend to engage with women in their reproductive rather than farming work, further reinforcing the gendered division of labour. Another problem is that food security organisations are biased towards food availability (production), whereas women are primarily concerned with food access.⁸⁵ The lack of agricultural extension, and in some cases the marked decrease in national investment in agricultural extension services, are additional challenges to increasing food security among small-scale farmers, as farmers first and foremost require access to knowledge about improved agricultural practices before practices and technologies can be adopted at scale.

HOW THIS PRACTICE SUPPORTS GEWE

Partnerships promote iterative learning, sharing and capacity development for all stakeholders including women as core activities, supporting innovation for co-generation of new knowledge and solutions, access to information by a range of sources: local, national, south-south and globally

The monitoring system assesses and reports on changes in men and women’s adaptive capacities, secure access to resources, markets and services, participation in collective and household decision-making and services and resilience impacts e.g. diverse and robust sources of production and income, improved nutrition and as part of the standard and agreed indicators for the initiative to enable improvements based on adaptation learning and evidence.

The initiative supports inclusive and continuous reflection, learning and feedback loops among innovating farmers, targeted communities, local service providers, researchers and other actors, to inform their planning and modification of activities and identification of capacity gaps, policy issues and demands as the climate and other circumstances change.

Resources are allocated to sustain ongoing facilitation of inclusive learning, knowledge management and brokering to enable exchange of and access to evidence and knowledge by stakeholders, adaptation programmes, NIEs and other actors.

LEARNING TOGETHER TO BUILD RESILIENCE

CARE Mozambique commissioned a study to evaluate the effectiveness of intercropping in managing the dietary and food security needs of farmers in Inhambane and Nampula Provinces. Through the Farmer Field and Business School (FFBS), small-scale farmers experimented with a combination of growing disease-resistant cassava alongside early maturing cowpea seed and ratooned pigeon peas. They found that this combination of practices can help them withstand one of the worst droughts and provide both the caloric and protein content that families need to avoid suffering through a hunger season. In addition to the obvious nutritional and food security benefits that these systems offer, over time, intercropping is also proven to improve soil health, reduce the risk of crop failure and, in some cases, crops like pigeon peas offer some farmer a new and lucrative source of income.

Farmers found that by cutting off the stem of a pigeon pea plant just after planting the following season's maize (a process called ratooning), the pigeon pea will produce enough biomass to increase the crop yields of the maize itself. Using this technique, maize yields have increased by over three times

in areas with ratooned pigeon peas. The pigeon pea is rapidly becoming one of the most lucrative crops across Mozambique due to increased market demand for the crop in Asia. FFBS participants also experimented with two varieties of 60-day cowpeas, and found that they produce dry beans about 20 to 30 days sooner than any of the traditional varieties within Mozambique. Since cowpeas are usually the first grains to be produced after the rains start, the ensuing hunger season is cut short by almost a full month. This is especially important for women, who have the strenuous job of weeding food crops like maize, usually at a time of year when they are least able to feed themselves well.

Through careful experimentation, the FFS discovered that the intercropping of cowpeas in other systems could easily increase total food productivity by 30 percent, and protein availability by around 50 percent, at very little added cost, with virtually no complications and with a higher over-all food security because of its drought-resistance. This alone can have significant impacts on household food and nutrition security.

TOOLS / METHODOLOGIES

Farm Field and Business Schools (FFBS) provide an avenue for driving and sustaining adoption of CSA – now a widely promoted extension approach and one which can be tailored to address women's needs. This is an adult education intervention that uses intensive discovery based learning methods with the objectives of providing skills and empowering farmers. Typically, a farmer field school facilitator guides a group of farmers in a season-long learning process cultivating a selected crop. The primary learning material at a farmer field school is the field. The farmer field school educational methods are experiential, participatory and learner-centred. They should always address gender to ensure disparities are confronted and resolved. Preparatory meetings precede a farmer field

school to determine needs, recruit participants and develop a learning contract. Farmer business schools are a type of farmer field school that emphasise farm business planning, implementation and evaluation, and more progressive models are addressing gender-based issues such as differences in literacy levels. While there is a consensus as to the above definition of farmer field schools in global circles (FAO, GFRAS and many international organisations) the term is more widely applied in southern Africa, referring to any field-based training involving groups of farmers.

Multi actor platforms: Cf. Practice # 8

PRACTICE 9

SCALING UP AND SUSTAINABILITY

Support upscaling of gender-sensitive sustainable adaptation practices and approaches

There is significant scope to scale out the adoption of climate-smart agricultural practices and approaches. The need to reach greater numbers of small-scale producers, especially women and girls, is acute. However, scale at the expense of sustainability and equality is the primary risk that climate-smart agriculture faces. Governments and all development partners must not fall into the trap of introducing policies, practices or technologies that compromise agro-ecological or socio-economic sustainability in the pursuit of any single paradigm.

Making agricultural systems climate-smart requires actions at different levels: policies, institutions, investments and practices.⁸⁶ Any actions taken should be based on evidence of how gender-responsive options for increasing agricultural productivity and incomes yield returns in terms of productivity, food security and resilience. This requires the engagement of local institutions to overcome gender barriers to CSA adoption, engaging local communities in dialogues around policies and developing the capacities of local stakeholders to take forward gender-equitable policies and practices. Sustainability in climate smart (or any) agriculture must thus be: 1) grounded in healthy ecosystem management practices; 2) supported by well-established and durable institutions; and 3) facilitate policy dialogue with local stakeholders (women and men, community leaders and local institutions).

HOW THIS PRACTICE SUPPORTS GEWE

The initiative aims to **establish inclusive local ownership, adaptive capacity** and resources, so that the resulting socio-cultural, economic and environmental benefits, and supporting systems and services, are equitable, sustainable and replicable.

The initiative **engages with policy processes, governance structures and services**, public, private and civil society institutions and the enabling environment to ensure the resulting processes and outcomes are sustainable, up-scaled and promoted nationwide.

Socio-economic and environmental cost-benefit analysis of CSA and related adaptation actions, including on-going planning, climate service provision, direct and indirect impacts, and adaptive management, is documented and used to ensure cost-effective design and outcomes.

LINKING FARMERS AND STATE ACTORS IN MULTI-ACTOR PLATFORMS

The Women and Land Initiative aims to tackle the emerging trend of excluding women from agricultural land in southern Niger. The principles for the rights-based approach are the inclusion of vulnerable women, participation of marginalised women in community discussions and decision-making processes and gender equality and equity for access and control over resources such as land. The project is working in southern Maradi with 3 000 women in 30 communities within six municipalities. In these communities, women are organised in saving and loans associations, each of which has a woman leader. Most of the women are without access to land and experience food insecurity. The initiative seeks to improve their living conditions and to engage them with those who make land-management decisions.

Awareness-raising campaigns are organised in all communities where there is a district-level land commission. Dramas are performed on women's inheritance rights to land, followed by discussion, questions and answers. Other methods used

are frequent radio broadcasts, sermons by religious leaders and debates between lawyers, rural women and other local stakeholders. This is an inclusive approach that encourages participation by many stakeholders, including local state authorities and leaders, and by both women's and men's leaders. To gain backing from local leaders, meetings are organised during which religious leaders, state officials and other stakeholders announce their commitment to support women's access to land in their area. Both the meetings and the awareness-raising messages communicate the importance of supporting women in realising their right to access land, as local food security is dependent on women's ability to produce food.

As a result of the Women and Land Initiative, some women's groups have been able to lease community land for a certain amount of time, for example from three to ten years. In some villages, the women's groups have received land for planting crops with high nutritive value through local land leases.

TOOLS / METHODOLOGIES

Cost-Benefit Analysis is one of the major tools used to analyse the relative efficacy of public interventions. Typically, Cost-Benefit Analysis allows the return-on-investment (ROI) of different projects, programmes or policies to be compared in order to determine which of the interventions yields the greater level of benefits in relation to the resources invested. In the case of climate change adaptation interventions as well as development policies, Cost-Benefit Analysis can be used to identify which approach and/or strategies can yield the higher possible returns for a given amount of costs. Given that a variety of adaptation and development approaches are being tested, it is indeed important to know to which of these are the most efficient and effective in generating high benefits for the population and communities. Based on findings of Cost-Benefit Analysis, it is thus possible to determine which interventions should be dropped in favour of other, more effective, interventions. In short, Cost-Benefit

Analysis is both an evaluative and planning tool. It seeks to answer the following questions: Has an intervention delivered the intended change for the amount of resources invested? Would it be possible to generate more benefits for the same resources if another approach was chosen? In the future, should we choose to improve an intervention's approach or choose a different adaptation approach altogether?

CARE and nef: Simplified guidelines for Social Cost-Benefit Analysis of Climate Change adaptation projects on a local scale, January 2014

<https://careclimatechange.org/wp-content/uploads/2014/08/CostBenefit.pdf>

Multi actor platforms: Cf. Practice # 8

CONCLUSIONS AND THE WAY FORWARD

Challenge and response – This paper has determined that gender-transformative approaches create opportunities for individuals to actively challenge existing gender norms; promote positions of social and political influence for women in communities and; address power inequalities between men and women, which are key to reducing the threat posed by climate change, especially to women and girls in developing countries. We also outlined that, despite existing evidence that gender-responsive and transformative programming delivers faster development outcomes and policy frameworks and government and intergovernmental statements that assert the importance of gender equality in agriculture, few design processes and implementation or monitoring frameworks actually include gender responsive, much less gender-transformative actions.

For the successful implementation of CSA to benefit women and address existing inequalities, it is essential to understand how gender roles and tasks in households and communities may be affected by new CSA technologies and practices⁸⁷. Gender-transformative CSA programming is not simply about gender parity or giving women and men equal resources. Rather, it is about adopting, integrating and promoting good practices in addressing all three domains of gender equality (building agency, changing structures and transforming relations). Indeed, programmes are most sustainable and impactful when all three areas of gender transformation are addressed at the same time. We provided case studies where one or more of these domains is being addressed, as well as the impact that such approaches are having, and we illustrate a set of good practices based on what has worked and why.

Produce the evidence for informing policy-making – Since agriculture or climate change adaptation investments and programming are evidently sub-optimal without gender responsive and transformative actions, it is imperative that investments and policy-making at national, regional and global levels, as well as investments and planning at national, sub-national and local levels, make clear commitments to integrating gender equality and women's empowerment. Many activities that, based on evidence, are identified as contributing to CSA, can be undertaken at local (e.g. promotion of agro-forestry), national (e.g. implementation of locally relevant and timely weather forecast delivery) or regional level (e.g. transboundary management of key natural resources such as water bodies and forests catchment areas). However, a holistic CSA approach must encompass all these levels to ensure the systemic transformation of agricultural systems in the face of climate change – this means that delivering gender equality and women's empowerment are also required at all levels.

The landmark 2015 Paris Agreement and the 2030 Agenda for Sustainable Development (SDGs) capture the global commitment to tackling climate change, as well as gender equality and hunger

and malnutrition. United Nations Sustainable Development Goal 13 commits governments to “Take urgent action to combat climate change and its impacts”. Under Sustainable Development Goal 5, countries around the world pledge to achieve gender equality and to empower all women and girls, and SDG2 enshrines a promise to end hunger and all forms of malnutrition.

The Paris Agreement – for the first time – demonstrates the global commitment to “pursuing efforts to limit the temperature increase to 1.5 °C over pre-industrial levels” and to “enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change”. This temperature threshold and global goal on adaptation are critical for agriculture, given the high level of vulnerability of the sector and of poor small-scale food producers to climate change impacts. At the same time, participating states recognised in the Paris Agreement “the fundamental priority of safeguarding food security and ending hunger”⁸⁸, as well as the need to “respect, promote, and consider their respective obligations on... gender equality [and] empowerment of women” in taking action to address climate change.

These commitments, together, provide a strong framework for engaging governments in setting priorities and undertaking actions that enable them to deliver on tackling climate change, building resilience, ending hunger and advancing gender equality.

UNFCCC's Lima work programme on gender provides a framework for ongoing work on gender equality and women's empowerment under the Convention, Kyoto Protocol and Paris Agreement. Its preamble “underscores” the importance of coherence between gender-responsive climate policies and action and gender parity in Convention processes and international instruments and outcomes, including CEDAW and 2030 Agenda for Sustainable Development. It established gender reporting requirements for all constituted (decision-making) bodies under the UNFCCC process and called for the development of a dedicated **Gender Action Plan**. The Plan,⁸⁹ agreed upon by the countries at COP22, provides an important step forward on the international climate

agenda. It explicitly acknowledges that women commonly face higher risks in responding to natural hazards and greater burden from the impacts of climate change, and consequently to ensure that women can influence climate change policy and are represented equally in all mandated areas of the UNFCCC's interventions. The GAP is made of five key goals:

- Gender-responsive climate policy including gender-responsive budgeting;
- Increased availability of sex-disaggregated data and analysis at all levels;
- Gender balance in all aspects of climate change policy including all levels of UNFCCC;
- 100 percent gender-responsive climate finance; and
- 100 percent gender-responsive approach in technology transfer and development.

In the context of their obligations under the Paris Agreement, countries will submit Nationally Determined Contributions (NDCs) every five years, laying out their voluntary, post-2020 climate actions. Some developing country governments included in their NDCs “conditional” pledges, actions they will take with support (finance, capacity building or technology development and transfer). NDCs thus act as a signal to donors (bilateral, multilateral or private sector) regarding country priorities and opportunities for investment. Targeting investment and support to the actions countries have captured in NDCs (or NAPs) can increase country ownership.

In that same vein, NDCs are a key means of ensuring that governments recognise from the outset the importance of integrating gender equality into climate plans. While nearly all NDCs include agriculture, only 40 percent include gender.⁹⁰ Yet, the Paris Agreement recognises the importance of advancing gender equality and women's empowerment. By working with governments on the crafting of NDCs, FAO can guide governments on the analysis needed to identify how gender shapes vulnerability to climate change, engagement in agriculture and access to resources, information, techniques and tools that support the adoption of climate-smart agriculture, while also contributing to broader gender equality commitments under the Convention and its financing mechanisms.

Through NDCs, governments can include gender transformational approaches among the priority actions they will undertake, thus shaping their own investments and guiding those from the donor community. Agencies such as the UNFCCC Secretariat and the Convention's Green Climate Fund (GCF), which assist developing

GENDER EQUALITY IN FINANCIAL MECHANISMS UNDER MULTILATERAL ENVIRONMENTAL AGREEMENTS (MEAS)

The two largest financial mechanisms under the UNFCCC and other MEAs are namely the **Global Environment Facility** (GEF) and the **Green Climate Fund** (GCF). Since 1991, the GEF has provided USD 17.9 billion in grants and mobilised an additional USD 93.2 billion in co-financing for more than 45 00 projects in 170 countries, while the GCF has committed USD 4.6 billion in projects in 96 countries over the past four years alone.

These financial mechanisms carry strict gender-specific conditionalities and call for “**projects that produce economic, social and gender development co-benefits**”.

FAO is an accredited implementing agency of these funds, which have dedicated Gender Equality Policies, and collaborates with governments, the private sector and civil society to catalyse projects with gender-responsive approaches and results

The areas for producing a gender-equality impact include:

- Improving women's access, use and control of resources, including land, water, forest and fisheries.
- Enhancing women's participation and role in natural resources decision-making processes, recognising women as agents of change at all levels.
- Targeting women as specific beneficiaries and creating opportunities from sustainable livelihoods and income-generation opportunities, by building climate resilience, conservation, rehabilitation and restoration actions for women.

country parties, actively work to support this coherence and coordination. Gender is not an explicit focus of NDCs, however, to the extent that instruments like GCF prioritise gender in programme design and implementation, it is both strategic and forward thinking to integrate gender considerations when working with NDCs. This guidance document can serve as a key resource for FAO in its work on NDCs, providing both scientific evidence and concrete recommendations arising from projects that will help countries achieve more gender equitable outcomes in their work.

The goals of the Paris Agreement and the SDGs can be reached only when women are supported in adopting and benefitting from climate-smart agriculture. However, the success of this requires gender transformational approaches targeting the underlying structural inequalities, and making rural farmers more resilient and empowered.

ANALIZE GENDER-DIFFERENTIATED IMPACTS

There is clear evidence that climate change is having **gender-differentiated impacts**, intensifying the constraints already faced by rural women and deepening the gender gap in agriculture. Harnessing women's knowledge and potential can significantly enhance the resilience of households and communities if their important role in adaptation and mitigation is fully recognised, and they are provided with equal access to productive assets, markets, climate information services, technology and training. FAO and CARE International share joint dedication to implement and scale up interventions that embrace women's fundamental role in food systems, and the transformative and multiplier effect of gender equality, and call on their partners to do the same.

The summary recommendations below provide a synthesis of guidance for governments and policy makers, development practitioners and investors, researchers and extension agents on integrating gender equality and women's empowerment in their work on agriculture under increasing climate risk.

Assess, analyse and understand social norms and power dynamics – Social norms and barriers, household decision-making patterns and divisions of labour must be properly understood to be addressed successfully. Thorough gender and power analysis – where differential vulnerability is investigated – will open pathways to equality and lead to more sustainable adoption, more productive agriculture and more food secure communities.

Engage and Include – The meaningful participation of women small-scale farmers and the groups that represent them in the design, implementation and monitoring of CSA policies, strategies and relevant legislation is fundamental. Reaching and engaging marginalised communities and groups requires skills and resources. Engaging and working with men is imperative in working towards gender equality.

Reinforce the capacity – The training and awareness-raising of authorities and service providers must be complemented with appropriate content and materials that are user-friendly. Agriculture education and extension systems require investment so that gender equality and women's empowerment is integrated.

Work with uncertainty – In a changing climate, risk management requires adaptive capacity and decision-making. Investments

in community-based adaptation and risk reduction processes should increase as they harness capacities and assets that can best absorb shock and stress. Collective social capital, such as in village savings and loans associations, leads women to make confident decisions.

Consult, inform and innovate – Since women adopt practices at (at least) the same rate as men when they are given information directly, it is critical that advisory and extension services include market and climate information that is relevant for them. Innovation and adoption succeeds in agriculture when it is farmer-led and responsive to specific contextual needs – and context specificity includes social norms.

Research, learn and adapt – Evidence on the gendered patterns of adoption, outcomes and scaling of Climate-Smart CSA remains sparse. More dedicated applied research with women farmers at the centre of learning is required, as this will build on a compelling case and lead to programme adjustments to produce better outcomes.

Coordinate and collaborate – Nationally Determined Contributions, National Adaptation Plans, National Agriculture Investment Plans and other policy instruments must act as vehicles for advancing gender-responsive actions. This requires collaborative effort and systematising of women's empowerment across sectors. National civil society actors and platforms can be engaged in leading roles in such processes.

Invest, monitor and report – Specific financial resources for the promotion and measurement of gender equality and women's empowerment actions are required (sex disaggregation is important but it does not constitute gender-responsive or transformative action). Gender metrics should be incorporated in programme designs, and progress against commitment should be reported.

Synergise and take a wider economy approach – Working beyond the boundaries of the agriculture sector is critical to achieving the empowerment of farming women. Reforms in land and other natural resource tenure; labour; social protection; health and nutrition; credit and finance; sexual and reproductive health and rights and other areas where synergies and mutually supporting policies and actions can deliver faster progress.



GLOSSARY AND TERMS

Adaptation Human-driven adjustments in ecological, social or economic systems or policy processes, in response to actual or expected climate stimuli and their effects or impacts. Various types of adaptation can be distinguished, including anticipatory and reactive adaptation, private and public adaptation and autonomous and planned adaptation.

Adaptive capacity (in relation to climate change impacts) The ability of a system to adjust to climate change (including climate variability and extremes) to moderate potential damages, to take advantage of opportunities or to cope with the consequences. Local Adaptive Capacity characteristics: asset base, institutions and entitlements, knowledge and information, innovation and flexible forward-looking decision-making⁹¹.

Agency Ensuring that rural women and men can take up economic opportunities to improve their individual and household wellbeing⁹²

Climate-Smart Agriculture (CSA) An approach to developing the technical, policy and investment conditions to achieve sustainable agricultural development for food security under climate change. It integrates the three dimensions of sustainable development (economic, social and environmental) by jointly addressing food and nutrition security and climate challenges. It is composed of three main pillars: (1) sustainably increasing agricultural productivity and incomes; (2) adapting and building resilience to climate change and (3) reducing and/or removing greenhouse gas emissions, where possible. For the purposes of this document, agricultural is defined as related to crops, livestock, fisheries and aquaculture and forestry.

Climate change Refers to any change in climate over time, whether due to natural variability or because of human activity.

Climate mitigation Include actions to reduce greenhouse gas emissions and sequester or store carbon in the short term, and development choices that will lead to low emissions in the long term.

Climate variability Variations in the climate (as measured by comparison with the mean state and other statistics such as standard deviations and statistics of extremes) at all temporal and spatial scales beyond that of individual weather events. Variability may be due to natural internal processes within the

climate system (internal variability) or to variations in natural or anthropogenic external forcing (external variability).

Disaster risk reduction (DRR) Refers to the programmes and practices that are specifically targeted at avoiding (prevention) or limiting (mitigation and preparedness) the adverse impacts of hazards, within the broad context of sustainable development. Denotes both a policy goal or objective, and the strategic and instrumental measures employed for anticipating future disaster risk; reducing existing exposure, hazard, or vulnerability and improving resilience⁹³.

Gender Refers to socially constructed roles, identities and expectations of females and males, and the differences between them. They are learned through culture and in society throughout the life course and can change over time. Gender norms can be dramatically different within and among cultures, and depend on ethnicity, social class, age and other socio-economic factors. Gender, class, age, marital status and race determine the distribution of roles, power and resources in particular societies. The roles of, and relationships between men, women, girls and boys, the elderly, the wealthy, the poor and the vulnerable are all taken into consideration in this study.

Gender analysis is the study of the different roles of women and men in order to understand what they do, what resources they have, and what their needs and priorities are.

Gender division of labour is the way work is divided between men and women according to gender roles. This does not necessarily concern only paid employment, but more generally the work, tasks and responsibilities assigned to women and men in their daily lives, which may also determine certain patterns in the labour market.

Gender equality A state in which women and men enjoy equal rights, opportunities and entitlements in civil and political life. It implies equal participation of women and men in decision-making, equal ability to exercise their human rights, equal access to and control of resources and the benefits of development, and equal opportunities in employment and in all other aspects of their livelihoods⁹⁴.

Gender equity is fairness and impartiality in the treatment of women and men in terms of rights, benefits and obligations, so

that resources and opportunities are distributed fairly between women and men. This often requires making additional resources available to women, to overcome long-standing inequalities in access to the means of self-improvement and empowerment. This is a process that leads to gender equality.

Gender-responsive approaches recognise and address the specific needs and priorities of men and women, based on the social construction of gender roles.

Gender-transformative approaches seek to transform gender roles and promote gender-equitable relationships between men and women. The aim of gender equality is for men and women to have equal participation in decision-making, the same access and control over productive resources, services and technologies, equal benefits from project results as well as the same opportunities to access decent employment and livelihood systems.

Gender mainstreaming Process of assessing the implications for men and women of any planned action, including legislation, policies and programmes, in any area and at all levels. It is a strategy for making the concerns and experiences of women and men an integral part of the design, implementation, monitoring and evaluation of policies and programmes in all political, economic and societal spheres, so that they benefit equally, and inequality is not perpetuated. It is the globally recognised strategy for achieving gender equality.

Good practices The term “good practices” designates, within a given professional domain, a set of behaviours agreed upon and considered indispensable by most professionals in that domain. For example, good agricultural practices, good manufacturing practices and good hygiene practices in the agro-food sector.

Labour-saving Practices and Technologies Tools, technologies and practices used in farming and non-farm enterprise that make existing tasks easier and increase the productivity of existing labour and draft power or change of farming practices to methods that use less farm power (adapted from Gender in Agriculture Sourcebook ⁹⁵). Labour-saving technologies and related services can contribute to freeing up women's time and improving their quality of life, enabling them to engage in activities of their own choice, whether for the home or remunerative nature.

Mainstreaming or Integration The integration (adaptation) of objectives, strategies, policies, measures or operations such

that they become part of the national and regional development policies, processes and budgets at all levels and stages⁹⁶.

Maladaptation Any changes in natural or human systems that inadvertently increase vulnerability to climatic stimuli; an adaptation that fails in reducing vulnerability but increases it instead⁹⁷.

Mitigation An intervention to reduce the sources or enhance the sinks of greenhouse gases⁹⁸. It implies the implementation of technological changes, such as cultivation practices, or substitution of technologies (such as substituting fossil fuels) to reduce greenhouse gas emissions and enhance greenhouse gas sinks.

Resilience The ability to prevent disasters and crises as well as to anticipate, absorb, accommodate or recover from them in a timely, efficient and sustainable manner. This includes protecting, restoring and improving livelihoods systems in the face of threats that impact agriculture, nutrition, food security and food safety. In other words, resilience is the ability of people, communities or systems that are confronted by disasters or crises to withstand damage and to recover rapidly.

Sustainability The ability of socio-ecological processes and activities to continue producing environmental, social, technical, financial and cultural benefits in the long term. FAO's vision for Sustainable Food and Agriculture is of a world in which food is nutritious and accessible for everyone, and natural resources are managed in a way that maintain ecosystem functions to support current as well as future human needs.

Vulnerability The characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a hazard, including climate variability and extremes. Vulnerability is a function of the character, magnitude and rate of climate variation to which a system is exposed, its sensitivity and its adaptive capacity. Therefore, adaptation would also include any efforts to address these components.

Women's Empowerment is the expansion of freedom of choice and action: the process through which women or men improve their capacity to make life choices and to transform these choices into actions and outcomes.⁹⁹

ANNEX 1. POTENTIAL GENDER CONSIDERATIONS OF VARIOUS CSA PRACTICES

Determining just how men's and women's constraints may differ by climate-smart option is the first step in understanding the range of issues that must be considered in designing projects and programmes to make agricultural systems more resilient (Table 1)¹⁰⁰. Based on experience in South Asia and Africa in the CGIAR Climate Change, Agriculture, and Food Security (CCAFS) programme and expert opinion, the below Table indicates the relative contribution (high, medium, low) of a given practice to CSA goals – adaptation, mitigation and food and nutrition security – as well as its gender impacts (here measured as the degree to which women are likely to control income from the practice) and the relative importance of various requirements for women to adopt the practice.

This analysis may serve as a guide to the kinds of questions they might ask about the effects of improved CSA technologies and practices proposed in target communities. The table may also be used as a tool for the consideration of gender actions in project design. It should be noted that the values of high/medium/low in the table will vary depending on contextual factors.



	Contribution to CSA Goals relating to:			Gender impact
CSA optional Practices	Climate change adaptation	Mitigation (Reducing GHGs)	Potential Household Food Security and Nutritional Impacts	Women's control of income from practices
Stress-tolerant varieties	High	Low	High	Low
High-yielding varieties	Low	Low	High	Low
Improved home gardens	High	Medium	High	High
Farmer-managed natural regeneration	High	High	Medium	High
On-farm tree planting	High	High	Low-medium	Low
Living fences	Medium	High	Medium	High
Fodder shrubs	High	Medium-high	High	High
Herbaceous legumes	High	Medium	High	High
Improved grasses	High	Medium	High	High
Livestock genetic improvement	High	Medium	Medium-high	Low-high
Restoration of degraded rangeland	High	High	Medium	Low-high
Zai pits	High	Low-medium	High	Low-high
Contour rock lines	High	Low-medium	High	Low-high
Contour earth bunds	Medium	Low	Medium	Low
Half-moon catchments	High	Medium	High	Low-high
Contour vegetative strips	Medium	Medium	Medium	Low
Tied-ridges	Medium	Low	Medium	Low
Pumping technologies	High	Medium	High	High
Check dams	High	Low	Medium-high	Low-high
Valley bottomlands development	High	Medium-high	High	Low
Small-scale irrigation	High	Low	High	Low-medium
Drip irrigation	High	Low	High	High
Farm ponds for rainy season supplemental irrigation	High	Low	High	Low
Conservation agriculture	High	Medium	High	Low
Fallow	Medium	High	Medium	Low-medium
Intercropping	High	Low	High	Low
Crop rotation	Medium	Low	Medium	Low
Composting	Medium	Medium	Medium	Medium

Requirements for Adoption of Practice					
Relative amount of time until benefits are realised	Potential for women to benefit from increased productivity	Women and youth labour availability	Women's access to and control of land	Women's access to water for agriculture	Women's access to cash and ability to spend it
Low	Medium	Medium	High	Low	High
Low	High	Medium	High	High	High
Low	High	High	High	High	High
Medium	High	Low-medium	High	Low	Low
High	Medium	High initially, low later	High	Medium	Medium
Medium	Medium	High	High	Low-medium	Low-medium
Medium	Medium	High	High	Medium	Low-medium
Medium	High	High	High	Medium	Low-medium
Low	High	High	High	Medium	Low
High	High	Low-high	Low	High	Medium
Low	High	Low-high	High	Low	Low
Low	Low-high	High	High	Low	Low
Low	Low-high	High initially, low later	High	Low	Low
Low	Medium	High	High	Low	Low
Low	Low-high	High	High	Low	Low
Low	Medium	Low	High	Low	Low
Low	Medium	High	High	Low	Low
Low	High	High	High	High	High
Medium	Medium-high	High	High	High	Medium
Low	High	High	High	High	High
Low	High	Medium	High	High	Medium
Low	High	Medium	High	High	High
Low	High	High	High	High	Low-High
High	High	Low-medium	High	Low	Low
High	Medium	Low	Medium	Low	Low
Low	Medium	Medium	High	Low	Low
Low	Medium	Medium	High	Low	Low
Low	Medium	High	Medium	Low	Low



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This guidance entitled *Integrating Gender Equality and Women's Empowerment in CSA Programs* focuses on a set of agricultural practices to be implemented by small-scale food producers in developing countries. The purpose of this document is to provide agriculture development practitioners and policy makers globally, with guidance, tools and examples of successful integration of gender equality and women's empowerment (GEWE) into climate smart agriculture (CSA) work, by demonstrating the necessity and benefits of incorporating a GEWE approach in CSA work; and presenting tested strategies for enhancing the engagement of women and particularly vulnerable groups in CSA work. With a view towards accelerating the impacts of country programs, FAO and CARE have partnered to develop this guidance to help policy makers and practitioners meet the ambitious goals of the SDGs and the 2030 Agenda.

FAO recognizes the potential of rural women and men in achieving food security and nutrition and is committed to overcoming gender inequality, in line with the pledge to “leave no one behind, which is at the heart of the Sustainable Development Goals (SDGs) and the 2030 Agenda.

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Founded in 1945, CARE is a leading humanitarian organization fighting global poverty and providing lifesaving assistance in emergencies. In 90 countries around the world, CARE places special focus on working alongside poor girls and women because, equipped with the proper resources, they have the power to help lift whole families and entire communities out of poverty. To learn more, visit www.care.org.

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