

Gender Equality in the Context of Climate Change and Food Security

Understanding and Reversing the Impact of Climate Change on Women and Children

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About this course

This course is one of six related but independent courses that are included in the Strengthening Communities to Attain Resiliency and Food Security (SCARF) project. The SCARF project focuses on transformative learning for climate action through developing and digitising learning resources and fostering social and ecological awareness that helps learners move from practising individual behavioural changes to achieving wider social change by targeting the root causes of climate vulnerability and risk.

Addressing climate change and promoting environmentally sustainable livelihoods is imperative if we are to protect the world's poor and their rights to food and decent livelihoods. The SCARF project aims to:

- change the attitudes and behaviour of communities to mitigate against and adapt to the impact of climate change;
- provide solutions and responses not only to tackle the climate crisis but also to transform societies for a better future;
- provide new insights and opportunities to put into practice the new knowledge and skills gained for mitigating climate change and conserving the environment; and
- enhance the reach to marginalised communities, facilitating lifelong learning among learners and providing them with knowledge, attitudes and skills that will prepare them for the present and future context.

The six courses will enable participants — grassroots-level volunteers, community leaders, field workers and economically disadvantaged women and girls with varying levels of literacy — to:

- use the knowledge they gain in their everyday lives,
- develop a sense of strong personal connection to the issues of climate change,
- understand the value of solutions grounded in human rights,
- critically question the actions and responses of leaders, and
- take appropriate action to respond to climate-related issues.

The six courses and their objectives are:

- **Course 1: Climate Change and Taking Action.** Explains climate change, its impact in the local context, its anticipated impact on human lives and how to mitigate its negative impacts through actions and policy advocacy.
- **Course 2: Small-Scale Traditional Food Production and Food-Processing Techniques for Sustenance and Survival.** Explains how to mitigate the impacts of climate change and achieve sustainable livelihoods. Discusses food and nutrition, local best practices and how to adapt such practices to attain family and community resiliency.
- **Course 3: Gender Equality in the Context of Climate Change and Food Security.** Discusses why women and children suffer most from the impacts of climate change, and the role of women as food growers

and providers for better community resiliency and sustainable livelihoods.

- **Course 04: Creating Gender-Sensitive, Climate-Responsive, Sustainable Livelihoods to Build Self-Reliant, Resilient Local Economies.** Explains the importance of climate-responsive and gender-sensitive livelihoods for building a self-reliant, resilient local economy.
- **Course 5: Using Innovations and Climate-Responsive Actions to Build Community Resilience.** Explains the role of innovation in livelihood design and local conservation efforts.
- **Course 6: Respecting Indigenous Rights and Practices: Ways to a Better Planet.** Discusses Indigenous practices and the integration of natural habitat conservation through such practices. Describes Indigenous rights and their importance in mitigating the impacts of climate change.

Each of these six courses can be done independently from [<https://opentextbooks.colvee.org/genderequalityclimatechangefoodsecurity/>] as a downloadable PDF or online in Moodle.

Gender Equality in the Context of Climate Change and Food Security: Understanding and Reversing the Impact of Climate Change on Women and Children was produced by the Commonwealth of Learning (COL). All courses produced by COL are structured in the same way, as outlined below.

How this course is structured

The course overview

The course overview gives a general introduction to the course. The information it contains will help you determine:

- if the course is suitable for you,
- what you need to know before you begin,
- what you can expect from the course, and
- how much time you will need to complete the course.

The overview also provides guidance on:

- study skills,
- where to get help,
- course assessments,
- icons used in the course, and
- the content of units.

To increase your chances of success, read the overview *carefully* before you begin.

The course content

The course is broken down into units. Each unit comprises:

- an introduction to the unit content,
- unit outcomes,
- new terminology,
- core content of the unit with a variety of learning activities,
- a unit summary, and
- assessments, as applicable.

Resources

Resources for further reading — for example, books, articles or websites — are provided throughout the course.

Your comments

After you complete this course, we would appreciate it if you would take a few moments to email womenandgirls@col.org with your feedback on any aspect of it. Your feedback could include comments on:

- content and structure,
- reading materials and resources,
- assessments,
- duration, and
- support (assigned tutors, technical help, etc.).

Your constructive feedback will help us to improve this course for future users.

Course overview

Welcome to Gender equality in the context of climate change and food security: Understanding and reversing the impact of climate change on women and children

This course explores gender and the different roles and perceptions associated with men and women and how these affect women's ability to mitigate risks associated with climate change. The course will describe how women and children suffer the most from the impacts of climate change and will focus on women as food growers and producers. Examples of successful, women-led conservation projects will be shared as best practices and as methods for mobilising other family and community members in building resiliency and sustainable livelihoods.

Gender equality in the context of climate change and food security: Understanding and reversing the impact of climate change on women and children—Is this course for you?

This course is intended for community members and people who work in the field, especially in the agriculture sector.

It is also intended for individuals who work at a grassroots level in their efforts to mitigate the impacts of climate change — for example, volunteers, community leaders, community health workers and others in positions to support women and children at the community level.

The intended users can use this course to expand their own knowledge, and teachers/facilitators can use it to expand knowledge within their own communities.

There are no prerequisites required to use this course.

Course outcomes



Outcomes

On completion of Gender Equality in the Context of Climate Change and Food Security you will be able to:

- *describe* gender and sex.
- *describe* the difference between gender equality and gender equity.
- *describe* the importance of gender equality in climate change mitigation.
- *engage* family members and neighbours in discussions about inclusive livelihoods that allow women to play a greater role in decision-making and to lead climate change actions.
- *identify* suitable conservation techniques to achieve food and nutrition security.

Timeframe



Time

Approximately 7.5 hours with approximately 1.5 hours for each of the five units and an additional 2 hours of reading time.

If the course is used for working with the participant's community, it could be spread over a desired number of training sessions.

Two additional hours of reading time might be required.

Study skills



As an adult learner you will take a different approach to learning than you did when you were a schoolchild. You will choose what you want to study, you will have a professional or personal motivation for learning and you will most likely be fitting your study activities around other professional or domestic responsibilities.

Essentially you will be taking control of your learning environment. You will therefore need to think about how issues such as time management, goal setting and stress management will affect your performance. You may need to review skills such as essay planning, coping with exams and using the Web as a learning resource.

Your most significant considerations will be time and space — that is, the time you dedicate to your learning and the environment in which you engage in that learning.

We recommend that you take time now — that is, before you begin your self-study — to familiarise yourself with these issues. There are a number of excellent resources on the Web that can help you. For example:

- <http://www.how-to-study.com/>

This website has a list of resources about study skills, including taking notes, strategies for reading textbooks, using reference sources and dealing with test anxiety.

- <http://www.howtostudy.org/resources.php>

This website has useful links to resources on time management; efficient reading; questioning, listening and observing skills; “hands-on” learning; memory building; staying motivated; and developing a learning plan.

These two websites can get you started on your learning journey. At the time of writing, the links to them were active. To find more options, go to www.google.com and type in phrases such as “self-study basics,” “self-study tips” or “self-study skills.”

Need help?



Help

At the learning centre you will receive the same support as you would from any classroom teacher, or you might find a more experienced tutor to support you during a contact session.

Find out the following information and write it in your journal for reference.

- What is the course instructor's name? Write down their office location and hours, telephone/fax number and email address.
- Is there a teaching assistant for routine enquiries? Write down their office location and hours, telephone/fax number and email address.
- Is there a librarian/research assistant available? Write down their office location and hours, telephone/fax number and email address.
- Is there a learners' resource centre? Write down its location, opening hours and telephone number. Also write down the name of the resource centre manager and their email address.
- Whom do learners contact for technical issues (computer problems, website access, etc.)? Write down their contact information.

Assessments



Assessments

There are five assessments in this course, one for each unit.

All assessments are self-assessments. The answers to the multiple choice questions are in the Answer Key, at the end of the course.

Each assessment takes place at the end of each unit and consists of between three and five questions.




Learners will have between five and ten minutes to read the questions and provide the answers for each assessment.

Getting around this course

Margin icons

As you work through this course you will notice the frequent use of margin icons. These icons serve to “signpost” a particular piece of text, a new task or a change in activity. They have been included to help you to find your way around this course.

A complete set of icons is shown below. We suggest that you familiarise yourself with the icons and their meanings before you begin.

			
Activity	Assessment	Assignment	Case study
			
Discussion	Group activity	Help	Note it!
			
Outcomes	Reading	Reflection	Study skills
			
Summary	Terminology	Time	Tip

Unit 1

Linking climate change impacts to increased workloads for women and children

Introduction

In this unit you will learn key definitions about gender and be introduced to traditional gender stereotypes and roles. Gender equality is essential for climate change mitigation and community resiliency because women and men have different roles and responsibilities in society and are affected differently by climate change. When women have equal opportunities to participate in decision-making and economic activities, they can contribute to climate change mitigation and community resiliency in meaningful ways.

On completion of this unit you will be able to:

- *describe* the importance of gender equality in the context of reducing the suffering of women and children in the face of climate change.



Outcomes

You will explore the following topics:

- Understanding gender
- Gender equality
- The impacts of climate change on women and children



Terminology

Male:	Refers to the biological sex a person is assigned at birth based on the presence of distinctive, sexual reproduction organs that produce sperm.
Female:	Refers to the biological sex a person is assigned at birth based on the presence of distinctive, sexual reproduction organs that produce eggs.
Boy:	A young person who displays the social characteristics and behaviours associated with being male.

Girl: A young person who displays the social characteristics and behaviours associated with being female.

Woman: An adult person who displays the social characteristics and behaviours associated with being female.

Man: An adult person who displays the social characteristics and behaviours associated with being male.

Gender: Social characteristics and behaviours that boys, girls, women and men are expected to display. These characteristics and behaviours relate to how they are expected to dress, act and speak, and what activities they engage in.

Masculine characteristics are generally associated with male people. For example, aggressive, protective and risk-taking. Boys are expected to be tough. Men are expected to make decisions for the household and the man's role is to provide for and support his family. The man is usually not expected to show too many emotions, but to be detached and objective in his decision-making.

Feminine characteristics are generally associated with female people. For example, gentleness, caring and emotional. Girls are expected to play with dolls. Many societies expect women to wear dresses and not to wear trousers. Some societies also expect women to cover their heads, faces or both.

Resources: Things that we need to survive and to live well — for example, water, air and land (natural resources); skills and knowledge (human resources); and financial resources.

We use resources to meet our basic needs (food, water, shelter, clothing and healthcare), produce or manufacture goods and services, and build and maintain our communities.

Access:	Having the opportunity, means, rights or permission to use or benefit from resources or services.
Gender equality:	Men and women have equal value, rights and access to resources, opportunities and benefits. People of both sexes are equally free to pursue whatever career they wish without discrimination, and everyone is valued and respected.
Gender equity:	Fair treatment of people so that everyone can have equal access to opportunities, resources and benefits, based on the recognition that people have different needs, experiences, abilities, challenges and status based on gender.
Livelihoods:	How a person makes a living to meet their basic needs such as food, water, shelter, clothes, medicine, sanitary products, books and school supplies, and agricultural inputs for farming.
Sustainable livelihoods:	<p>Ways of earning a living that meet the needs of the current generations without compromising the ability of future generations to meet their own needs.</p> <p>A livelihood is sustainable when it can withstand the stress and shocks of adverse environmental and economic circumstances.</p>
Climate change:	<p>The long-term changes in typical weather patterns. Climate change causes weather patterns to be less predictable, temperatures to be lower or higher than average, and more frequent and severe weather events, such as storms, floods and droughts.</p> <p>Climate change is caused by burning fossil fuels, deforestation and agriculture activities. These activities all release greenhouse gases, which trap heat and warm the planet, into the atmosphere.</p>
Conservation:	Natural climate change solutions designed to restore or improve the ecosystem while maintaining the capacity to absorb and store carbon from the atmosphere.

Resilience: The ability of an individual or community to withstand or quickly recover from adverse circumstances and to adapt to adversity.

Understanding gender



Activity

Icebreaker

Study each of the following statements and decide if they are usually considered **true** or **false** in your community.

- Males have more muscles than females [**T**]
- Women must raise the children in the family [**F**]
- Girls do not like sports [**F**]
- Women breastfeed [**T**]
- Men lead, women follow [**F**]
- Only men own farms [**F**]
- Girls cook better than boys [**F**]



Discussion

Our perceptions and understanding of what it is to be a girl/woman or boy/man are influenced by what we see and learn every day. Sex is usually determined at birth and refers to our biological make-up. Many people believe that boys and men can only do certain things and girls and women can only do certain other things. However, since many of these beliefs are learned behaviours, these traditional and stereotypical thoughts and behaviours can be challenged and changed through awareness-raising.

In many communities, it is believed that women should take care of the home and children while the men work. In households where there are both men and women, the man usually looks after the vehicles and equipment and makes repairs to the home, while the woman is usually responsible for the cooking, cleaning and caregiving.



Note it!

Gender is influenced by culture (education and religion), the media and a person's social status or class. Gender behaviours and roles can vary from one society to the next and can change over time within a particular society.



Activity

Reflections on gender: Write in your journal about a time in your life when you discovered that you were different from another gender. Alternatively, the facilitator/teacher may ask participants to share with the group a time in their life when they realised that they were different from another gender.

Reflections on gender versus sex: Make two columns and label one Sex and the other Gender. Go back to the statements at the beginning of the unit and place each one in the relevant column. Alternatively, the teacher/facilitator can either:

- draw the columns on a board and ask participants to identify which column each statement should be placed in, or
- draw a line on the floor, mark one side Sex and the other Gender and ask participants to stand on either side of the line on the floor as each statement is read out.

Hint: There are two non-gender statements.

Gender statements: Participants write in their journals three examples of gender statements and three non-gender statements based on sex. Alternatively, the facilitator/teacher can ask each member of the group to give one example each of gender statements.

Gender equality

Gender equality refers to equal access for both women and men to resources, opportunities, benefits and participation in decision-making at the household, community and national levels. It is regarded as a fundamental human right which is the foundation of a sustainable world.

Worldwide there is inequality. More men participate in the labour force and earn a wage, which often means they are seen as more important than women. In many instances, what women do in the home is not considered as work but as a natural part of life. Today, many women also work outside the home, many in lower-paying jobs, but are still expected to take care of the house, the children and people who are sick or elderly. Many women are therefore over-burdened or overworked compared to men. Women who are over-burdened find it difficult to take advantage of other opportunities, such as education and income-earning jobs, and so they tend to remain poorer than men.

Women represent a high percentage of people in poor communities. In rural, agricultural communities, women and men are highly dependent on local, natural resources for their livelihood — in fact, these are often their sole sources of food and income. In addition, women shoulder the major responsibility for supplying the household with water, energy for cooking and heating, and regular, nutritious and affordable food. In the field, they are mainly responsible for the more time-consuming and labour-intensive tasks that are carried out manually or with non-mechanised tools. Women

are mainly engaged in subsistence farming, particularly horticulture, poultry and raising small livestock for home consumption.



Note it!

To achieve the goal of gender equality, some people may have to receive extra-special resources and assistance based on their circumstances. Achieving gender equality involves working to change attitudes in our homes, communities and the wider society. Changes involve reducing women's workload and increasing their decision-making powers.



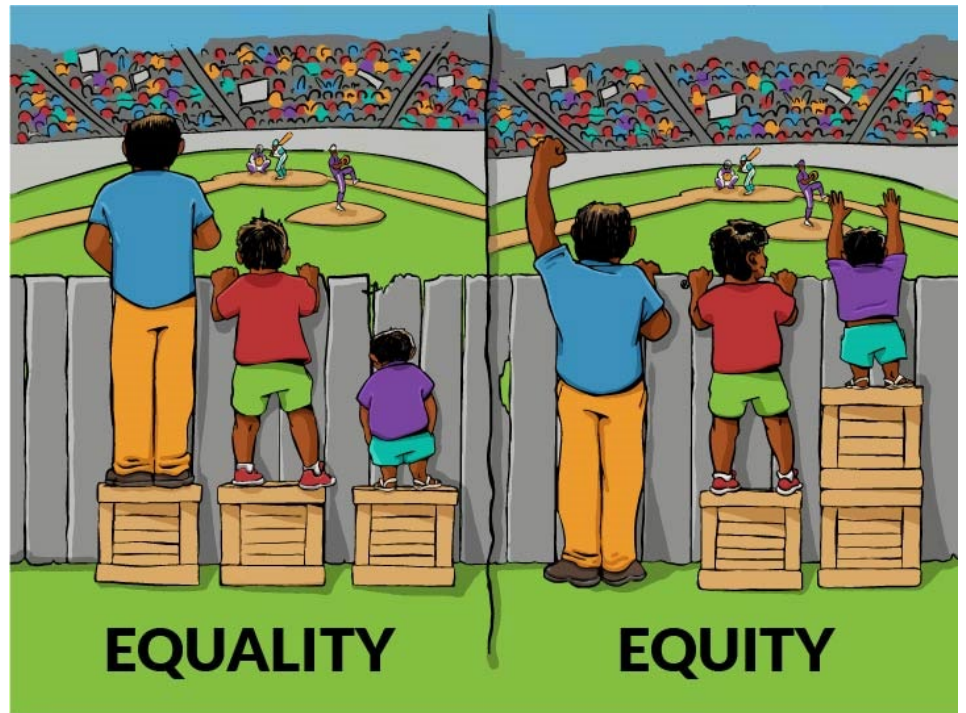
Activity

Watch the video [Understand Goal 5: Gender Equality](#) by Participate Inc.

The teacher/facilitator will ask you whether you agree with the contents.

Gender equity is about everyone getting what they need in order to improve the quality of their situation and becoming equal. Gender equality requires gender equity treatments. Equity involves providing women with access to inputs, resources, education, job opportunities and healthcare services that are specifically designed to meet their gender-specific needs and reduce their time burdens. Equity *does not mean* that everybody gets the same thing. Achieving gender equity involves creating awareness of the impact of gender and the negative effects of inequality.

Gender equity is therefore concerned with dealing with people and their communities and providing them with opportunities, benefits and resources as needed in order to level the playing field and create equal outcomes for all.



Institute for Social Change. (2016). *Equality vs equity*. interactioninstitute.org; or madewithangus.com.
Licence: Open access.



Activity

Study the illustration above and identify the differences between the left-hand and right-hand panels.



Discussion

Ways to promote gender equality

In the home, chores should not be allocated based on gender. Anyone can be responsible for inside duties such as washing dishes and cleaning the rooms. Similarly, outdoor duties can be divided equally. In schools, girls should be encouraged to select subjects such as science, technology, engineering and mathematics (also known as the STEM subjects). Once certified in a particular field, everyone should have the same opportunities to be hired and should receive equal pay for equal effort. Wherever possible, action should be taken to reduce the burdens facing women and provide social services to help them care for the family. In communities, women must be allowed to participate in all levels of decision-making. In agriculture, women should be given access to inputs, finance, water, energy, equipment, extension services and appropriate infrastructure.

When women have equal opportunities, resources and ability to participate in decision-making and economic activities, they can contribute to climate change mitigation and community resiliency.



Activity

Think back to the *Equality vs Equity* illustration. Identify three ways to promote gender equality or change attitudes towards women in your community or workplace.

Alternatively, the facilitator/teacher may ask participants to each identify one activity to promote gender equity or change beliefs about women.

The impact of climate change impact on women and children

Climate change and extreme weather conditions affect everyone. However, men, boys, women and girls all experience the impacts of climate change differently. This is because different groups of people are in different positions in society in terms of their ownership of assets or resources, wage levels, educational achievements, roles and power to make decisions for themselves, about themselves and for others.

People such as farmers, foresters and fishers depend on natural resources for their survival and so they are directly affected by climate change. How they cope with that change will also depend on where they live; their age, ethnicity and mobility; and the resources available to them. Poorer people will be more vulnerable to the impacts of climate change.

Women are often the primary caregivers in their families. They are responsible for providing food and water and taking care of the old and the very young. They are also more likely to live in poverty and have less access to resources than men. More women are negatively affected by climate change because of inadequate and unequal access to land, water, energy, finance, information and technology. Women face higher risks and even greater burdens because of the effects of climate change — for example, they have to travel further to obtain daily supplies, which exposes them to risks to their personal safety. The added burdens mean they have less time to take advantage of education and employment opportunities.

Children have to depend on other people for assistance and cannot make decisions independently.

During preparations for disasters caused by climate change

Women have less access to and control over environmental goods and services, have negligible participation in decision-making and are not involved in the distribution of environment management resources. People who have more access to information and higher levels of education are more likely to engage in disaster preparedness. Women who are time-burdened and do not have access to employment opportunities are less able to take measures to protect their homes, farms and communities against the impacts of climate change. People with mobility challenges may not be able to access emergency shelters.

Traditional gender roles mean that in preparing for climate change events, men tend to take care of the physical assets in and around the home, while women take care of the food supplies. Most people on rescue teams are men, and they are exposed to many physical dangers and health risks.

Post-disaster behaviours

Men may take more risks by going outdoors immediately after a climate change-related event. Rescue teams may need mental health support during and after the disasters because of what they witness and experience. Nurses, who are usually women, may experience extra psycho-social trauma in dealing with the dead and injured victims of climate change-related events.

People who own more assets can repair or rebuild sooner than those who have to wait for assistance from the government. Globally, women tend to own less land, equipment and resources and so have to depend on government social assistance in the event of a disaster. Men tend to get jobs in construction as part of the rebuilding of physical infrastructure.

After a disaster, women tend to do more work than men in rebuilding the home, and they spend more time on rebuilding and repairing than they

did before the disaster. They also have to find alternative means of getting water, fuel and food. This means they have to use improvised methods for washing, cooking and sanitation and, with no or limited access to electricity and motorised transport, their gendered responsibilities take more time than ever to fulfil. Their workload becomes more difficult, and their increased time burden leaves them with even less time to access training and education, develop skills, or earn income after disasters. An added challenge for women after extreme weather incidents is that they are more at risk of abuse, sexual harassment and rape in emergency shelters (see Osman-Elasha, 2009, for more information).

Disasters relating to climate change disrupt food and energy supplies, transportation services and social services. Scarcity drives up the costs of goods and services, and this disproportionately affects women, especially those who are single heads of households, since they tend to be poorer than men in similar circumstances. In societies where women are less educated than men, after a disaster there is high demand from women for assistance with completing application forms to access aid such as food, building materials and medical supplies.

Pregnant women may not be able to access the healthcare services they need, since healthcare personnel will likely be attending to the emergencies associated with the climate change incident. Those women may find it difficult to access transportation and so face increased risks related to maternal and neonatal problems. Research indicates that the number of stillbirths increases during periods of extreme heat.

In the aftermath of climate-induced disasters, women and girls can be more vulnerable to gender-based violence (GBV) and therefore need access to services that can keep them safe. Sexual exploitation after disasters occurs when women are forced to exchange sex for food and supplies. Men tend to deal with the trauma of losing their assets (such as their cars) or jobs differently because their role as breadwinner may be threatened after a natural disaster. For example, they may become violent or withdrawn. Women tend to take on the role of keeping the family and community together through voluntary work. They manage community soup kitchens and emergency domestic living arrangements and mediate in conflicts brought on by stress. The unpaid emotional support they provide contributes to rebuilding communities. In some cultures where marriage dowries are common, more child marriages occur as dowries allow some parents to gain assets.

Women and children are more likely than men to die during extreme weather events linked to climate change. For example, in a 2003 heatwave in Europe, more women than men died. In 2004, after the tsunami in the Indian Ocean, between 70 per cent and 80 per cent of all deaths were women. In 2005, after Hurricane Katrina struck New

Orleans, USA, African American women, who were among the poorest in the population, faced the greatest challenges to survival.

In Bangladesh, the areas most heavily affected by the impacts of climate change include the coastal areas, where settlements get flooded with salt water. Other areas experience drought, flash flooding and river erosion. In 1991, when a cyclone hit Bangladesh, 90 per cent of the victims were women.

In Malawi, droughts and flood have increased over the past 20 years. In 2023, Tropical Storm Freddy caused more than 200 deaths, including more than 40 children.

In 2022 in Pakistan, there were a reported 1,739 deaths due to flooding. Almost one third of the victims were children.



Reading

Mirza, M. M. Q. (2001). Climate change and extreme weather events: Can developing countries adapt? *Climate Policy*, 3(3), 233-248. doi:10.3763/cpol.2003.0330.

Licence: Open access.

OECD. (2008). Gender and sustainable development: Maximising the economic social and environmental role of women. *Climate Policy*, 3(3), 233-248. <https://doi.org/10.1787/9789264049901-en>

Licence: Open access.

Osman-Elasha B. (2009). *Women in the shadow of climate change*. *UN Chronicle*, Special Climate Issue, XLVI (3 & 4). <https://www.un.org/en/chronicle/article/womenin-shadow-climate-change>

Licence: Open access.

UN Women. (2022, 28 February). Explainer: How gender inequality and climate change are interconnected. News and Stories.

Licence: Open access.

Long-term effects of climate change

Beyond the physical damage inflicted by the impacts of climate change — for example, the destruction of homes, livestock and crops — there are usually unseen ripple effects on people's livelihoods and their social lives.

In Bangladesh, Malawi, Mozambique, Pakistan and Sri Lanka, very many people depend on agriculture for their livelihoods, and many of the smaller farmers are women. A man who owns heavy equipment or practises conservation techniques may be able to recover quicker from a

disaster than a woman who has few or no resources. A woman in that situation may lose her livelihood and fall into poverty. When harvests are reduced, small-scale farmers have little or no surplus produce to sell to earn money. When the surrounding environment and homes are damaged and livelihoods are lost, many people migrate or move to less affected areas.

The floods in Pakistan in 2023 were described as the worst in the country's history. They swept away everything in some districts, and people were forced to move empty-handed to other districts. For women with no resources, building back will be harder than it will be for men, and they may have to stay in temporary relief camps for longer. Women also experience a loss of dignity when they access healthcare services among strangers.

The frequency of droughts, floods and cyclones in Mozambique has forced many men to migrate to South Africa in search of work, leaving women to bear the burdens of the household and the farm work singlehandedly. In Sri Lanka, droughts have forced more people to move to highly populated areas close to water sources.



Activity

Can you think of one example of how men and women may experience the effects of climate change differently?

Unit summary



Summary

In this unit you learned the difference between sex and gender and how to define gender equality. You can now describe the importance of gender equality in the context of the impact of climate change on women and children.

You can identify activities to promote gender equity and discuss the changes needed in the home and the community to reduce the workload of women.

You also now know how to engage family members and other people in discussions on the impact of climate change and how the impacts can differ due to gender roles.

Assessment



Assessment

Multiple choice questions: 1

1. What is gender?
 - A. Gender is what everyone is born with.
 - B. Gender refers to how boys/men and girls/women are expected to behave.
 - C. Gender refers to who we like.
2. Gender equality is the same as gender equity.
 - A. Yes.
 - B. No.
 - C. Sometimes.
3. After a climate-related disaster, who is more at risk of gender-based violence (GBV)?
 - A. Women and children.
 - B. Men.
 - C. No one.

Unit 2

The role of gender in mitigating the impacts of climate change and promoting gender-led best practices (past and present)

Introduction

This unit:

- looks at the important links between climate change and gender equality, and
- provides examples of actions taken to mitigate the impacts of climate change in the past that can serve as ideas for the present.

On completion of this unit you will be able to:

- *discuss* the importance of gender in mitigating climate change and developing climate resiliency.



Outcomes

You will explore the following topics:

- Gender equality and climate change
- Best practices in climate change mitigation



Terminology

Mitigation:

Actions designed to reduce the effects or impact of something. In the current context, it refers to reducing the causes of climate change, particularly the accumulation of greenhouse gases (GHGs), which are emitted into the atmosphere, or the actions taken to enhance the absorption of GHGs.

Best practices:

Guidelines based on examples of successful actions that have been taken to reduce climate changes and that would produce similar good outcomes if followed.

Gender equality and climate change

Introductory video

The video *Climate Change & Gender* by the United Nations Development Fund (UNDP) highlights the work of the UNDP and gives examples of women-centred practices that can help to mitigate the impacts of climate change — for example, giving women access to information and water resources, and training in agro-processing and building cookstoves and solar power units.

Why gender equality is essential for climate change mitigation

Women make up nearly half of the agricultural labour force in developing countries, but they tend to have smaller holdings and to produce less. Gender is an important factor in mitigating climate change and its effects and developing resiliency because women:

- do not have the same types of jobs as men in and outside the household,
- do not have the same access to resources as men, and
- do not always have the same status in communities as men.

Due to their expected roles and responsibilities, these women experience increased workloads and reduced income because of climate change. They are therefore more vulnerable because they are likely to suffer more from the effects of climate change. Solutions to climate change or mitigation actions must acknowledge the needs of women (and other vulnerable people such as people with disabilities, the elderly and the very young).

When women and other vulnerable people are supported and given greater access to resources, they can increase their production. This in turn can help to reduce hunger, enhance nutrition and contribute to food security. Gender equality is important for improving both women's resilience and the community's resilience to climate change.

Gender equality is possible when women receive equal opportunities as follows:

- equal opportunities to **access** the necessary information and best practices on climate change mitigation that are timely and relevant to their situations
- equal opportunities to **make decisions** about climate change mitigation strategies for themselves and others
- equal opportunities to **own** and **control** assets and resources that they can use in their homes, farms and communities to mitigate climate change

Together these opportunities contribute to women's empowerment and will have a positive impact on economic growth and climate change mitigation, which is a major part of sustainable development.



Activity

Replay the introductory video. Think about which of UNDP's mitigation actions could be taken in your community. Alternatively, the facilitator may ask participants to discuss which of the actions would be appropriate in your community. The actions were:

- involving women as stakeholders and planners
- providing access to and control of resources, including water
- providing access to information about the climate
- training in climate-resistant farming practices, new harvesting techniques and new production and processing techniques
- training in the construction of newer, cleaner, more efficient stoves; solar grids; and reservoirs and river embankments

Best practices in climate change mitigation

Achieving gender equality in climate change mitigation involves providing support to women in the form of information, technical advice, materials and equipment. Such support provided to women must:

- be relevant to the decisions of small-scale producers,
- be timely and accessible to women in remote rural communities with marginal infrastructure,
- ensure that women participate in the design and delivery of the assistance,
- be accessible to women and other socially and economically marginalised groups, and
- must not increase women's time burdens (see Loboguerrero et al., 2019, for more information).

Climate change mitigation for small farmers

In agriculture, soils, plants and livestock play a major role in regulating greenhouse gases, which are one of the causes of climate change. Proper management of farms and forests is one method of mitigating climate change, but it can be difficult for women-operated farms to invest in technologies that would make the farms more efficient.

Relatively low-cost management practices that bring economic benefits and improved resilience for agricultural producers are therefore more appropriate for women. Low-cost mitigation practices are significant ways of empowering women because women tend to be among the small-scale and resource-poor producers.

Best practices in agriculture for small farmers include no-till agriculture, conservation agriculture — for example, multiple cropping or crop rotation — organic farming, biomass production, irrigation, re-afforestation and reducing soil erosion.

Women-led best practices

Watch the video [*It's Not Too Late: Climate Action for Women by Women*](#) by UN Women. It shows examples of climate change action **by** women and **for** women. Try to identify what actions each of the women in the video was engaged in. (You will need to pause the video relatively often.)

Here are some examples of other women-led initiatives that empower members of the community and address climate impacts.

In Malawi, the **Green Girls Platform** was established in 2018 to promote gender and the rights of women and girls. This non-governmental organisation (NGO) advocates for increasing the participation of women and girls in climate change initiatives and for financing to support women-led interventions.

Green Girls Platform has clubs in many communities. For example, there is a club in Karonga, an urban centre by the shore of Lake Malawi in the North Rukuru River floodplain. Karonga often experiences droughts and limited access to safe drinking water and poor-quality sanitation, and it experiences all the health risks associated with these situations. The Green Girls Platform Community Club in Karonga educates women on climate change and potential measures to address it (see International Centre for Climate Change and Development, 2023, for more information).

In January 2023, floods and strong winds destroyed most of the communities around Karonga. Villagers were forced to flee their homes and seek shelter at a school, which quickly became overcrowded. A lack of water and proper sanitation caused one family to find shelter by the side of a road. And a single, widowed mother received assistance from the Green Girls Platform and a space for sharing experiences with other women negatively affected by climate change. Members of the club learned about community-based early warning systems and how to cope with the adverse impacts of loss and damage. The club has been able to train 35 young women and girls on climate change, leadership, tree nursery establishment, and general management as well as briquette making for an alternative energy source. The members sell tree seedlings as part of a programme to prevent erosion and have planted 10,000 seedlings in schools in their communities (see Logoguerrero et al., 2019, for more information.)

In Pakistan, Humera Iqbal, a graduate of the Agriculture University Faisalabad in Pakistan, leads a volunteer organisation called **She Leads Agriculture**. The group's projects promote climate-smart agriculture among women involved in crop and livestock farming (see International Union for Conservation on Nature, 2023, for more information).



Reading

International Centre for Climate Change and Development. (2023). *Women are leading the charge in addressing climate impacts in Karonga Malawi*. <https://www.icccad.net/voices-from-frontline-p3/women-are-leading-the-charge-in-addressing-climate-impacts-in-karonga-malawi/>

International Union for Conservation of Nature. (2023, 8 March). Empowering women and girls to lead climate action: Gender and climate award announced in Pakistan. *News & Events*. <https://www.iucn.org/story/202303/empowering-women-and-girls-lead-climate-action-gender-and-climate-award-announced>

Loboguerrero, A. M., Campbell, B. M., Cooper, P. J. M., Hansen, J. W., Rosenstock, T., & Wollenberg. (2019). Priorities for climate change adaptation and mitigation for agriculture and food systems. *Sustainability*, 11(5), 1372. DOI: <https://doi.org/10.3390/su11051372>

Other community projects to mitigate the impacts of climate change

Other methods of promoting climate change mitigation within low-income communities include:

- Using improved cookstoves. This has a positive impact on the health of the users (mainly women), reduces how much firewood is needed for open fires, and reduces the release of GHGs into the atmosphere.
- Setting up early warning systems and training people in their maintenance.
- Disseminating information about climate-related events or situations via appropriate communication channels, including radio and mobile phones, to all members of the community.

In Mozambique, a project for empowering coastal communities, funded by the Swedish Embassy, assisted women in acting to alleviate the decline in the quantity of fish. The participants were given boats and fishing and agricultural conservation materials and equipment. In one district, 58 per cent of women participated in the programme (see International Union for Conservation of Nature, 2020, for more information).

In a flood-prone district in Bangladesh, a women-led organisation called Badabon Sangho trained 32 youth volunteers (18 of whom were girls) to use mobile devices to collect digital mapping data. The data will be used to develop community climate resilience plans (see Cities Alliance, 2021, for more information).

In Sri Lanka's Dry Zone, a number of organisations collaborated on a programme to improve community irrigation systems, drinking water systems and early flood warning systems (see UNDP, 2023, for more information).

The video [Bangladesh: A Women's Organization Taking Action for Climate Change in Informal Settlements](#) by Cities Alliance shows the work of Cities Alliance, which trains community members (particularly women and youth) in collecting data as part of a digital mapping project that is used for climate change planning. The crucial factor here is the involvement of community members in community meetings. What does the video say about the importance of community meetings?



Reading

Cities Alliance. (2021, 23 February). Bangladesh: Using digital maps for climate resilient city planning. *UNOPOS News*. <https://www.citiesalliance.org/newsroom/news/results/bangladesh-using-digital-maps-climate-resilient-city-planning>

International Union for Conservation of Nature. (2020, 9 March). Women in Mozambique engage in climate change action. *IUCN Newsletter*. <https://www.iucn.org/news/eastern-and-southern-africa/202003/women-mozambique-engage-climate-change-action>

United Nations Office for Disaster Risk Reduction. (2023, 17 June). Her land her rights: Combating environmental challenges and empowering women in Sri Lanka. *Prevention Web*. <https://www.preventionweb.net/news/her-land-her-rights-combating-environmental-challenges-and-empowering-women-sri-lankas-dry>

Unit summary



Summary

In this unit you learned why gender equality is important in the context of climate change mitigation actions.

You also learned about some examples of mitigation actions and best practices on climate change mitigation — with a focus on actions led by women — in Bangladesh, Malawi, Mozambique, Pakistan and Sri Lanka.

Assessment



Assessment

Multiple choice questions: 2

1. Climate change mitigation is:
 - A. Actions designed to reduce the sources of climate change, particularly the accumulation of greenhouse gases (GHGs) that are emitted into the atmosphere
 - B. Actions designed to enhance the absorption of GHGs in the atmosphere.
 - C. Both of the above.
2. A best practice is:
 - A. Someone's best efforts.
 - B. Examples of previous successful actions that have been taken and that would produce similar good results in the present time.
 - C. Examples of previous successful actions that have been taken but would not apply to the present situation.
3. Gender equality is important to climate change mitigation actions because:
 - A. Women are more negatively impacted by climate change and will require equitable support to enhance their resiliency.
 - B. Men are more negatively impacted by climate change and will require equitable support to enhance their resiliency.
 - C. Climate change affects everyone in the same way and to the same extent.

Unit 3

Advocating gender equality and mobilising communities to attain gender equality

Introduction

This unit introduces gender equality advocacy and advocacy methods for sensitising and mobilising members of communities to take actions to mitigate climate change impacts. The importance of engaging men to support gender equality and strengthen resiliency is emphasised, and some key methods for engaging men as advocates are discussed.

Although conservation efforts in agriculture are the focus of this course, this unit will briefly discuss the impact of non-agriculture-related actions on gender equality and the indirect but important impact of these actions on reducing vulnerabilities among girls and women.

On completion of this unit, you will be able to:

- *identify* how to sensitise and mobilise communities, in particular men, to support gender equality to strengthen community efforts to build resiliency and women's leadership for climate change mitigation.



Outcomes

You will explore the following topics:

- Advocating for gender equality
- What is advocacy? What does an advocate do?
- Advocacy actions (sensitising and mobilising)
- Why is it important to engage men in supporting gender equality?



Terminology

Advocacy:

Actions giving support or encouragement to another person or people for a particular cause, such as gender equality.

Mobilising:

Assembling and preparing groups of people or communities to take action for a specific purpose or cause, such as climate change mitigation.

Sensitising:	To cause someone to become aware of and respond to an action or issue.
Ally:	A person, organisation or country that is associated with or united with other members of different groups for a common cause.
Champion:	A person who actively supports and defends the rights, principles or causes of other people.
Mentor:	A person who advises and provides on-the-job training to a younger or less senior person. The mentor is likely to be an experienced person who provides leadership and access to networks.
Sponsor:	A person or organisation that pays for or contributes to the costs associated with the hiring of another person or the costs associated with an event.
Advocate:	A person who publicly supports or recommends a particular cause or policy. In specific instances an advocate is a person whose job is to defend someone's case in a court of law or to act as go-between two conflicting parties.

Advocating for gender equality

Introductory video

The video *Promoting Gender Equality and Women's Empowerment through Responsible Investment in Training* by the Food and Agriculture Organization (FAO) of the United Nations shows women involved in agriculture in Sierra Leone. However, there are women in similar situations in all developing countries. The women's inequality affects their capacity to produce food and achieve their full potential. The FAO is working with these women to strengthen their capacities by advocating for:

- women's involvement in decision-making related to responsible investments in agriculture
- gender-responsive policies, laws and incentives
- organisations to improve services and work towards empowering women and to promote gender equality

What is advocacy? What does an advocate do?

A person's decisions and choices are influenced by social norms and behaviours, and what decisions and choices other people are making. Actions to mitigate climate change and its impacts are also likely to be influenced by a person's belief that the decisions they make are for the sake of the environment and future sustainability. To encourage people to become advocates for gender equality and to support women-led climate actions it is necessary to:

- provide data and information to increase knowledge and awareness of gender equality, and to influence behaviours and attitudes; and
- provide support aimed at changing the circumstances under which decisions are made.

The main responsibilities of an advocate for gender equality are to raise awareness of the importance of the different impacts of climate change on men and women and to disseminate such information. As part of community mobilising, the advocate will also act as the go-between for community members and other stakeholders such as financial and donor organisations, government bodies, local government representatives and other community groups.

The advocate supports women who are competing for key positions in the community and at the national level in political parties by improving female candidates' access to funding, which is usually relatively limited compared to funding available to male candidates. Advocates therefore assist with fundraising. They also raise awareness of the importance of women's participation in decision-making at all levels of society, including political levels, facilitate training for candidates and assist in organising campaigns designed to encourage support for women candidates.

Advocacy actions (sensitising and mobilising)

In the context of gender equality in climate change actions, advocacy actions and tools include:

- Making efforts to sensitise people to the issue by disseminating information about the effects of climate change and especially its disproportionate negative effects on women. The information shared should also include information about best practices derived from previous climate change mitigation actions.
- Conducting publicity campaigns or promotions by using brochures and pamphlets, radio, television and social media through blogs tweets and letters to the editor to raise awareness and increase knowledge.
- Running informal and formal training sessions to communicate information to community members who do not know about climate change or what to do to mitigate the problems. The messages will be relevant to the realities of the communities and focus on local, real-life impacts.

- Training experts, celebrities, influencers or extraordinary community members to deliver the message.
- Becoming allies, champions, mentors or sponsors, or encouraging women to be leaders or supporting women as leaders.
- Building coalitions and networking around specific themes or causes.
- Talking about and increasing awareness of discrimination and women's rights. Demonstrations are one way for groups to publically support a person or cause.
- Forming diverse and inclusive community advisory boards and participatory community monitoring committees.
- Planning and executing community-specific actions.
- Writing letters or meeting with decision makers.
- Providing tangible support in the form of legal advice, finance, shelter, supplies and services to a vulnerable group.
- Taking action to redistribute care work in the home.

Why is it important to engage men in supporting gender equality?

Gender equality cannot be achieved by women alone or by focusing exclusively on women.

Much of the inequality and discrimination women face is directly or indirectly related to their interactions with men and their disadvantages when compared to men — particularly in terms of access to resources and decision-making. Efforts aimed at achieving gender equality and the empowerment of women must include raising awareness among men and boys and engaging them as advocates. Everyone must understand that including men and boys in gender programming creates better outcomes for both sexes. Engaging with men and boys is not an end in itself; it is a means to an end: gender equality.



Note it!

We can use gender to understand boys and men.

Boys' and men's privileges are taken for granted and their feelings and beliefs about having control start very early in life. Their behaviours therefore seem almost natural to both men and women. Most people do not think that there is anything wrong or unusual about allowing boys to play outside while girls remain inside or are expected to clean and cook. If we ignore these social behaviours and unequal gender power dynamics, women will continue to be marginalised — and that will only increase women's vulnerability to the impacts of climate change in the long run. By overlooking women's and girls' roles and the underlying inequity issues, we risk designing climate plans and projects that do not match all

people's needs and possibly exacerbate the vulnerability of certain groups.

When we understand that we can no longer take social behaviours and beliefs for granted, we have to start questioning and challenging beliefs about what masculinity is. Men's gender roles usually mean that men often have power over some aspects of women's lives. More men than women are presidents, prime ministers, religious leaders, judges and generals in armies. Similar leadership roles are held by men within households.

Questioning and challenging men to rethink their roles, beliefs and behaviours will cause some men to become "fearful, resentful, jealous and angry towards acts that disrupt the status quo" (Guthridge et al., 2022).

Without the support of men, however, gender inequality will be more difficult to erase. It will be difficult, for example, to change the cycle of violence against women if men's fundamental mindset remains unchanged. Men who are in leadership positions have to be encouraged to use their power to advocate for gender equality. Working with men and male youth creates opportunities for stakeholders to have meaningful discussions and engagement. Men are encouraged to share power because inequalities weaken families, communities and development generally. When power and the privileges that come with it are shared equally, there is a greater chance that everyone will be able to build resilience to climate change.

Men who are members of privileged groups and are willing to collaborate with women to address inequities are called allies. An ally who is frequently and actively committed to gender inclusion is an advocate. Advocates learn from women's stories and intervene to counteract discrimination.

To encourage men to become advocates for gender equality and to support women-led climate change actions, we can use the advocacy tools listed above. In addition, sensitising men to support gender equality and support women in climate change action involves:

- Using people in authority, including religious leaders who support women's rights, to deliver advocacy messages to men. Professional male athletes who are vocal supporters of gender equality are also very effective at influencing or changing attitudes and behaviours. Men are more likely to listen to other men about why gender equality matters. It may be necessary to get other men, who received prior gender training, to intervene initially, before men with a higher profile become involved. Men can share their experiences about what they have done.
- Asking men to commit to taking a specific action or to making a pledge that is related to advancing gender equality and supports women or more vulnerable populations.



Activity

- Getting men to participate more equally in housework, caregiving and parenting. This is the first step in ensuring gender equality in the home.

Watch *Men Need to Step Up for Gender Equality* by the OECD and then discuss with other participants:

- what culture is, and
- how difficult it would be to get men on board as advocates for gender equality.

Can you think of at least one way to encourage men to contribute more equally to caregiving and parenting in the home? Alternatively, the facilitator may ask participants to work in groups of three or four to identify at least one way to encourage men to contribute more to reproductive work.

Highlighting men-led gender equality actions

Some male-dominated organisations have also taken action in the pursuit of gender equality. For example, The All Africa Conference of Churches (AACC) helped to organise a three-day workshop in July 2022 to train male champions in advocating for gender equality and women's empowerment, with a focus on widows. In Sri Lanka, some private companies have been taking deliberate steps to change their workforce by hiring more women as mechanics and engineers and extending paternity leave. In Bangladesh, the private sector teamed up with a bank to design loans that reward borrowers for increasing the number of women supervisors in their businesses and for reducing GHG emissions.



Reading

Guthridge, M., Kirkman, M., Penovic, T. & Giummarra, M. J. (2022). Promoting gender equality: A systematic review of interventions. *Social Justice Research*, 35, 318-343.
<https://link.springer.com/article/10.1007/s11211-022-00398-z>

Examples of community mobilisation

Community mobilisation on climate change occurs when members of the community put aside their differences to overcome a common problem or challenge associated with the impacts of climate change. Mobilisation involves discussion, decision-making and participation by members on agreed-upon actions. When women actively participate in community mobilisation and their views are listened to and valued, their empowerment benefits. Gender equality is important in climate change mitigation because co-operation between women and men in agreeing on and

implementing national climate policies, programmes or projects increases the chances of success.



Note it!

Community-based initiatives are key to mitigating climate change. While climate change mitigation actions such as providing safe shelters and services for vulnerable people are important, these actions do not address the underlying causes of the disproportionate negative impact of climate change on women and girls. Changing the ways men and women interact in their communities and how they view issues such as balancing power between men and women addresses the root causes.

Highlighting women's conservation and climate actions

Watch the video *Listening to Women: Adapting to Climate Change* by the FAO. It shows different ways in which women are working against climate change in agriculture by getting involved in agro-processing and rural tourism in different parts of the world.

Now watch *Belize Women in Fisheries Forum 5: Gender and Climate Change Understanding the Link*, also by the FAO. It shows how women in fisheries have been drawing attention to the work they do.

Highlighting non-agriculture action for climate actions

Some actions may not seem directly related to climate change but are very impactful in the long run. For example, in Malawi, child marriages are still common, and girls who marry early drop out of school, which means they will have fewer opportunities to have sustainable livelihoods (see World Bank, 2022, for more information). Women with less education and information will not be aware of climate change mitigation opportunities and so obviously will not be able to take advantage of them. Advocacy for reducing child marriages is therefore related to climate change.

The video [*CAMFED: Girls' Education and Climate Change*](#) by Campaign for Female Education (ICAMFED) shows how education is also important for reducing the impact of climate change on girls.

Finally, the video [*Gender and Climate Expert Lorena Aguilar*](#) by the Georgetown Institute for Women Peace and Security offers hope that there has been some progress in the understanding of the relationship between gender and climate change.



Photograph from Perret, M. (n.d.). Community members attend a briefing by a social mobilization team, Freetown, Sierra Leone. UN Photo. <https://dam.media.un.org/archive/socila-mobilisation-team-2AM9LO4G9H5Y.html>
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Activity

Can you think of at least three topics that should be discussed at a community meeting on climate change?



Reading

World Bank. (2022). *Breaking the cycle of reduced economic opportunities for Malawi's women and girls*. <https://www.worldbank.org/en/country/malawi/publication/breaking-the-cycle-of-reduced-economic-opportunities-for-malawi-s-women-and-girls>

Unit summary



Summary

In this unit you learned what advocacy is and read about some of the tools that are used in advocacy.

You also learned:

- about the importance of engaging men in advocacy for gender equality and some ways to engage men; and
- how to sensitise and mobilise communities to support gender equality with the aim of strengthening community efforts to build resiliency and women leadership for climate change mitigation.

Assessment



Assessment

Multiple choice questions: 3

1. Which of the following are advocacy actions to inform and motivate communities?
 - A. Training and sensitisation.
 - B. Providing support to politicians.
 - C. Using experts, celebrities, influencers or extraordinary community members with prior training to deliver the message.
 - D. Only A. and C.
 - E. All of the above.
2. Which of the following are examples of a non-agriculture-related action to take to promote gender equality and climate change mitigation?
 - A. Education of girls.
 - B. Reduction of child marriages.
 - C. Designing bank loans that reward borrowers for increasing the number of women in their businesses and reducing GHG emissions.
 - D. Only A. and B.
 - E. All of the above.
3. What can be done to encourage men to support gender equality?
 - A. Allow men who have been trained in gender equality to talk to other men.
 - B. Ask men to give up all their power and privileges.
 - C. Use professional male athletes as role models.
 - D. Only A. and C.
 - E. All of the above.

Unit 4

Gender and food security: The traditional role of women in subsistence food production and processing

Introduction

This unit explores the important role women play in agriculture — specifically, their contribution to food nutrition and food security. You will learn about some traditional and environmentally friendly agricultural techniques still practised by small-scale and subsistence agricultural producers, most of whom are women.

We will also take a critical look at:

- some modern agricultural practices that can be considered climate-smart agriculture techniques,
- some modern practices that have negative impacts for women in particular,
- some household-based agricultural preservation and processing practices, and
- traditional practices for home medicines and the importance of these women-led practices.

On completion of this unit you will be able to:

- *recognise* traditional and modern techniques adapted by women across the world in response to local climate and weather fluctuations, and
- *recognise* women's role in producing and procuring food.



Outcomes

Subsistence: A type of livelihood that is based on obtaining the minimum necessities of life.

Traditional: Actions and practices from the past that have stood the test of time.



Terminology

Examples of traditional practices in agriculture include polyculture (combining a variety of agricultural practices such as a nursery for seedlings, rearing freshwater fish and planting trees as windbreaks); intercropping (growing different crops mixed with each other); mixing crop and animal farming; crop rotation (planting different crops in different seasons); making organic compost by incorporating farm waste into soil to promote soil health; and harvesting rain in covered barrels.

Modern:	Actions or practices established in the present or in recent times.
Climate-smart agriculture:	<p>Technical, economic, social and environmental actions in agriculture that increase productivity and incomes, increase resilience to climate change and reduce greenhouse gases (GHGs).</p> <p>Examples include drought-tolerant crop species developed through crop breeding; community ponds in farming areas to save water to use during prolonged dry periods; flood-tolerant crop species developed through crop breeding; improved drainage systems on agricultural lands and farms, including regular desilting to alleviate flood risk; elevated flood havens; designated evacuation routes for livestock; and the use of bio-stimulants, beneficial micro-organisms and improved crop varieties to enhance crop production in stressful conditions.</p>
Food security:	Occurs when people have regular and long-term access to sufficient, affordable, safe and nutritious food that meets their basic needs and preferences for a healthy life.
Food nutrition:	Occurs when there is a diet that provides the essential substances to support a healthy life.
Food processing:	Turning agricultural products into other forms of foods by washing, chopping, grinding, cooking, pasteurising, freezing, fermenting and packaging them.

Food preservation: Actions to extend the shelf life of food by preventing spoilage.

The importance of agriculture in dealing with climate change

Approximately 38 per cent of the land on Earth is currently used for agricultural production, including crop and livestock production. The increased temperatures associated with climate change negatively affect agriculture and result in lower yields and rising prices. When food becomes relatively scarce and more expensive, some people, particularly those who are poor and vulnerable, will face malnutrition and food insecurity.

Trees and plants absorb and store carbon dioxide (CO₂) and mitigate against climate change. Yet agriculture, including forestry, is responsible for approximately 23 per cent of greenhouse gas emissions. Some crops, fertilisers and large herds of livestock release substantial amounts of methane (CH₄) and nitrous oxide (N₂O). When there is deforestation or land clearing to make way for mega farms or mining, carbon dioxide and other GHGs are released. Forest loss and damage cause around 10 per cent of global warming.

Therefore, agriculture both affects and is affected by climate change. However, proper management of soil, water and land will allow agricultural producers to maintain their livelihoods and provide food and nutrition for the wider communities, while also reducing or removing GHG. Climate-smart agriculture can help us achieve this.

Women in agriculture

It is estimated that women make up an average of 43 per cent of the agricultural labour force in developing countries and as much as 50 per cent in eastern and south-eastern Asia and Sub-Saharan Africa.

Smallholders in agriculture include crop, forest and livestock farmers who manage areas ranging from less than one hectare to ten hectares. They tend to be subsistence producers who work for themselves and depend on family for labour. Subsistence producers use most of their produce to feed their families. Women are mainly subsistence producers.

The small-scale fishing industry contributes an estimated 46–54 per cent of fish catches. Small-scale fisheries employ over 90 per cent of the fishers and approximately 85 million people are employed in fish processing, distribution and marketing. About half of the people employed in small-scale fisheries are women. As with land-based agriculture, small-scale fisheries not only generate income for families

but also supply them with nutritious food (see FAO, 2012, for more information).

Women are involved in all aspects of agricultural production, although heavy, manual work tends to be performed by men, who are the main decision makers. The women's farm work is intertwined with housework, and the food they grow or animals they rear are transformed into food for the household.

Women work on farms as unpaid family labourers, as paid wage workers — full-time, part-time or seasonal — or as farm managers. The types of work they do depends on geography, culture and what is happening in the household. For examples, wives take on the role of managers when their husbands migrate in search of other work.

Generally, women are responsible for propagation, post-harvest agro-processing, livestock rearing and selling produce in community markets. Although there are no precise data on women's work in different farming activities such as seed selection, selling produce and food preparation, it is estimated that women devote more time than men to many household activities in addition to their work on the farm. Even women who are employed full-time off-farm undertake most of the daily work related to healthcare for themselves and their family and to maintaining links between the home, school and church and organising community-based activities.



Reading

Food and Agriculture Organization of the United Nations. (2012). *Smallholders and family farmers* [Factsheet]. https://www.fao.org/fileadmin/templates/nr/sustainability_pathways/docs/Factsheet_SMALLHOLDERS.pdf



Activity

In your journal, reflect on what agricultural activities the women in your community are usually involved in. Are these activities the same as the activities the men participate in? The facilitator may ask you what activities you are usually involved in, both on the farm and in the community, and lead a discussion about the different activities of each sex to identify gender norms.

Importance of gender in subsistence food nutrition and food security

All farmers face similar challenges from climate change and adverse weather, but the greater vulnerability of women as farmers is related to the differences between women and men when it comes to asset ownership. In agriculture, men usually have greater access to productive

resources (for example, land, labour, capital, technology and knowledge); services (extension and credit); and decision-making opportunities. The differences are referred to as the **gender gap**. That means that many women who are subsistence farmers do not have the means to invest in modern agricultural technology and so they rely on traditional methods. Women could increase their yields on their farms by 20–30 per cent if they could gain access to the same resources as men. Women's additional production could contribute to food and nutrition for as many as 100–150 million people. Women subsistence farmers therefore have tremendous potential to contribute significantly to the health and well-being of their communities.

**Note it!**

Women are the mainstay of development in many parts of the world, particularly in rural areas. Sustainable development cannot be achieved without the contributions of women. Women as farmers contribute to food security by making food available and accessible on a continuous basis to farm families and communities. In many developing countries they collect firewood and water for cooking and cleaning, both of which are crucial for daily health and survival for themselves and other family members, including the very young and the elderly. The contributions they make enhance the resiliency, self-sufficiency or independence of their households because they then do not have to rely on government support.

Since many large farms produce food for export or supply inputs for manufacturing industries, the availability of food on the local markets is highly dependent on small farmers.

Traditionally, farmers took the lead in saving quality seeds from one harvest to be used in subsequent plantings. Their contributions maintain the biodiversity and ecology in communities. In most instances, women's roles are as seed keepers and propagators of biodiversity.

Women engaged in small-scale agricultural production are sometimes seen as being involved in home-based “activities” rather than in “work.” Their important roles are unrecognised, and they are seen as secondary farmers or home gardeners who do only backyard gardening, or as market vendors. Their work as small-scale farmers is not seen as contributing to diversity, sustainability, food and nutrition.

Women are expected to devote more time to non-market or home-based work such as childcare and household responsibilities. Therefore, they cannot compete with their male counterparts for jobs or even in terms of time spent on the farm. The result is a performance gap between men and women in terms of agricultural productivity. To maintain the flexibility they need to perform more efficiently in both their farm and non-farm work, many women choose to be self-employed and operate businesses from home. Women have become associated with cottage, or home-based, businesses.

The importance of home-based agriculture businesses or backyard gardens can be clearly seen in Bangladesh, where this type of production

provides most of the country's supply of firewood, fodder, medicine, fruit and timber.

Modern versus traditional agriculture

The traditional farming techniques that women predominantly use include mixed or polyculture (intercropping various crops at the same time); crop rotation; cover cropping (planting crops not for harvesting but to preserve the soil or prevent erosion); mulching; and integrated animal-crop farming. They use organic manure, fallowing and agroforestry. They also tend to use hand-held tools like a hoe and digging stick instead of animal-driven or mechanised ploughs since these require less upper-body strength and physical power. Traditional soil conservation practices include mulching using compost, straw, sand, sawdust, wood chipping and leaves. Modern mulching uses plastic products.

Modern agricultural systems and practices include:

- the use of greenhouses or a structure that uses transparent materials — for example, glass or netting — that filter the light and heat of the sun and also protect against the full force of the rain. This type of structure can assist in regulating climatic conditions, such as temperature and humidity.
- hydroponics, in which plants are grown in water infused with nutrients instead of in soil.
- aquaponics, which combines rearing fish in tanks and using the water infused with fish waste in a hydroponics system for watering plants.
- vertical farming or stacking plants on a vertical structure instead of on a large, single-level surface.

Traditional **conservation** actions include replanting trees (reforestation) and preserving genetic diversity. Modern actions include:

- trickle and drip irrigation.
- watershed management.
- adding bio-charcoal to increase soil fertility and crop productivity.
- planting genetic material to mitigate climate change and extreme adverse conditions — for example, disease-resistant plants, flood-tolerant species of rice and drought-tolerant species of dasheen (now being grown in Guyana); or plants able to grow in high temperatures (for example, tea in Sri Lanka and tomatoes in Mauritius).
- applying chemicals to the soil that allow crops to grow on salt-affected soils that have been flooded by the sea or affected by scarce rainfall (for example, in the Middle East).
- applying organic fertiliser and organic pesticides to reduce the negative effects of pollution through chemical seepage into the soils and into the ground water. This also reduces the amount of GHGs

released into the atmosphere (currently used in pineapple farming in Costa Rica).

Many of these techniques have been shown to increase productivity and offer greater resilience to the impacts of climate change.



Photograph: Samson, T. (2012). *Malawian farmer in her groundnut plot under conservation agriculture*. International Maize and Wheat Improvement Center (CIMMYT). <https://ccafs.cgiar.org/news/conservation-agriculture-malawi-we-always-have-problems-rain-here>

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In the picture above, the farmer, Belia Sikelohe from Malawi, practises conservation techniques such as eliminating traditional ridge-and-furrow tillage systems, keeping crop residues on the soil, and rotating or intercropping maize with other crops. These techniques reduce the labour and costs involved. The improved soil structure is also resistant to erosion and increases water infiltration and retention, a huge benefit when drought threatens in Malawi, where maize farming usually depends on rain alone as its water source.

Many people therefore choose traditional agriculture practices as sustainable alternatives to industrialised production methods and as a means for protecting diversity (see Dahlin & Svensson, 2021, for more information).

Some women-led businesses in the eco-tourism industry have been successful in using traditional practices to conserve natural resources while also providing economic benefits to themselves and their local communities (see Akhter et al., 2013, for more information).



Reading

Akhter, S., Alamgir, M., Sohel, S. I., Parvez, R. Ahmed, M., & Chowdhury, M. S. H. (2013). The role of women in traditional farming systems as practiced in homegardens: A case study in Sylhet Sadar Upazila, Bangladesh. *Tropical Conservation Science*, 3(1), 17-30. doi:10.1177/194008291000300103

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Dahlin, J., & Svensson, E. (2021). Revitalizing traditional agricultural practices: Conscious efforts to create a more satisfying culture. *Sustainability*, 13(20), 11424. <https://doi.org/10.3390/su132011424>

Licence: Open access

Some disadvantages of modern agriculture techniques

Some modern-day agricultural techniques designed to increase profits and reduce the amount of hard, physical labour required have led to monoculture — that is, large fields are planted with the same crop to allow for mechanised harvesting, etc., by large machines and equipment. Such farming systems have resulted in over-tillage of the soil, loss of crop genetic diversity, overuse of fertilisers and pesticides and pollution from chemicals leeching into the soil and underground wells. Large-scale monoculture — for example, the production of grain for export, animal feed or conversion into biofuel — means that land is not available for traditional domestic food production in which more women are engaged. For some women who are both small farmers and responsible for their household, the increased amount of management time needed for large-scale production is an added burden.

The beneficiaries of mechanisation tend to be wealthier men who can afford the machines and equipment. Labour-saving equipment is too costly for many farmers, and so they cannot benefit from modernisation. Such technological interventions risk contributing to or increasing the inequalities between large and small farmers and to increasing the gender gap.

Food preservation and processing techniques

Introductory video

The video [Food Preservation](#) by APC Books talks about various food preservation methods — for example, refrigeration, pasteurisation, drying in the sun, pickling or adding sugars to make jams, jellies and sauces.

Home-based food processing and preservation are important practices that have been passed down through generations. They involve the use of traditional techniques to preserve food, such as drying, smoking, salting, fermenting and pickling. These methods help to extend the shelf life of food and reduce food waste. Additionally, traditional home-based food processing and preservation practices can help to maintain the nutritional value of food because they preserve vitamins and minerals that are often lost during commercial manufacturing processes.

Home-based food processing and preserving also have economic benefits. By preserving food at home, families can save money on groceries and reduce their dependence on store-bought products. This can be especially important in areas where fresh produce is expensive or difficult to obtain. Having such food available at home contributes significantly to food security.

Overall, traditional home-based food processing and preservation are important practices that can help to promote healthy eating habits, reduce food waste and save money.

Preserving food gives people a safety net to help them cope during food shortages caused by seasonal unavailability of food and natural disasters like hurricanes and droughts. It gives them an emergency supply of food to stop them from going hungry in difficult times.



Photograph: Naika, A. (2020). *Bila: Fermented cassava*. Food and Agriculture Organization. <https://www.fao.org/3/cb2113en/CB2113EN.pdf>
Licence: CC BY-NC-SA 3.0 IGO

One example of a traditional preserved food is fermented cassava, pictured above. It is called bila and is a speciality of the Naila Village in Fiji (see Naika, 2020, for more information).



Activity

Go online and read the booklet [*Preserve Your Own Food: Promoting Healthy Eating through Home Food Processing and Preservation*](#). It is a practical guide to simple methods and techniques for preserving food at home. It promotes the consumption of local starchy staples and dark green leafy vegetables.

The methods in the booklet were tested in two communities in the Ra Province in Fiji. A pilot project was conducted in Burenitu Village and the pilot version of the booklet has been used to facilitate training in 107 project communities in Fiji.

Now watch the video [*How to Store Raw Mango for Long Time*](#) by Pai's Kitchen. It explains how to preserve mangos and provides recipes for making mango chutney as an appetiser or side dish.

Another traditional method of processing cassava is to make unleavened cassava bread. It is a very lengthy process. Watch the video [Making Cassava Bread in Warapoka, Guyana](#) by Reel Guyana to see how it is done.



Reading

Naika, A. (2020). *Preserve your own food: Promoting healthy eating through home food processing and preservation*. Food and Agriculture Organization of the United Nations.

<https://www.fao.org/3/cb2113en/CB2113EN.pdf>

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Home-based medicines

Women have long played a pivotal role in healing in Indigenous societies. Traditional women-led practices of home-based medicines are remedies that are prepared at home using ingredients found in their natural state and used to treat a wide range of illnesses. The knowledge, skills and practices are often passed down through the generations and are based on the beliefs and experiences of the cultures in which they are used (see “Traditional medicine,” 2023, for more on this).

It is common for women to be the primary producers of traditional home-based medicines, especially herbal medicines made from leaves, roots, bark or flowers. Herbal medicines include herbal teas to treat colds, headaches and digestive issues; poultices that are applied directly to the skin to treat rashes and insect bites; herbal tinctures made by soaking herbs in alcohol or vinegar; and oil infusions made by soaking herbs in oils. They can be used to treat a variety of ailments, such as anxiety, insomnia, digestive issues, skin irritations and other ailments.

Many people still use these medicines as alternatives to industrialised medicines and see them as a way to protect their environment from the threats caused by unsustainable lifestyles (see Dahlin & Svensson, 2021, for more information).

Traditional medicine is available in many parts of the world. For many people who live far from public health centres, it plays an important role in their culture and health. Lack of access to public or government maternity care is one major reason for the use of traditional medicine among pregnant women. The knowledge and use of traditional medicine contributes to the conservation of trees and plants and to biodiversity.

More than 80 per cent of the world’s population uses traditional medicine. It is also the foundation for many modern medicines and practices. Almost 40 per cent of approved pharmaceutical products come from natural substances. Watch the video [Bringing Ancient Wisdom and](#)

[*Modern Science Together*](#) by the WHO Global Centre for Traditional Medicine to find out more.



Reading

Dahlin, J., & Svensson, E. (2021). Revitalizing traditional agricultural practices: Conscious efforts to create a more satisfying culture. *Sustainability*, 13(20),11424. <https://doi.org/10.3390/su132011424>

Traditional medicine. (2023, 25 December). In *Wikipedia*. https://en.wikipedia.org/wiki/Traditional_medicine.

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Activity

Identify one traditional medicine in your country. Ask questions in your community to help you identify the ingredients and methods used for making the medicine and what disease or illness it is used to treat. The facilitator may ask you to discuss the advantages and disadvantages of some traditional medicines.

Unit summary



Summary

In this unit you learned about:

- the importance of women’s roles in agricultural production, and
- the traditional and modern agricultural techniques used by women across the world.

Women make essential contributions to agricultural and rural economies in all developing countries. Rural women in agricultural communities often manage both their household and the various tasks associated with farm work as well as alternative livelihood strategies. Their activities typically include producing agricultural crops, tending animals, processing and preparing food, working for wages in agricultural or other rural enterprises, collecting fuel and water, engaging in trade and marketing, caring for family members and maintaining their homes. Women also participate in home-based preservation and processing activities.

Many of the activities women take part in are not defined as “economically active employment” by governments but they are essential to providing food security and maintaining the general well-being of their households and communities.

Assessment



Assessment

Multiple choice questions: 4

1. Why are home gardens important in the face of climate change?
 - A. Small-scale home gardens provide firewood, fodder, medicine, fruit and timber.
 - B. Small-scale home gardens contribute to diversity, sustainability, food and nutrition.
 - C. Small-scale home gardens provide food for the local communities.
 - D. All of the above.
2. Which of the following statements are true?
 - A. The food that women grow provides nutrition and food security for their families.
 - B. Women's livelihoods contribute to self-sufficiency among rural populations.
 - C. Women supply food to local community markets, which then contributes to self-sufficiency among rural populations.
 - D. Women's backyard or home gardens are unproductive.
 - E. Only A., B. and C. are true.
 - F. All are true.
3. Which of the following statements are examples of modern agriculture techniques?
 - A. Covered agriculture or agriculture using greenhouses.
 - B. Trickle and drip irrigation.
 - C. Plants that have been grown from seeds from a previous crop.
 - D. Vertical farming.
 - E. Only A., B. and D.
 - F. All of the above.

Unit 5

Women and conservation: Women-led efforts in natural resources and environment conservation

Introduction

This unit contains case studies about women around the world who are taking the lead in climate change actions. Their actions are examined in relation to the geography of where the women live, the impact of their actions and whether their actions can be sustained.

We also look at the need to balance climate change conservation actions with the needs of both humans and wildlife. We must satisfy the needs of people who depend on the land, forests, seas and wildlife with the need to limit over-hunting, fishing and logging and prevent stripping nutrients from the soil.

This unit highlights the need for continuous dialogue and the active involvement of local and Indigenous people, specifically women, in decision-making. The case studies highlight conservation practices that you can replicate in your community or context.

On completion of this unit you will be able to:

- *analyse* case studies and the geographical context of women-led efforts, their impact and sustenance.



Outcomes



Terminology

Ecofeminism:	The combination of advocacy for the environment and advocacy for women's rights.
Non-traditional:	Any career or industry in which less than 25% of any one gender is normally employed. For example, the construction and automobile industries are non-traditional for women since there are very few women in the workforce. Cosmetology and nursing are non-traditional careers for men.
Activism:	Social, political or environmental actions taken by individuals or groups that are designed to make changes or reforms towards a perceived greater good.
Activist:	A person who takes direct social, political or environmental actions for or against a social change.

Women taking the lead in climate change actions

Introductory video

The video [Shaping an Equal, Greener and More Resilient Future for Women and Girls](#) by the Asian Development Bank (ADB) highlights the ADB's actions to help create a different future for women and girls by:

- helping to create decent work, especially in areas that do not traditionally hire women,
- providing access to basic needs such as food and water, and
- helping women to take the lead in climate change actions, or to become agents of change in their communities.

Case studies

We will now look at some case studies or examples of women leading sustainability efforts in their communities around the world.

For all the cases studies think about:



Activity

- how women may be doing non-traditional activities as leaders and change agents; and
- whether individuals like yourself could duplicate some of these actions or start similar actions in your community.



Case study

Chipko movement

The Hindi word chipko means “to hug” or “to cling to.” The Chipko protest movement originated in the Himalayan region of Uttarakhand (then part of Uttar Pradesh) and quickly spread throughout the Indian Himalayas. The first Chipko protest occurred in 1973, near the village of Mandal in the upper Alaknanda Valley. The protest was against the government, which had denied approval to the villagers to use a small number of trees to build agricultural tools but had given approval to a sporting goods manufacturer to cut down many trees. Chandi Prasad Bhatt led villagers into the forest, where they surrounded the trees to prevent logging. The logging company was prevented from cutting down the trees, and the government later cancelled the company’s logging permit and granted the village cooperative, the Dasholi Gram Swarajya Mandal (DGSM), approval for their original request.

The next major protest occurred in 1974, near the village of Reni, when a large student-led demonstration protested against a plan to fell more than 2,000 trees. The government insisted that all the men from the surrounding villages go to a nearby city to receive compensation, but this was seen as a plot to allow the loggers to proceed unhindered. The women and girls who remained in the villages, led by Gaura Devi, got together to hug the trees and refused to move out of the way of the loggers. They bravely stood up to the loggers, all of whom were men. In response to the protest actions, the government established an investigation into the demonstrations and finally declared a ten-year ban on commercial logging in the area.

The Chipko movement became a popular peasants’ and women’s movement for forest rights. Chipko protesters used a variety of non-violent techniques grounded in Mahatma Gandhi’s concept of satyagraha (non-violent resistance), such as fasting and tying sacred threads around the trees while reading from the *Bhagavadgita*. In 1978, in Pulna Village in the Bhyundar Valley, the women took away the loggers’ tools and left “receipts” for the tools to be returned only if the loggers withdrew from the forest.

The protests gradually expanded across the entire region, ultimately becoming the Save Himalaya movement. In the 1980s, the protests were focused on the Tehri Dam limestone mining operations, and resulted in the closure of at least one limestone quarry. Large-scale reforestation resulted in the planting of more than 1 million trees in the region.

After the ten-year ban, the government resumed large-scale logging, but the protests continued.

The video [The Chipko Movement: A Milestone in Ecofeminism](#), by Feminism in India, provides some background and original pictures of the Chipko Movement.



Activity

The video [The Chipko Movement: A Milestone in Ecofeminism](#) ends with a question: Why do you think ecofeminism is essential to our survival?

Think about this question and write your thoughts in your journal. Alternatively, the facilitator may ask you and the other participants to discuss your thoughts.



Case study

Planting resilience to climate change

In 1998 in Honduras, Central America, flooding and landslides caused by Hurricane Mitch killed more than 7,000 people and eroded the landscape and coastlines. An estimated 1.5 million people were displaced. A year or so later, wind blowing in from the sea created large sand dunes. The mounds of sand began to spread into the community and covered a row of houses. Hundreds of residents were forced to leave their homes and relocate.

Attempts by outside organisations to restore the beach with non-native vegetation failed. A group of local Garifuna women and OFRANEH (the Black Fraternal Organization of Honduras) established a nursery that produced 3,600 seedlings of native shrubs and trees. The women planted cocoplum, sea grape and other native coastal plants on and around the sand dunes in an effort to halt the advancing sand and prevent further displacement of the residents of the Santa Rosa de Aguán community. Over the years, the vegetation thrived. Today, the vegetation planted around the community by Garifuna women helps to prevent the dunes from building up and creates a natural protection barrier from coastal erosion due to climate change events.

Adapted from Cuffe, S. (2017, 24 July). Planting resilience to climate change. *Earth Island Journal*.

https://www.earthisland.org/journal/index.php/articles/entry/planting_resilience_to_climate_change/

Licence: see [Republication Guidelines: Earth Island Journal](#)



Case study

Women-led community water governance safeguards for drinking water in Bangladesh

In 2015, the Christian Commission for Development in Bangladesh (CCBD) established a community-led water management system in

response to a local drinking water crisis. In three coastal districts that were experiencing increased soil salinity, the women who collected drinking water for their households formed groups to identify and discuss the challenges they faced. They also discussed potential solutions to their challenges. They subsequently began to collect and store rainwater during the monsoon season in ponds, and used pond sand filters to provide a safe source of drinking water for sustainable, participatory water governance systems.

The approach was known as Bring Women into Action, and it was designed to give the women decision-making power at the local district level to manage the new water system. As the women gained access to powerful leadership positions, they also gained technical and governance skills. The inclusive and participatory approach to climate action was successful in improving acceptance of the new system. The water collection and storage project enhanced the livelihoods of over 4,500 residents.

Adapted from: Christian Commission for Development in Bangladesh. (n.d.). *Women-led community water governance safeguards drinking water in Bangladesh*. Women and Gender Constituency.
https://womengenderclimate.org/gjc_solutions/women-led-community-water-governance-safeguards-drinking-water-in-bangladesh/
Licence: see https://womengenderclimate.org/gjc_solutions/women-led-community-water-governance-safeguards-drinking-water-in-bangladesh/



Case study

Community Baboon Sanctuary

The Community Baboon Sanctuary (CBS) in Belize covers 5,179 hectares (20 square miles). It was initially established in 1985 to protect the habitat of black howler monkeys (called baboons by the locals). The CBS closed in 1996, but in 1998, women leaders in seven villages in the Belize River Valley created the Community Baboon Sanctuary Women's Conservation Group (CBS WCG).

The CBS WCG implements climate-resilient practices among 300 farmers to reduce deforestation of the monkeys' prime habitat. The group also protects other fauna and flora found within the sanctuary. The women distribute Maya nuts and cacao seeds to local growers because these crops are drought- and flood-resistant. Many of the women are involved in eco-tourism activities such as catering, handicraft production, processing and preserving food, homestays and tour guiding.

The group is also involved in educating community members. Community rangers are trained and equipped with clothing, training tools and other equipment, and volunteer students and youth groups are

responsible for data collection to monitor the monkey population, river species, water quality and wildlife.

The CBS WCG board of directors is made up of one woman representative from each of the seven villages. The organisation represents women with different livelihoods, religions, cultures and educational qualifications who collaborate on different social issues while promoting sustainable livelihoods.

Adapted from: One Earth. (n.d.). *Protecting Belize's biodiversity and enhancing community livelihoods through women-led conservation*.

<https://www.oneearth.org/projects/protecting-belizes-biodiversity-and-enhancing-community-livelihoods-through-women-led-conservation/>
Licence: Open access (see <https://www.oneearth.org/terms/>)



Case study

Female climate fighters in the Pacific Islands

AnnMary Radiva is sometimes called The Pacific's Greta (Thunberg). She is a climate activist in Fiji, in the Pacific Islands, who is collaborating with a group of friends to take action against rising sea levels caused by climate change. Since 2018, they have planted 10,000 mangrove seedlings which have grown into mangrove forests. The roots of the shrub form a mesh in the salty water which stops the sea from moving inland.

These mangrove forests, like other mangroves, also help to absorb up to 6 billion tons of carbon dioxide from the atmosphere annually. AnnMary thinks that because she and her friends cannot attend international conferences, demonstrations or strikes, their actions and activism are real rather than symbolic solutions. She says the mangrove is the real hero in the fight against climate change, though.

You can see AnnMary Radiva in the video [The Female Climate Fight for the Pacific Islands](#) by BBC News. The case study on AnnMary starts at the 7:23 minute mark in the video.



Case study

Team Lioness

In Kenya, Team Lioness is a group of eight young Maasi women aged 20–28. They are the first all-women group of community wildlife rangers. Being a wildlife ranger is considered a non-traditional career for women in Kenya, where women do not have many opportunities to support themselves and usually depend on their families to survive. The rangers risk their lives to protect the wild animals from poachers. One advantage of the team being all women is that other women in the community feel more comfortable sharing information about poaching activities with them. By gaining access to information about poaching before it happens,

they are able to detain poachers and reduce the killing of rhinos, elephants, giraffes and smaller animals such as antelopes, impalas and gazelles. The reduction in poaching contributes to tourism in the area, which benefits many in the community. The members of Team Lioness act as role models for the next generation who will be inspired to protect their communities and earn independent incomes.

Adapted from: Silva, D. (2020, 22 September). *Canopy conversations: Team Lioness engages women in wildlife conservation*. CIFOR–ICRAF Forests News. <https://forestsnews.cifor.org/67411/canopy-conversations-team-lioness-engages-women-in-wildlife-conservation?fnl=>

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Case study

Young environmental and climate change activist

Ugandan climate activist Leah Namugerwa has been a local environmentalist in her country since the age of 15, advocating for changes such as banning unnecessary plastic to reduce waste. In 2019, Leah began to speak up for the environment and founded Fridays for Future Uganda, a movement inspired by Fridays for Future, founded by Greta Thunberg a young eco-activist from Sweden.

Uganda experiences mudslides and severe flooding because of climate change, and so Leah advocates for Uganda to fully commit to the Paris Climate Agreement. As a climate change activist, she celebrated her 15th birthday by planting 200 trees. She also launched the Birthday Trees project which distributes seedlings to anyone who wants to do the same.

Adapted from: Leah Namugerwa. (2023, 5 December). In *Wikipedia*. https://en.wikipedia.org/wiki/Leah_Namugerwa
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How to balance the needs of both humans and wildlife

There is an orangutang in my bedroom

The video [Rang-tan: The Story of Dirty Palm Oil](#) by Greenpeace International presents the impact of deforestation from both a human and animal perspective. The child in the video sees wildlife as disrupting her home, but the wildlife see animals being forced out of their homes by humans, whose actions have a negative impact on climate change. The video suggests that anyone, including girls, can become involved in conservation.



Activity

Think about what the girl said she would do at the end of the video. Do you think you can take similar actions? Write your thoughts about this in your journal.



Case study

Conservation versus livelihoods for some women?

It is important to understand that not all women totally support the protection of natural resources and the environment or climate change mitigation actions in their communities. For example, women who live within the coastal Cantanhez Forest National Park, which is a protected area, face certain challenges in following the regulations to protect the environment and maintaining their livelihoods.

The Cantanhez Forest National Park in Guinea-Bissau, West Africa, was established in 2007 to preserve the remaining forests and endangered animal species such as chimpanzees, baboons and monkeys. No hunting is allowed in the park. The protected area also has porcupines, gazelles and antelopes.

In keeping with their culture and gender roles, the women do not participate in hunting, logging or producing cash crops. Only the men participate in those activities. The women and girls have fewer educational opportunities than boys and men, cannot inherit land and do not participate in community decision-making. They produce subsistence crops to feed the family; cultivate rice, peanuts and oranges; gather firewood; and produce some palm oils and traditional medicines from what is available in the forests.

The rainy seasons are getting shorter because of climate change and the area experiences rising sea levels to the point where sea water enters the women's rice plots. To ensure that they could continue to plant rice, the women began slash-and-burn clearing in the forest to grow dry field rice. Rice is the basis of the Guinean diet, so the women feel threatened by malnutrition when this staple is unavailable or scarce, even though other crops such as cassava may be available.

The women who live within the national park perceived the park as being responsible for malnutrition, because their crops were either eaten or damaged by the wildlife, especially the chimpanzees. They were unwilling to participate in conservation efforts because they were dependent on the crops and forest products that were grown or available in the park. They saw the park as a threat to their welfare and survival.

There was very little infrastructure in the village, which meant limited access to health services and schools. The women had very little

alternative opportunities for livelihoods. They felt that they had no choice but to break the rules for the park.

The women were also disappointed that they did not receive compensation from the government for their damaged crops.

Adapted from Costa, S., Casanova, C., & Lee, P. (2017). What does conservation mean for women? The case of the Cantanhez Forest National Park. *Conservation & Society*, 15(2), Special Section: The Green Economy in the South, pp. 168-178. <http://www.jstor.com/stable/26393284>



Note it!

The case study above shows the importance of dialogue and participation in decision-making in conservation actions. The social and economic needs of the people who are affected by conservation actions must be considered. In the case of the Cantanhez Forest National Park, if compensation and alternative livelihoods, for example, are not offered, it is possible the women and their families will continue to break the rules and the park may not be sustainable.



Note it!

Human versus wildlife conflict

Wild animals are eaten by humans worldwide, but over-hunting threatens some species with extinction and threatens many people with being denied access to a source of nutrition. Regulations that deny hunters access to wildlife can threaten livelihoods. The solutions to the human versus wildlife conflict include:

- reducing the demand for illegal wild meat in cities and towns, because research has shown that over-poaching is a result of trying to satisfy the demand from outside the Indigenous communities. Since people in cities have alternative sources of food, efforts are made to identify culturally acceptable and sustainable alternatives.
- sensitising the local, Indigenous population on the management and conservation of wildlife and vegetation.
- encouraging the participation of Indigenous people in the management and conservation actions (returning control and use of the resource to local communities and enforcing compensation).
- creating and enforcing legal and sustainable regulations for the sale of wildlife.

Adapted from O'Connell, E. (2023). *How to balance the needs of both humans and wildlife*. CIFOR–ICRAF Forests News. <https://forestsnews.cifor.org/81237/how-to-balance-the-needs-of-both-humans-and-wildlife?fnl=>

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Reading

Dahlin, J., & Svensson, E. (2021). Revitalizing traditional agricultural practices: Conscious efforts to create a more satisfying culture. *Sustainability*, 13(20), 11424. <https://doi.org/10.3390/su132011424>

Traditional medicine. (2023, 25 December). In *Wikipedia*. https://en.wikipedia.org/wiki/Traditional_medicine.

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Unit summary



Summary

The case studies in this unit are from different parts of the world and highlight different types of conservation actions related to the specific environmental conditions associated with the locations. The unit highlights women-led projects and the impact of their actions.

The case studies include examples of using water management in the fight against droughts, wildlife management and managing coastlines by using trees and plants. Many of the case studies show the importance of plants and forests, which lessen the negative impacts of climate change worldwide because trees absorb carbon as they grow.

Assessment

**Assessment**

1. Which of the following statements are true?
 - A. Women can enter into jobs usually associated with men.
 - B. Women can become decision makers and leaders.
 - C. Young girls and women cannot become activists.
 - D. Only A. and B. are true.
 - E. All of the above are true.

2. How does climate change affect coastlines?
 - A. The sea can erode the coastline and carry away land.
 - B. The soils can become too saline (salty) and destroy crops.
 - C. The wind blowing off the sea can create high mounds of sand or sand dunes that can cover people's homes.
 - D. All of the above.

3. Which of the following is an example of women-led conservation actions concerned with saving the coastline?
 - A. Planting resilience to climate change in Honduras.
 - B. The Christian Commission for Development in Bangladesh.
 - C. The Chipko Movement in India.
 - D. The Cantanhez Forest National Park in Guinea-Bassau, West Africa.

4. What are some conservation actions you can take to mitigate climate change?
 - A. Plant trees.
 - B. Establish community ponds.
 - C. Participate in community projects.
 - D. Participate in collecting data about wildlife and fauna.
 - E. Encourage your family and neighbours to stop over-hunting.
 - F. All of the above.

Answer Key

Multiple choice questions: 1

1. What is gender?

B. Gender refers to how boys/men and girls/women are expected to behave.

2. Gender equality is the same as gender equity.

B. No.

3. After a climate-related disaster, who is more at risk of gender-based violence (GBV)?

A. Women and children.

Multiple choice questions: 2

1. Climate change mitigation is:

C. Both of the above.

2. A best practice is:

B. Examples of previous successful actions that have been taken and that would produce similar good results in the present time.

3. Gender equality is important to climate change mitigation actions because:

A. Women are more negatively impacted by climate change and will require equitable support to enhance their resiliency.

Multiple choice questions: 3

1. Which of the following are advocacy actions to inform and motivate communities?

D. Only A. and C.

2. Which of the following are examples of a non-agriculture-related action to take in support of gender equality and climate change mitigation?

E. All of the above

3. What can be done to encourage men to support gender equality?

D. Only A. and C.

Multiple choice questions: 4

1. Why are home gardens important in the face of climate change?

D. All of the above.

2. Which of the following statements are true?

E. Only A., B. and C. are true.

3. Which of the following statements are examples of modern agriculture techniques?

E. Only A., B. and D.

Multiple choice questions: 5

1. Which of the following statements are true?

D. Only A. and B. are true.

2. How does climate change affect coastlines?

D. All of the above.

3. Which of the following is an example of women-led conservation actions concerned with saving the coastline?

A. Planting resilience to climate change in Honduras.