

# Participatory Research on Gender-based Vulnerabilities to Climate Change in Cambodia





## LIST OF ABBREVIATIONS AND ACRONYMS

<b>CBO</b>	Community-based organisation
<b>CCCSP</b>	Cambodia Climate Change Strategic Plan
<b>CCDM</b>	Commune Committee for Disaster Management
<b>COVID-19</b>	Coronavirus disease
<b>CSO</b>	Civil society organisation
<b>FGD</b>	Focus group discussion
<b>GADC</b>	Gender and Development for Cambodia
<b>GPS</b>	Global Positioning System
<b>IDI</b>	In-depth interview
<b>IVR</b>	Interactive voice response
<b>KHR</b>	Cambodia Riel
<b>MoE</b>	Ministry of Environment
<b>NGO</b>	Non-governmental organisation
<b>PRA</b>	Participatory rural appraisal
<b>SDG</b>	Sustainable Development Goal
<b>SSI</b>	Semi-structured interview
<b>TAG</b>	Technical Advisory Group
<b>UNDP</b>	United Nations Development Programme
<b>UN Women</b>	United Nations Entity for Gender Equality and the Empowerment of Women
<b>USD</b>	U.S. dollar



## LIST OF KEY TERMS

**Adaptive capacity** - a person's ability to make decisions about adapting to climate events. This is influenced by power dynamics, soft skills such as communication, collaboration and problem-solving, and by confidence levels. Unequal distribution of resources, power imbalances and differences in access to information and social networks between sexes determine the different ways in which climate change affects women and men and their capacity to absorb, adapt or transform their lives in order to respond.

**Gender** refers to the roles, behaviours, activities, attributes and opportunities that any society considers appropriate for girls and boys, and women and men. Gender interacts with, but is different from, the binary categories of biological sex.

**Gender-based vulnerability** is a term used throughout this report to describe risks or vulnerabilities that have different implications for women compared to men.

**Gender equality** means that women and men, boys and girls are able to enjoy equal status, and have equal entitlements and opportunities to realise all their human rights fully, making choices, and accessing assets, services and public goods without limitations imposed by legislation, policies, gender norms and stereotypes.

**Gender equity** is fairness of treatment for women and men, girls and boys according to their respective needs. This may include equal treatment or treatment that is different, but which is considered equivalent in terms of rights, benefits, obligations and opportunities.

**Gender norms** are the societal rules or ideas about the way women and men, girls and boys should behave and look, for example, that men should not cry or that women should dress in a certain way. They dictate how women and men, girls and boys think they should behave to gain societal acceptance.

**Gender roles** are the roles that society expects a man, woman, girl or boy to perform. They derive from the gender norms in a given context. For example, the expectation that a woman should take care of children or that a man should be the breadwinner.

**Gender-sensitive projects** are those where a robust gender analysis has been conducted to understand the different barriers facing women, girls, men and boys, using sex-disaggregated data. Specific solutions to address the needs and concerns of women and girls are included in gender-sensitive project activities and outcomes. Activities are more likely to focus on women's and girls' practical needs to improve their daily condition.

**Gender stereotypes** are oversimplified images and ideas of an individual or group based on their gender. They derive from gender norms and roles. For example, that women cannot drive or that men are good at maths.

**Gender transformative projects** aim to challenge the root causes of gender discrimination, for example through addressing discriminatory gender norms, stereotypes and unequal power relationships between women and men, boys and girls. Activities and methodologies might focus on more strategic needs that improve women's and girls' position in society. This work is likely to be relatively long-term.



**Intersectionality** is the interconnected nature of social identities such as race, gender, class, sexuality and disability, and how these can create overlapping, compounded and interdependent systems of discrimination or vulnerability.

**Resilience** is the ability to thrive by managing risk and responding positively to change in the face of “shocks” (rapid-onset events such as earthquakes and landslides) and long-term “stresses” (slower-onset trends such as drought or economic decline).



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## About this study

BBC Media Action has partnered with UN Women Cambodia on this study, which forms part of a four-year regional project, EmPower Women for Climate Resilient Societies, being jointly implemented with UN Environment and which is supported by the Swedish International Development Agency. The EmPower project aims to contribute to the overall of outcome of “implementation of climate change and disaster risk reduction actions in Asia and the Pacific addressing key drivers of gender-based vulnerabilities and enhancing human rights”. The study addresses the need identified by UN Women for robust gendered research to explore the realities of gender-based vulnerability to climate change for Cambodian women and men and understand how intra household decision making influences current coping strategies in the face of climate change.

## About BBC Media Action

Established in 1998, BBC Media Action is the international charity of the BBC. Working with media and communication to help reduce poverty and support people in claiming their rights, our aim is to inform, connect and empower people around the world. We are independent from the BBC, but share the BBC’s fundamental values and reach over 100 million people a year through local broadcast partners, BBC channels online, mobile and print platforms and through interpersonal communication (IPC). A global leader in research-led communications for development, we have special expertise in working in fragile and conflict-affected societies, in humanitarian emergencies and in environments where political, security or other factors mean that media is one of the few options available to reach vulnerable groups.

BBC Media Action has been working in Cambodia since 2003, using media and communication to empower and engage young Cambodians; to improve health outcomes and to build resilience to the effects of climate change.



## Executive Summary

*“Women are better prepared for hazards than men because she knows in detail about small preparation [methods] such as collecting and stocking of water as well as keeping farming material when the rain comes, while men do outside jobs and know less about protection.”* Female leader of a community saving group, Pursat province.

## Introduction

Cambodia is highly vulnerable to the impacts of climate change. Women can often be disproportionately affected by the impacts of climate change. Furthermore, deep-rooted gender norms can interact with other social and structural barriers, which can exacerbate this issue.

BBC Media Action was commissioned by UN Women Cambodia through the EmPower project<sup>1</sup> to conduct in-depth participatory research to understand how women and men are impacted by the effects of climate change, what actions they are taking to respond and how decision-making to take action and gender roles are influenced by prevailing gender norms.

The community based research was conducted in two study locations – Kampot province in the Coastal region and Pursat province in Tonle Sap region. These were chosen because they face different climatic hazards and previous research indicated that people in these regions were taking different levels of action in response to climate change. A range of fieldwork tools were used to understand communities from the perspective of women, men, community leaders, non-governmental organisations (NGOs), civil society organisations (CSOs) and government agencies. Following the fieldwork, community validation exercises enabled women and men to reflect on the picture of their own communities provided by the research.

## Key findings

Women and men are experiencing the same changes in weather, climate and the environment in Cambodia. However, the impact of changes in weather and environment are affecting men and women differently and the actions they are taking are also different. This is because structural, social and resource-based barriers can interact with gender norms and inequalities which can then limit, or dictate, what types of action women take compared to men. Women in rural Cambodia are however, taking action and are motivated to do so, (sometimes they are even seen as better able to cope as they are more in touch with the needs of their families). But, they require increased economic power, hands-on experience, useful information, and relevant support networks and support from men in order to do so. **Combining continued efforts to shift traditional gender norms which limit women’s adaptive capacity**

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<sup>1</sup> The EmPower project works to strengthen human rights and gender equity through climate change action and disaster reduction.



and improving women's recognition of their own abilities, agency and value they can bring in supporting themselves, their families and wider communities to take relevant actions in response to changes in the weather and environment could help to address the issue of women's vulnerability to the impacts of climate change in the future.

**Women and men reported experiencing the same changes in weather, climate and the environment.** For example, both women and men cited key impacts including water scarcity, rising temperatures, pest attacks on crops and storms. Households in Tonle Sap have been particularly affected by drought while those in the Coastal region have suffered saltwater intrusion that damages rice crops. It was evident in the rural communities visited that as women and men livelihoods depend on the reliable supply of natural resources – fertile land, sufficient rainfall and plentiful fish stocks – the increasing intensity and frequency of climate-related shocks are having a severe impact on their income sources. Both women and men felt that these changes in their environment and climate had worsened and they were concerned these issues would continue in the future.

**Women and men who participated in the research were concerned about their livelihoods.** They also discussed the depletion or degradation of natural resources, the destruction or damage of housing, the loss of productive assets including livestock, and the detrimental impact of all of these on their physical and mental health. These impacts have further eroded their capacity to cope and recover in the face of future weather extremes. Broadly, the main barriers women and men have faced in responding to these climatic changes and weather extremes are a lack of money and resources, limited information, land and labour, and restricted ability to adopt appropriate adaptive techniques such as growing different types of crops or keeping different livestock, rotating crops and using pesticides to increase agricultural productivity.

*“When the temperature is rising so much, I can't grow my vegetables well as it is difficult to look after them, so I have changed from growing vegetables to growing potatoes instead as potatoes are not so difficult to take care of. When there is rain (rainy season), I grow vegetables such as cucumbers and other types of spinach that I learnt from NGOs and agriculture workers, they taught me about making natural fertilizer and growing natural vegetables at family scale.”* Woman, 29, Kampot province.

**Though women and men were noticing the same changes in weather and the environment, the impact these changes had on their daily lives was different and the actions they were taking as a result also differed.** In the research men commonly talked about how these changes impacted on their livelihoods. Women were concerned about the impact these changes had on resources which would affect their household and family (such as water and food availability). This also translated into differences between women and men in terms of the future. Women were concerned about these changes would affect their family and children's health and future whereas men more commonly talked about their concerns for the future of their livelihood.

**Structural, social and resource-based barriers entrenched in deep-rooted gender norms and inequalities can limit, or dictate, what types of action women take compared to men.** For example, both women and men in the study locations accepted a





gendered division of labour – that men should be the family breadwinner and women should take lead responsibility of household management and childcare. In some cases, women were leading on household work and childcare in addition to being responsible for agricultural work or taking up other income generating tasks such as making, cleaning or fixing fishing nets at home, or working in factories or grocery stores. This increased the level of additional responsibilities and concerns they had. Women were taking actions (sometimes to the detriment of their own health) to save and store water and food to ensure their families survival. Men were taking actions such as migrating to look for work (again women’s ability to do this was limited owing gender norms dictating she should stay at home). There were a few examples emerging from the research however, of cases where women had migrated for work and where men and women were working on agricultural activities together and taking collective decisions on their livelihoods (see case studies in later sections).

**It was evident that both women and men are contributing economically to the household to respond to challenges they were facing.** Women provided examples of how they were often trying to supplement their income on top of their household responsibilities or were working with their husbands to adapt farming practices in response to climatic changes. In Pursat, where outward male migration is more commonplace, women in the study location were more likely to earn an income and have to cope with household responsibilities. This either empowered them to make decisions about adapting to climatic changes or left them with no choice but to do so. This was also recognised by local leaders who felt that women were often the ones more across the needs of their families and taking the important actions which would ensure their families survival in the wake of a disaster.

“*Water scarcity or drought severely impacts women more than men as women need more water for daily use. Floods also have more impact on women than men as women need to take care of children and household assets. So ... when men are not at home all responsibilities fall under women.*”

Male commune chief, Pursat province.

**Whilst women often perceived themselves as playing a key role in household decision-making, they were often not able to influence big spending decisions for various reasons.** It should be recognised however, that women are often in charge of the family income, providing them with some financial independence and decision making. Although women and men discussed such decisions and men sometimes appreciated women’s opinions – especially concerning household needs – women usually conceded final decision-making power on big decisions, such as investing in changing agricultural crops or buying fishing equipment, to men. Household decision-making dynamics were particularly male-centric when women lacked economic power, experience, relevant information and networks, and emotional support from their husband or other men. This was more evident for women in Kampot compared to Pursat and appeared to be more entrenched in one village in Kampot, where Muslim women reported having very little or no decision-making power, as both men and women felt it was sinful for a wife to challenge her husband’s decisions.

**Gender alone does not mean women are more vulnerable to climate change.** The gender norm that there should be a gendered division of labour, for example that women are



expected to look after the home and children whilst men are expected to earn an income for the family, was accepted by both women and men in the study. The impact of these attitudes often resulted in women having less ability to network with people who may be more informed about climate change, women having less access to information and self-confidence on key issues around climate change adaptation, and a male bias in decision-making. The research found that women from poorer households, those with disabilities or those acting as the household head were particularly vulnerable as they sometimes lacked the reliable income or financial resources – and the necessary strength, knowledge of adaptation and preparedness strategies, and confidence – to cope with, adapt to and recover from these impacts.

Other factors also interact with gender norms. For instance, women in Kampot had little income and played a periphery role in household decision making. Therefore they had less influence on how to react and adapt to climatic changes, such as investing in adaptive practices, making them more vulnerable to the impacts of these changes. They also lacked access to information and social networks and support which could help them learn more about effective solutions to come of the challenges they faced.

Despite challenges faced by women, research-based case studies in this study showed how many women endeavour to take action to cope with the impacts of climate change. Some men and community leaders also pointed out that women play an important role in contributing to the “right” decision in their household because they base any changes or investments on the needs of the entire family. These findings support research from previous BBC Media Action research, which found that women are more willing than men to take actions that could benefit their family’s future wellbeing.<sup>2</sup>

*“We discuss together in my family [ideas] such as buying a jar to store water or which crop to plant, but some other women have to follow their husband’s decision because the husband is the income earner and would make violence in the family if women do not follow.”* Women, 29, Pursat province.

## Recommendations


It is widely recognised that existing gender inequalities in society are mirrored in climate vulnerability, with women more vulnerable to the effects of climate change than men.<sup>3</sup> It is therefore recommended that the focus of future climate change and disaster risk reduction work in Cambodia tackles the structural, social and resource barriers that are entrenched in deep-rooted gender norms and inequalities which prevent some women from and taking action towards building resilience. Summary recommendations include:

At a programme level:

- Increased women’s leadership, including women networks at the grassroots, to improve women’s recognition of their own abilities, agency and value they can bring in taking action and how they can build their networks.

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<sup>2</sup> Southall, E., Chandore, K. and Otdam, H. (2019) *How the people of Cambodia live with climate change and what media and communication can do*. BBC Media Action research report. Available at: <https://www.bbc.co.uk/mediaaction/publications-and-resources/research/report/asia/cambodia/climateaction>. (Hereafter referenced as ‘Climate Asia Study’.)

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- Fuel discussion on climate-related issues and topics among men and women – for example on climate related-risks, solutions and actions - both separately and together.
  - Encourage effective political and social participation of women.
  - Ensure intersectionality is considered and cross-sectoral strategies are used in project design and implementation.
  - Interventions should focus on a range of issues where gender norms are prevalent, not just climate vulnerability.

At a policy level:

- Ensure policy level initiatives have tackling gender related vulnerability to climate change translate into clear and recognisable programmes which engage women and men at the community level.
- Take into account the different cross-cutting ways gender-based vulnerability to climate change can interact with other issues.

In media and communication:

Women and men reflected that to support to take action which would help them could include more information, networks and support. Policy and programme responses would also be enhanced through social and behaviour change communication being streamlined across all work gender and climate related work which could be addressed through a variety of media and communication initiatives. Ways that media and communication might be able to address gender-based climate vulnerability could include:

- Incorporate climate-related content into existing media content or platforms that women and men access to engage them in these issues in an entertaining and informative way through existing digital, radio or TV dramas or magazine programmes which women and men already consume.
- Furnish partnerships between media and communication organisations and NGOs, CSOs and government agencies to develop high-quality media and communication strategies and materials for use in outreach activities
- Ensure media and communication initiatives focus on reflecting and challenging broader gender norms which affect women's vulnerability to climate-related risks.

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<sup>3</sup> Climate Change News (2020). Article available at: <https://www.climatechangenews.com/2020/03/08/power-structures-gender-make-women-vulnerable-climate-change/>



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## Context: The links between gender, climate change and adaptive capacity

Gender, climate change and adaptive capacity are intricately linked. This section aims to outline the links between climate change, gender inequality and adaptive capacity to respond to climate change in Cambodia and is based on a literature review conducted to help frame the primary research questions.

### Climate change and risks

Cambodia is highly affected by weather extremes. The country has five main geographical regions – Phnom Penh, Plain, Mountain, Tonle Sap and the Coastal region – which are each affected by specific climatic hazards. Rural Cambodians (79% of the total population)<sup>4</sup> are highly dependent on climate-sensitive livelihood sectors – notably agriculture, forestry and fisheries. The majority depend on agriculture – about 39% of women are employed in this sector<sup>5</sup> to sustain their livelihoods. However, agriculture is largely dependent on a rain fed system which is highly vulnerable by climate change.<sup>6</sup>

Rural Cambodians are likely to experience low productivity, loss of income and damaged infrastructure/assets due to rising temperatures, flooding, drought, more intense storms, rising sea levels and an increase in pests and diseases. The country's vulnerability to climate change is also linked to its characteristics as a post-civil war country, which is among the least developed in the region, and has weak adaptive capacity, poor infrastructure and limited capacity of the national institutions responsible for climate change.<sup>7</sup>

Many people in Cambodia have tried to respond to the impacts of climate change, for example by migrating or using natural resources (often unsustainably). Previous BBC Media Action research (which was part of a research series 'Climate Asia', which surveyed several Asian countries to understand men and women's knowledge, perceptions and motivations and barriers to taking action around climate change),<sup>8</sup> found that 43% of respondents had made some level of change to their livelihoods or jobs as a result of changes in the weather and the availability of resources. Of these, 21% had migrated temporarily to earn more money.

### Gender inequalities

While political, economic and social development have opened up new opportunities for

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<sup>4</sup> Oung, T. K., Cambodia 2040 Economic Development. *Chapter 8: Environment and Climate Change*. KAS report. Available at: <https://www.kas.de/documents/264850/9494350/Chapter+8.pdf/cb46ca2e-6aef-b923-317b-a09b375ae193?version=1.0&t=1593966406826>

<sup>5</sup> Cambodia Socio-Economic Survey 2017. Available at: <https://nis.gov.kh/nis/CSES/Final%20Report%20CSES%202017.pdf>

<sup>6</sup> FAO (2020) Kingdom of Cambodia: FAO Country Programming Framework 2019–2023. Phnom Penh. Available at: <http://www.fao.org/3/cb0491en/CB0491EN.pdf>

<sup>7</sup> Royal Government of Cambodia (2013), Cambodia Climate Change Strategic Plan (CCCSP), 2014–2023. Available at: [https://www.cambodiaip.gov.kh/DocResources/ab9455cf-9eea-4adc-ae93-95d149c6d78c\\_007729c5-60a9-47f0-83ac-7f70420b9a34-en.pdf](https://www.cambodiaip.gov.kh/DocResources/ab9455cf-9eea-4adc-ae93-95d149c6d78c_007729c5-60a9-47f0-83ac-7f70420b9a34-en.pdf)

<sup>8</sup> Climate Asia study: Researchers interviewed 1,660 people in June 2018 in five geographic regions across Cambodia: Phnom Penh, Plain, Mountain, Tonle Sap and Coastal. All research data is available at: <https://dataportal.bbcmmediaaction.org/site/>



women and men and challenged traditional gender roles, Cambodian society remains largely patriarchal and hierarchical, and women continue to face political and economic discrimination. Cultural and social norms related to gender identity and tradition expect men to be the breadwinners, to lead the household and to have dominance over women.<sup>9</sup> These norms interact with other social and structural barriers in Cambodia and can result in the impacts of climate change disproportionately affecting women.

This vulnerability can manifest itself in many ways. For instance, when food is scarce during periods of flooding or drought, women tend to eat less so that their partners and children can eat enough, which can lead to an increase in health-related problems for women, including malnutrition.<sup>10</sup> Limited food consumption can deepen vulnerability as it makes women physically weaker and more susceptible to fall ill to diseases such as typhoid, dengue and fever.<sup>11</sup> When men migrate to neighbouring countries for work, women often face increased workloads, taking over agricultural work while continuing to fulfil childcare duties and carry out household chores. This leaves women with little or no time for rest or leisure, which has a detrimental impact on both their physical and mental wellbeing.<sup>12</sup> Often in charge of water collection, women have to spend longer collecting and securing this essential resource during times of drought or water scarcity.<sup>13</sup>

#### The Climate Change Strategic Plan and gender

In October 2013, the Royal Government of Cambodia approved the Cambodia Climate Change Strategic Plan (CCCSP) 2014–2023, which provides a national framework to address changes in the climate. The CCCSP's main aim is for Cambodia to be a "greener, low-carbon, climate resilient, equitable, sustainable and knowledge-based society".

The mid-term review of the CCCSP in July 2019 found that its strategic objectives and strategies are responding to Cambodia's needs. However, more needs to be done on understanding the inter-relation between gender and climate change. Although the plan recognises gender issues, the review found there is little to support change in terms of activities, indicators and resources. The review found this resulted from a limited understanding of the relationship between gender and climate change.<sup>14</sup>

#### Adaptive capacity

A person's ability to make decisions about adapting to climate events is influenced by power dynamics, their soft skills such as communication, collaboration and problem-solving, and by their confidence levels. Unequal distribution of resources, power imbalances and differences in access to information and social networks determine the different ways in which climate change affects women and men and their capacity to absorb changes, or adapt or transform their lives to respond to them.<sup>15</sup>

<sup>9</sup> Ministry of Women's Affairs (2014) *Attitude Gender Relations and Attitude Cambodia Gender Assessment*.

<sup>10</sup> Goh, A. H. (2012) *A Literature Review of the Gender-Differentiated Impact of Climate Change on Women's and Men's Assets and Well-Being in Developing Countries*. Available at: <http://www.worldagroforestry.org/sites/default/files/4.pdf>

<sup>11</sup> Oxfam America (2010) *Rural Women, Gender and Climate Change in Cambodia*.

<sup>12</sup> Goh, A. H. (2012) *A Literature Review of the Gender-Differentiated Impact of Climate Change on Women's and Men's Assets and Well-Being in Developing Countries*. Available at: <http://www.worldagroforestry.org/sites/default/files/4.pdf>

<sup>13</sup> UN Women (2016) *Gender Equality, Climate Change and Disaster Risk Reduction*.

<sup>14</sup> Garcia, J. (2019). Mid term review of Cambodia Climate Change Strategic Plan 2014 - 2023



Women who rely on agriculture and natural resources to sustain their livelihoods in the most rural parts of Cambodia are most vulnerable to climate change impacts as they have particularly limited adaptive capacities due to a lack of financial resources,<sup>16</sup> as well as time constraints and lack of access to relevant information.<sup>17</sup> Rural men tend to have wider access to resources, and have greater skills and power to use them as the majority of agricultural production work is conducted by men.<sup>18</sup>

Previous research by BBC Media Action found that women and men who relied on land for income were particularly vulnerable to changes in the climate.<sup>19</sup> Over half of this group (54%) thought that agricultural productivity had declined, with 30% feeling that it had decreased “a lot”. Some 35% of this group felt that their household income had decreased in the previous five years as a result of climate change. The study found that poor agricultural and fishing households had less capacity to adapt to climatic changes and were facing increased economic hardship. Coping strategies, such as taking out loans and selling productive assets, often eroded households’ capacity to cope in the long term.

The same study also found some key differences in how women and men were responding to climate change in Cambodia. It found that women were more likely to take action related to household-based work such as storing food (53% compared to 44% of men) or making water safe to drink (87% compared to 79% of men). In contrast, men were more likely to report making structural changes to their home such as permanent adjustments (41% compared to 36% of women). However, it was also evident from this study that women felt better able to cope with changes in weather and resource availability than men. Three-quarters of women (76%) reported feeling they could cope with an extreme weather event, compared to 68% of men (and 72% of respondents overall). This is consistent with women’s greater feeling of preparedness (46% felt prepared for an extreme weather event, compared to 40% of men). The study also found that women were more likely to be willing to take steps to respond to disasters and extreme weather, but often did not take action. This indicates that, despite this willingness, they face structural, social and resource barriers.

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<sup>15</sup> The Resilience Measurement, Evidence and Learning Community of Practice (CoP) (2016) *Analysis of Resilience Measurement Frameworks and Approaches*. Prepared by the Overseas Development Institute (ODI) and members of the Resilience Measurement, Evidence and Learning CoP.

<sup>16</sup> Royal Government of Cambodia (2013), Cambodia Climate Change Strategic Plan (CCCSP), 2014–2023.

<sup>17</sup> Ringler, C. et al, (2010) *Climate change impacts on food security in Sub-Saharan Africa: Insights from comprehensive climate change scenarios*. International Food Policy Research Institute. Available at: [https://www.researchgate.net/publication/237137914\\_Climate\\_change\\_impacts\\_on\\_food\\_security\\_in\\_Sub-Saharan\\_Africa\\_Insights\\_from\\_comprehensive\\_climate\\_change\\_scenarios](https://www.researchgate.net/publication/237137914_Climate_change_impacts_on_food_security_in_Sub-Saharan_Africa_Insights_from_comprehensive_climate_change_scenarios)

<sup>18</sup> Ke, S. O., Babu, S. C., (2018) *Agricultural Extension in Cambodia: An Assessment and Options for Reform*. International Food Policy Research Institute. Available at: <http://ebrary.ifpri.org/utils/getfile/collection/p15738coll2/id/132261/filename/132473.pdf>

<sup>19</sup> Climate Asia Study: Farmers and fishermen made up 37% of the nationally representative quantitative survey in Cambodia, of which 46% were women.



## Research Objectives and Methodology

There is clear evidence linking adaptive capacity and gender inequality in response to climate change. Literature reviewed (discussed above) in order to help shape the design of this research found that although women may be willing to take action to cope with changes in climate, they were sometimes not taking action owing to:

- ◆ Structural barriers (such as women needing institutional support from the government or NGOs to take action)
- ◆ Social barriers (such as women not wanting to try anything new, or being fearful of discussing actions with others, not feeling that actions fit in with religious or community beliefs, or feeling that their family would not approve of taking action)
- ◆ Resource barriers (such as women not having access to information, not knowing how to take action or knowing others who are, or not having enough money or materials to do so).

### Objectives

Though there have been numerous studies in Cambodia to understand climate vulnerability, there has been a gap in in-depth research to explore the realities of gender-based vulnerability for Cambodian women and men. As such, this research study aimed to answer the following research questions:

- ◆ How are women and men impacted by the effects of climate change, and how does this differ by gender?
- ◆ What action are women and men are taking to respond to climate change, and what influences them to do so?
- ◆ How does household decision-making influence the actions women and men take in response to climate change?

These questions aim to help inform a deeper understanding of the role of gender dynamics in climate change adaptation, and to contribute to developing indicators that could be used to measure efforts to reduce gender vulnerability. Consequently, the research aimed to answer these questions, using a framework of barriers unearthed during the literature review to test and explore in more in-depth how these barriers played out in the research locations selected for the study (see Annex 2).

### Methodology

BBC Media Action's socio-ecological research model recognises that the way people think and act is influenced by many factors including their social networks, wider communities and social structure and systems. As such, this study used community-based participatory research, with follow up community validation of the findings to align the work with a Participatory Rural Appraisal (PRA) approach, to understand how women and men were affected by climate change, the actions they were taking and how decision making and gender roles are influenced by prevailing gender norms with regards to climate change adaptation. This was an





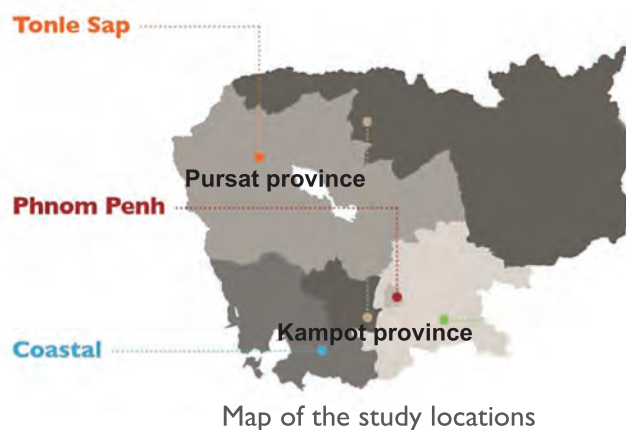
ethnographic approach whereby researchers stayed in the communities during the fieldwork, building trust to help garner useful information and explore gender norms in-depth. Prior to designing the primary research, an extensive review of relevant climate related and gender literature (discussed in the previous section) was conducted to inform the research design. In this research project, BBC Media Action used a range of techniques to understand women's perspectives and those of their wider families and communities.

A Technical Advisory Group (TAG) made up of representatives from both local and international organisations, provided inputs and expertise on issues relating to gender and climate throughout the research project.

### Research locations

Previous BBC Media Action research helped to select the study locations to conduct the fieldwork in. Findings from the Climate Asia study found that people who are adapting to climatic changes are most likely to live in the Tonle Sap region (44% of those adapting, compared to just 3% of those living in the Coastal regions). Using these insights, study locations were selected in the Tonle Sap and Coastal regions to reflect geographically different areas of Cambodia that face different climate hazards and different levels of action among community members in response to climate change.

In the Tonle Sap region the study focused on the Me Teuk commune in the Bakan district which comprises fifteen villages, three of which are located in the Tonle Sap floating community, and the rest along or close to the Bakan river and has a population of 14,683 (3,538 households). In Kampot the study sampled the Prek Thnot commune in the Teuk Chhou district, which comprises of four villages close to the coast with a population of 10,704 (1,905 households).



### Pursat province, Tonle Sap region

In Tonle Sap, various climate-related changes are having a profound effect on both agriculture and water resources. Fishing is the main source of income, although many people work in agriculture.

Findings from BBC Media Action's Climate Asia study found that climatic hazards and extreme weather events in Pursat province ranged from increasing temperatures, unpredictable rainfall, intense flooding and an increase in pests and plant diseases. The data indicated that people in the region felt most at risk of extreme weather (32%) compared to respondents in the other geographical regions. As a result, people living in Tonle Sap were more likely to feel that the



future impact of climate change would be high. They were already more likely to be taking action, such as changing their job or livelihood, or using fuel more efficiently, in response to this challenge and were the most willing to make further adjustments. Over a third (36%) of people in Tonle Sap said they were “very” willing to make more changes in response to climate change compared to a quarter (26%) of Cambodians overall.

### **Kampot province, Coastal region**

The Coastal region of Cambodia already experiences sea level rises and typhoons, both of which are projected to increase. Saltwater intrusion, higher temperatures, irregular rainfall and an increase in storm intensity are damaging soil and housing, and creating obstacles to fishing. Fishing is common in this region but agriculture (rice and crops) is the largest income sector. The province of Kampot also has high levels of migration for work compared to other provinces in the Coastal region.<sup>20</sup>

In Kampot province, coastal communities’ livelihoods are highly vulnerable to the impacts of flooding and intense storms, which damage housing and fishing equipment.<sup>21</sup> The Climate Asia study found that women and men in Kampot felt that the sea level was rising, temperatures were getting hotter, storms were more intense and rainfall less regular. However, people in the Coastal region were more likely to be struggling with climate change than adapting to it. Across Cambodia, a third (32%) of people did not think it was their responsibility to take action in response to the impacts of climate change, but this was notably higher in the Coastal region, where 42% of respondents cited this. In addition, half (49%) of the respondents in this region said that taking action would not fit with their religion or community beliefs (compared to 35% across Cambodia). People from this region were also more fearful than other Cambodians of discussing their actions with others (43% compared to 37% overall). This is consistent with the high value that Coastal region inhabitants place on their religion and following traditional beliefs (84% said this was “very important” to them, compared to 77% of the overall sample).

### **Research Timeline**

#### **Before the fieldwork (December 2019)**

**Stakeholder interviews** with six participants from government ministries and local and international NGOs were conducted to understand their perspectives on gender roles in relation to climate change adaptation and disaster risk reduction, and to understand the level of support they provide to communities. This data helped researchers to refine the research design, frame research instruments, and then complement data collected from the communities themselves. The research team continued to engage with these stakeholders throughout the project to validate the information collected.

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<sup>20</sup> Royal Government of Cambodia, Ministry of Planning (2012). *Migration in Cambodia: Report of the Cambodian Rural Urban Migration Project (CRUMP)*. Available at: <http://www.mop.gov.kh/DocumentEN/CRUMP%20Report.pdf>

<sup>21</sup> Ministry of Environment [MoE]. (2018). *Addressing Climate Change Impacts on Economic Growth in Cambodia*.



**Initial visits** to the two proposed fieldwork provinces – Pursat and Kampot – were undertaken to understand the community context and the feasibility of conducting fieldwork there, to select the villages within the provinces most vulnerable to climate change (taking diversity of livelihood into account), and to understand what permissions would be required to conduct fieldwork there through consultation with local authorities, NGO and CSOs. The visits helped the research team to finalize its research design and instruments in the appropriate context. Three villages in each province were selected for the fieldwork, all of which were located in the same commune and relatively close to one another.

### *The fieldwork (February 2020)*

BBC Media Action used community-based participatory research and the various methods outlined below to understand these two communities in depth. After data analysis, the research findings were taken back to the communities for interpretation and validation, giving women and men a chance to express their opinions on the data.

**Transect walks**<sup>22</sup> (two in each province with one key informant for each two-hour walk) were conducted. These involved female and male key informants, such as community leaders, village chiefs or respected elders, to gather general information about the systems and



Transect walk led by a village chief in the village



Transect walk led by a member of the community fisheries committee

structures within each community. They also increased researchers' understanding of key resources and opportunities for development in each community<sup>23</sup> and helped them to identify key areas to follow up in group discussions.

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<sup>22</sup> Transects walks consist of an exploration of the community geography by the researchers in collaboration with key community members (such as community leaders, village chiefs or respected elders). The walk, which can take up to two hours depending on the size of the community, includes asking community members to identify different hazards, conditions, infrastructure or landmarks depending on the focus of the research.



**Focus group discussions (FGDs)** were conducted (four in each province with women, four in each province with men and two in each province with both women and men). Researchers conducted FGDs with different groups, according to gender, age, occupation and the type of climate-related risk they faced. Separate groups were used for women and men to enable them to discuss sensitive issues safely and with confidence. Women and men were also brought together to discuss issues both have in common.

Participants chosen for the FGDs were aged 16-44, split into three groups: 16-24, 25-34 and 35-44. Combined these age groups account for 71% of the country's population (28%, 23% and 20%, respectively). It was important to ensure a range of age groups were included as they face different issues related to how they are affected by climate related vulnerability.

FGDs involved six participatory exercises:

- 1) **Resource/hazard mapping** to understand what resources were available in the community and identify areas and resources at risk from climate-related hazards and subsequent disasters.
- 2) **Creating a historical timeline** to gain insights into previous extreme weather events, such as men's and women's perception of risk and what action they took in response to these events.
- 3) **Drawing up a seasonal calendar** to draw out key (gender-specific) livelihood activities over the course of a year and explore the influence of climate-related hazards on each activity at different points during the year.
- 4) **Developing a decision-making matrix** to gain a better understanding of who takes decisions on which issues, who controls which assets/resources within households, how decision-making power is allocated between household members, and how this influences adaptation strategies.
- 5) **Creating a vulnerability matrix** to determine the hazards that have the most serious impact on people's livelihoods, and what vulnerabilities make them more likely to be affected by those hazards. Researchers asked female and male community members to indicate and agree on the degree of vulnerability that each identified climate-related hazard had on a given livelihood activity, giving a score from 0–5, where 0 means not vulnerable at all to a hazard and 5 means severe/extreme vulnerability to it.
- 6) **Institutional mapping** to understand which institutions exist in the communities and assess their role, their importance and benefits to community members, how they have helped community members to adapt to the impacts of climate-related hazards and what can be done in the future.

To enable full participation in the FGDs, the research team used projective techniques where necessary. For example, they used symbols to represent institutions (for participants who could not read or write) and shapes to reflect the degree of something (small circles versus large circles).

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<sup>23</sup> FAO (2006). Participatory Rural Appraisal (PRA).



**Semi-structured interviews** (43) were conducted with a broad range of participants (23 females and 20 males). These one-on-one informal discussions lasting at least one hour each used a list of key questions based on findings from the FGDs to gain a deeper understanding of specific issues related to climate change and the individual experience. This included its impacts, challenges faced and actions taken, and how these differ for women and men.

**Qualitative in-depth interviews** (20) were conducted lasting at least an hour with a range of key informants with particular knowledge and understanding of the community. Participants included village chiefs, commune chiefs, the Commune Committee for Disaster Management (CCDM), community leaders, village model farmers, respected elders, NGOs and government project implementers.

For more information on the study participants please see Annex I.

### **After the fieldwork**

#### **Community validation of findings (June 2020)**

The results from the community validation process helped to ensure that the context, data and information were correctly interpreted and presented in this report. This participatory validation exercise consisted of two group meetings in each province and two individual validations in each province with local authorities. These meetings employed a variety of techniques, with a facilitator using flipcharts, pictures, diagrams and icons to present key findings. They also included a presentation of key statements and a discussion around them, which was extended to include any relevant impacts from COVID-19 (the global pandemic emerged after the original fieldwork took place).



Small groups of women and men participated in the community validation of findings

#### **Stakeholder consultation workshop (July 2020)**

The BBC Media Action research team led a consultation workshop with a range of stakeholders including NGO, government, academic, development partners and donor representatives. During the two-hour session the research team presented the validated research results, facilitated a discussion of the key questions and findings with the stakeholders, and discussed viable recommendations. The session aimed to collect comments from stakeholders to help to interpret the data and shape the research report.



## Key findings

### Section I: What changes in climate and environment are women and men experiencing?

Both women and men reported that they were being affected by extreme weather and environmental changes. These issues such as drought, high temperatures, water scarcity and storms were increasingly affecting various aspects of their lives – eroding their income sources, damaging or destroying productive assets including livestock, depleting natural resources such as fish stocks and negatively affecting their families' health. This section looks what changes in weather and the environment which women and men felt were affecting them in the respective study regions.

#### Pursat

“ When there is rain with thunder, I have to bring all my kids into the house and take my cow to the shelter as I used to see that cows and humans were killed by lightning strikes.... ”

Woman, 30, Pursat province

In Pursat province, both women and men talked about how changes in the weather and environment were having a huge impact on people's economic and livelihood activities. **Drought** has affected all villages in this commune over the last three years. When researchers asked discussion groups to list a range of climatic hazards, community members rated drought as the highest risk (scoring 5 on a 0-5 impact scale, where 0 represents no impact at all, and 5 represents extreme impact) as it stops rice farmers' ability to earn an income. Discussions with commune council members (and statistics from a commune report) suggest that more than 80% of land in this area was severely or partially affected by water shortages in 2019. A lack of water in the Bakan river, insufficient irrigation channels and groundwater make rice farmers reliant on rainfall, which they felt was becoming less predictable.



One of many dried-up ponds in Pursat

Women and men both felt that temperatures are increasing sharply, in tandem with a rise in crop pests and diseases. Women and men scored these two hazards as 4 (out of 5). They felt pests and diseases damage crops and have forced them to use pesticides. They also felt they were experiencing more livestock deaths – perhaps as a result of emerging diseases, high temperatures and irregular rainfall, although they were not certain about the specific causes.



Women and men also rated inland storms as a high risk (scoring 4 out of 5) because of the damage they inflict on houses and crops.

Both women and men felt that the hazards of drought, high temperatures, pests and inland storms have become more intense in recent years – for example, in the past three years the water in the local stream has dried up – with flooding the only exception. Although temporary flooding damages rice crops, threatens human and animal lives, increases disease outbreaks (such as **diarrhea**), and cuts off transport links, women and men did not report this as having been so much of an issue in recent years. However, both women and men did feel that, compared to the past, rain patterns were becoming more irregular (for example less rainfall in the rainy season and more in the dry season) and river fish stocks were depleting.

“ We had very severe flooding in 2011, 2012 and 2013, and periods of drought, ... strong winds, extreme temperatures and lightning. But 2020 has marked a new level of drought and animal diseases. The drought is so extreme and there is a lack of water for everyday use as well as for vegetable growing. This year more and more animals are infected with diseases. ”

Male village chief, Pursat province.

## Kampot

Kampot province shared some similarities with Pursat in that women and men both felt that environmental changes and extreme weather have become more intense in recent years and were causing them more of a problem. In Kampot, women and men felt deforestation was causing environmental changes such as increased temperatures. This increase in temperatures was then affecting fish stocks.

“ When [the] weather is too hot, fish cannot stay in low water, so they go into deep water, leading there to be less fish. ”

Male NGO worker, Kampot province.

Research participants in Kampot reported facing more intense and frequent hazards such as **seasonal storms and flooding**. In the past, both women and men felt their environment had been rich in resources – mangroves were abundant and the sea was full of fish. They reported that mangroves have now dramatically reduced and the construction of coastal factories has driven down fish stocks. In the last five years, they felt storms had decreased in frequency but grown in intensity and unpredictability.

The hazards that Kampot community members reported were often similar to those in Pursat. For example, they rated storms, high temperatures and agricultural pests as severe hazards (rating 4–5 out of 5) due to the damage they inflict on rice crops. However, they felt **saltwater intrusion** was also a high risk, reflecting their proximity to the coast. They reported that saltwater commonly flows into rice fields during plants' flowering stage, damaging flowers and decreasing rice yields. When the amount of saltwater in a rice field is high, it affects the next rice season as farmers must wait until several periods of rainfall return soil salinity to normal. Saltwater progressively affects soil fertility, reducing rice yields from year to year while also increasing the salinity of freshwater in wells.



Saltwater intrusion damage to a rice field in Kampot

homes. Women and men reported that storms often damaged houses, rice crops, fruit trees and fishing equipment, and prevented fishermen from going to sea. They have observed **increasing temperatures** over the last five years, especially in the dry season – leading to more outbreaks of livestock disease and declining fish stocks. Increasing use of pesticides to combat the rising number of pest attacks on crops has also affected people’s health (usually men, who do most of the agricultural work in this area).

As in Pursat, women and men in Kampot were particularly concerned about **water scarcity** (rating it as a 5 on the severity scale). However, whilst in Pursat they were concerned about the impact of water scarcity on agriculture, in Kampot their worry about water scarcity was linked to not having enough for household use and consumption. This was also echoed by local NGO workers who has also noticed the impact of water scarcity on communities in Kampot.

“During drought [the] ponds dry up. But when we try to dig wells, the water is salty. Our plants also get affected... During the 2015 drought most of the durian [fruit] trees died. When their plants rotted, people migrated out of villages.”

Male NGO worker, Kampot province.

### Women and men had different concerns about the future

As discussed above, in both Kampot and Pursat, women and men both felt that the changes in weather and environment they were experiencing were worse now, compared to the past. They also felt that these issues would get worse in the future. But the reasons men and women were concerned about these changes was different.

Women were concerned about drought as this affects their responsibilities in caring for children and livestock, and water consumption for household use. In Pursat, women were also concerned about the impact of water shortages on their agricultural activities. Men were concerned about how future climate-related changes would affect their livelihoods. For





example, male farmers in Kampot felt they would have to stop rice farming in the future as they expected saltwater intrusion to continue being an issue. Fishermen were concerned that rising temperatures would lead to depleted fish stocks. In Tonle Sap, men hoped that plans to construct a canal and reservoir would come to fruition and protect their crops and livestock. If not, they felt migration out of the area would increase. These concerns about the future also acted as key motivators for men and women to take action.

“ I have more worries for [the] future (in terms of changing weather) as I can't predict how the temperature is rising and how water scarcity is getting worse when my child grows up. ”

Woman, 30, Pursat province.

## Section 2: What actions are women and men taking to cope with changes in the weather and environment?

Though women and men reported experiencing similar types of weather and environmental changes, the impact of these changes and the actions women and men were taking differed. This section explores the impact of these changes and the actions taken in terms of household level economic security and food and water security.

### Household economic security

#### Women and men were undertaking a range of livelihood activities to contribute to family income

Women and men in the two different research locations relied on a range of livelihood activities. In Pursat, the three floating villages depend solely on fishing as a livelihood whilst the other villages depend a combination of fishing and/or rice farming. One village relied only on rice farming and growing vegetables. Women perform both household chores and agricultural work (such as sowing seeds and taking care of rice fields) and some worked in factories. Men work in agriculture during the planting and harvesting seasons, but migration was also common amongst men in this province.



Sewing fishing nets at home to generate income



Fisherman prepares his boat and fishing materials

In contrast, in Kampot, the communities depend mainly on sea fishing and/or rice farming. On days when they are not at sea, fishermen in Kampot sometimes work in construction, and some families depend on small businesses and migration (but this was less common than in Pursat). Women mostly stay at home doing household chores and caring for their children.



Though women in Kampot were less likely to work, there were some examples of women trying to generate additional income through mending fishing nets, removing debris from nets and taking up jobs such as dishwashing, work in factories or grocery stores in addition to their existing household responsibilities to earn an income (see case study below). Women in Pursat also reported that they would supplement their income in other ways when there may be challenges with farming crops.

“When rice cannot be grown well during drought, I could only sell my salty fish-paste (usually for household consumption only)... in order to get money for my family. Salty fish-paste could sell for around 7000 or 8000 Riel (around 2 USD) per Kilogram...My husband sometimes goes fishing to get supplementary income and goes to other provinces for construction work for a few months when we can't grow rice.”

Woman, 29, Pursat province.

### Kampot case study: Changing livelihoods to adapt to climate change

Savorn is a 41-year-old mother-of-three living in the Prek Thnot village in Kampot province. Strong rainy season winds are a big concern in her village, posing a major safety hazard that prevents fishing and damages homes and assets. Savorn and her husband used to make a living from fishing but had to stop as stormy weather made Savorn seasick, preventing her from helping her husband.

The couple is aware of the impact of climate change and has tried to adapt to overcome this. They previously worked as rice farmers and used techniques to prevent saltwater intrusion (such as draining saltwater out of the paddy field, and retaining rainwater in the field before pumping it out to prepare for farming). They also switched to a rice seed variety that grows better in salty conditions. Nevertheless, saltwater intrusion badly affected their rice quality and yields, forcing them to abandon this livelihood.

Now, Savorn's husband works in construction and she earns money making and fixing fishing nets, whilst her two daughters work in garment factories. While Savorn and her husband have been able to change livelihoods in the past, Savorn fears for her children's future – especially if factory closure rumours become a reality.

### Men commonly discussed changes they were making to their fishing and farming practices

Though there were examples of men and women in Pursat making changes to their livelihoods, the research found that men more commonly talked about examples of how they had made additional changes to their fishing and farming practices to cope with changes in the weather and environment. For example, men in Pursat reported taking actions such as digging ponds or ditches and pumping water from streams. To deal with the increase in livestock diseases, men tended to administer medication and vaccines, and improve husbandry practices such as cleaning out animal shelters more often and separating sick animals from others. They have constructed animal shelters and ensured they stay inside during particularly hot periods.



Despite sometimes having responsibility for livestock, women generally had fewer skills and less knowledge about how to treat sick animals— they have not received the training to know how to do so, and will opt to let their husbands lead on this work. Fishermen in Pursat have also had to make changes. Men used to fish in the nearby stream but it has dried up owing to drought so they need to travel around 12 kilometres to fish in Tonle Sap lake.

In Kampot, where fishing was a common livelihood, men reported taking actions such as buying boat materials which would be more resistant to storms and also reported changing rice seeds (to deal with saltwater intrusion). In Kampot, although men were taking the lead in actions around agriculture women were still aware of these adaptation strategies, though they took a less active role in them.


### **Women also took actions related to adjusting farming practices**

Across both regions, the men we spoke to were more commonly taking action to adapt farming and fishing practices, some women did report having taken action in this area. In Pursat, where both women and men were more commonly involved in agricultural work (such as rice farming or raising livestock) they reported making changes to farming practices as a result of changes in the weather. For example, less rainfall and less reliable rainfall had prompted them to change their ways of rice production. They used to grow rice once a year in the rainy season when there was enough rainfall. Now, they are doing dry rice production 2-3 times a year and changing the rice seeds. However, the impact of this was that this had exacerbated water shortages further.



Wife of a model farmer controlling pests on their crops

There were other examples of women taking action to protect their crops from extreme temperatures, working together with their husband to do this (see case study below). In Pursat, making these changes involved discussion between men and women but men would



often have the final say as they were more responsible for this area. Women whose husbands had migrated felt they were more confident in making these types of decisions (i.e. taking actions or making changes to farming practices) but would still make sure they got agreement from their husbands.

“When there are pests on my rice farm, I buy pesticide to control them which I learnt from my neighbour who also did this...I discussed with my husband [the issue of water scarcity] and changed to dry farming and changed the seeds... following my neighbour who received agriculture training from an NGO.”

Woman, 30, Pursat province.

### Pursat case study: Severe drought drives female farmer in Pursat to take action in response to water shortages and high temperatures

Vegetable growing is the only source of income for Chantou (44) and her husband, who live in Me Tek commune in Bakan district of Pursat province. Over the last two years, Chantou has noticed increasingly intense droughts and high temperatures, which she attributes to deforestation. These weather extremes have decreased the couple's crop yields, meaning they are unable to grow crops in June or July, and their October–December yields are lower. To adapt to higher temperatures and increase crop yields, she protects her crops through use of a silver black plastic mulch, placing the black side inwards, towards the crops and the silver side outwards, which helps to protect crops from heat and maintain moisture. This was a technique taught to her neighbour by an NGO. To deal with pests, she uses pesticides, but this is not always effective. However, she knows to bring leaves destroyed by pests to pesticide sellers so they can recommend what kind of fertilizers to be used with different types of insects. Chantou's husband, Sokha, said that he would welcome other villagers to see what techniques they are using to help them cope too. Chantou and Sokha are also engaged in a wider community effort to address some of their agricultural issues. The community are trying dry season farming so they can sell produce at higher prices, and also rented a large digger to construct a well at the bottom of the stream to generate water for household use by all villagers and for watering crops.

“Every year the stream used to be filled with water, but last year water shortages were really extreme. Even though the bottom of [the] stream has been dredged, there is still no guarantee [of] water.”

### Men were more commonly migrating, compared to women

“We are worrying a lot about future livelihoods as fish stock keeps decreasing and we can't grow rice and if we are able to grow rice – the price is low and we have to sell it in order to pay back debt such as for chemical fertilizer. If the situation remains like this in the future, we have no choice but will need to migrate to find construction jobs in Kampong Som province, Phnom Penh capital or [go] to Thailand.”

Man, 43, Pursat province.

Across both research regions, women and men reported often lacking the resources, techniques and information to adapt effectively to the impacts of the changing climate. Running out of solutions, some have taken out loans and migrated for work. In Pursat, where this was



more commonly reported, men have responded to changes in weather and the environment by migrating to work in construction in other parts of Cambodia (Kampong Som province and Phnom Penh) and Thailand. During the research validation exercise, participants reported that people mainly migrate to meet loan repayments, but often do not earn enough and some are cheated, pushing them into greater debt.<sup>24</sup> In Pursat, there were some examples of women migrating to work in factories (see the case study below). However, this was much less common than men migrating, owing to the entrenched norm that women should take care of children and household work, while men should work to generate family income.<sup>25</sup> It was also therefore less common among married women who were more likely to have these responsibilities than single women. Migration was less commonly reported overall in Kampot.

### Pursat case study: Migrating in response to drought

Increasing debt and rising living costs have caused one family from the Me Teuk commune in Pursat's Bakan district to make changes. Phirum is a 38-year-old farmer and fisherman in sole charge of his three children (aged 14, 10 and 2 years), as his wife migrated to Thailand a year ago to work in a chicken factory. After drought devastated their paddy field, and simple adaptation strategies failed to generate any water, leaving them in debt, the couple initially planned to migrate together. However, they decided it would be better for Phirum to stay in Cambodia, as he could earn some income from fishing, although he finds this challenging as he must bring his youngest child with him wherever he goes. This is unusual, as Cambodian men are usually much more likely to migrate for work, leaving their wives to care for their families. Despite making the decision jointly, Phirum worries about his wife. He worries about her working so far away, that she doesn't eat enough and though she sends money back to her family – around 4,000 Thai Baht twice per month – he worries she is sending more home than she needs in Thailand to live off of. Phirum is largely dependent on his wife to generate income which he must use for many things; to pay off existing debts, for daily expenses, wedding invitations and on his children's education and other expenses.

### Women were taking on increased responsibilities as a result of men migrating

“...when men are not at home all responsibilities fall under women.”

Male commune chief, Pursat province.

In Pursat, there was an impact on women when men migrate for work. Both women and men reflected that this was the case and that generally, women have to take up additional responsibilities when men migrate. These increased responsibilities included looking after animals and crops and having to administer pesticides, which they claim have negative side effects including dizziness, exhaustion, headaches and vomiting.

<sup>24</sup> Migration is a common response to coping with climate changes. The Climate Asia study found that 43% of respondents had made some level of change to their livelihoods or jobs as a result of changes in the weather and the availability of resources. Of these, 21% had migrated temporarily to earn more money.

<sup>25</sup> The research did not conduct follow up interviews with partners who had migrated to assess how successful this was from the migrant's perspective, but this would be a recommendation for future research.



When men are absent, women are also responsible for protecting children or elderly/disabled relatives in the event of flooding or a storm. Although this presents women with a double responsibility to both household responsibilities and agricultural work, interviews with local leaders felt this equipped women with a better understanding and ability to be prepared for extreme weather and changes in the environment, as they are more in step with their family's needs.

“Women are better prepared for hazards than men because women pay close attention to their family and children the most.”

Male commune chief, Pursat province.

In Kampot, although men did not report migrating as much as men in Pursat, they would go on out to fish for days at a time, also leaving women to have to look after children and other dependents and to be prepared for any extreme weather such as storms or heavy rain.

“One time there were storms and my husband couldn't return back home from fishing and my rooftop was damaged by [a] storm with heavy rain, so I could only stay still and wait for my husband [to] returns to get the rooftop fixed as I can't fix it myself.”

Woman, 25, Kampot province.



Storm damaged houses in Kampot (Photos provided by a member of commune council)

Although the majority of this research was carried out before the COVID-19 pandemic, the community validation exercises took place during the pandemic, in June 2020. When reflecting on their own communities' research findings, women and men also discussed changes that had taken place as a result of COVID-19. In both regions, women's household responsibilities and burdens had further increased as a result of the pandemic. Women felt they were busier as they had additional caring responsibilities as their children were at home rather than in school.

### **Women and men were both taking out loans to adapt**

When women and men have had to spend money on techniques to adapt to changes in the weather and environment, such as buying pesticides to deal with greater numbers of pests, this has often forced them to take out loans or borrow money. Women and men generally take decisions on loans together, and must both be present when obtaining a loan from a microfinance institute. On smaller amounts of money, whilst the decision to borrow is still made jointly between women and men, women more commonly do the borrowing and negotiating with middlemen and businessmen in the community, and are often in charge of the family income, providing them with some financial independence.



Poorer households often had to take this action to survive despite this having a wider impact on their futures. For example, children from poorer families often dropped out of school to migrate and make money to alleviate family debts. Women were especially concerned about debt as they usually oversee family income and expenditure. Stress over debt repayments sometimes led to arguments over selling assets or cutting back on the cost of weddings or religious ceremonies.

“ *It is better to make decisions together between men and women in the family. Women usually borrow money from others for husbands to use for livelihoods such as buying [a] hand tractor, rice seeds, fertilizer, and chemical spray.* ”

Female leader of saving group in the community, Pursat province.

Again, the onset of COVID19 had exacerbated this issue around the need to borrow money. In Pursat, factories had closed, so women and men were worried about a lack of income. Men working in construction had seen changes to payment schedules – receiving money monthly rather than weekly – which forced them to borrow money from employers to buy food.

### **Fishermen, supported by their wives, took actions to prepare for storms**

Fishermen in Kampot talked a lot about how they have dealt with storms. If they are at sea during a storm, they are usually well prepared. If they cannot retreat to the shore, they down an anchor and wait for the storm to pass. They prepare themselves well with life jackets, plenty of drinking water, fuel, wet weather gear and a water pump. If they have a smartphone, they check for weather forecasts and news from nearby Vietnamese fishermen. To deal with increased temperatures at sea, men reported having cooled their boats by throwing water on the roof. As they felt prepared for these issues, they perceived them as less of a risk, indicating that when people have the right knowledge and information, they feel better equipped to deal with risks relating to climate change. Some fishermen have also joined forces to patrol coastal areas for fish conservation and to reduce illegal fishing.

It was clear from the research that some actions women and men have taken have also been mediated by other factors. Families from low-income backgrounds reported taking more risky actions to protect their livelihoods. For example, poorer fishermen in Kampot have taken more risks in going to sea during storms to generate more income as there is less competition.

“ *When people are poor although they know there is [a] storm ... they still need to go to the sea for fishing in order to support [their] family livelihoods. If they do not go, they won't have money for food and for their children to go to school.* ”

Male, 30, Kampot province.

In the community validation exercises, though women in Kampot do not go to sea with their husbands, they reported supporting their livelihoods in other ways. Several women reflected that they play a role by preparing food, water, life jackets, and wet weather and safety gear for their husbands before they go to sea.

However, in Kampot, the impact of men being so reliant on sea fishing meant that women were often anxious about their husband's safety at sea. If anything happened to their husbands, they felt they were vulnerable as they would struggle to support their children in the future.



“ I always worry about my husband’s safety as we only have a small fishing boat to do fishing in the sea. I’m so happy when my husband returns back safely each time. ”

Woman, 39, Kampot province.

## Food and water security

### Women reported curbing their own food and water intake to help their children

Women were concerned about food security, often risking their own health to ensure that of dependents.<sup>26</sup> This was an issue for men and women across communities, which was heightened when there was either extreme weather preventing fishermen being able to fish or drought affecting farmers capacities to grow rice. However the impact of these food shortages appeared to fall more on women. For example, across both provinces, women were responding to difficulties related to food and water shortages by sacrificing their own needs for others – skipping meals or restricting their water intake to ensure that their children did not go hungry or thirsty. Women were the main parent responsible for childcare and therefore had to try and ensure the safety of themselves and their children. For example, in Kampot, women reported dealing with increased temperatures by ensuring that their children stay in the shade and showering them to cool down.

### Women and men were taking different actions to address water shortages

*“The temperature is rising [more] than before, so the measure is to prepare jars to collect rain water for consumption, but when there is rain for the first time we should not collect it because it has dust from our rooftop which is not good water to use, we can collect water from the second rain – I experience it myself.”* Woman, 44, Kampot province.

In both provinces, women and men have been dealing with the challenges of water shortages. Water shortages in Kampot resulted from a lack of groundwater, whereas those in Pursat were reportedly caused by droughts, rainfall shortages and high demand for water in other communes upstream.

*“Water scarcity or drought severely impacts women more than men as women need more water for daily use. Flooding also impacts more on women than men as women need to take care of children and household assets.”* Male commune chief, Pursat province.

Women and men responded to this challenge in different ways. In Pursat, many villagers have tried to dig wells with little success, causing them to lose motivation. They also reported having come together as a community to raise funds or work to repair dams, wells, ponds or to restore canals. Men often used their hand tractors to transport water from the pagoda’s (a Buddhist temple) pond. In contrast, female-headed households (where the husband had migrated or a couple had divorced) often have to buy water or, if they cannot afford it, reduce their consumption and try to save water. To cope with drought and water scarcity, male farmers were switching seed varieties. In cases where the husband has migrated, women consulted their absent husbands before making such decisions.

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<sup>26</sup> This was also reflected in the Climate Asia study; women were more likely to take actions related to household-based work such as storing food (53% compared to 44% men) or making water safe to drink (87% compared to 79%).





Women in Pursat have to travel further, between one and five kilometres, depending on how close their village is to the pagoda (pond at pagoda is publicly used by villagers). Women in Kampot reported that when water is scarce, they have to travel further to collect it, up to one kilometre at a time, increasing their workload and often facing difficulties to maintain menstrual hygiene. Therefore some women also save water using non-drinking water saltwater for washing clothes and dishes. One Muslim community visited for this research demonstrated solidarity in sharing water – when water is scarce, they share what they have among their community rather than selling it. If one family owns a well, they let others use it too.



A pond at a pagoda from which villagers in the study area in Pursat collect water

Poverty also meant households deal differently with water shortages. Lower-income households had to travel to collect water from streams during shortages and some avoided regular showering to conserve water. In contrast, richer households could afford to buy water. This shows how vulnerability is exacerbated by factors like poverty.

“ With the increased level of sea water in rice fields, women are affected in terms of lack of food and lack of fresh water for household use. ”

Male NGO worker, Kampot province.

### Section 3: What information do women and men access to support taking action?

Having timely, relevant and high-quality information can help people to be better equipped to deal with extreme weather and its impacts on their environment and livelihoods. This section examines where women and men receive information from in relation to climate related risks and hazards and actions they can take to adapt and respond to it.

#### Media access and consumption differed for women and men

The literature review showed that crucial factors in encouraging women to adapt to climatic changes are linked to their access to information and their knowledge of climate-smart agricultural techniques to increase productivity sustainably and enhance resilience.<sup>27</sup> But women often engage less in learning adapting strategies due to discouragement from others, and they also tend to have less access to information, and less free time in which to seek it.<sup>28</sup> In the study locations, women and men had experience of changes in the weather and environment but lacked the knowledge of what they could do about this and how to respond to its impacts. However, there were different levels and types of access to different media and information sources available to women and men, which may exacerbate this issue more for women.



Overall, TV was the most trusted source of information for people in both study areas but TV programmes about climate related risks and hazards and what actions women and men can take are rare. In both regions media access and consumption was different for men and women. In Kampot, women did not report using media as an information source to find out about how to cope with changes in the weather and environment – they generally used media for entertainment such as watching Thai movies on TV and smartphones. A few reported

having access to Facebook but they usually used it for entertainment rather than information. However, a few women reported listening to weather forecasts on the radio. This was similar in Pursat where, although a few women reported watching weather-related news on the TV, they did not seek it out.

Smartphone access was not common but in the instances where people did have access men reported using it more to keep up to date with information, rather than women. Women who had access to a smartphone reported using it for entertainment rather than information – following similar dramas to their friends and neighbors. Other women commonly had access to a regular mobile phone, but not a smartphone.



Satellite TV provides better connections to local TV networks

Men in Kampot reported using a range of media sources and following weather forecasts via the radio, TV, smartphone apps (such as GPS, Google Maps and weather apps) and Facebook as they felt they needed to be well-prepared for fishing. They also used smartphones during their leisure time to access entertainment content such as boxing matches and action movies. Similarly, men in Pursat more actively pursued information about the weather than women by staying up-to-date with forecasts, and a few reported using YouTube to access information about agricultural techniques. They also more commonly have a smartphone as they need it when migrating. However, they also reported that they sometimes have difficulty accessing the local phone network which prevents them from receiving information. Where men were able to connect and received information about floods and storms, they reported sharing that information with others in the village.

“Men have smart phones and go out a lot for their job so they can see information about weather while women only use normal phones and are busy with household work and child care all day with less time to gather with others.”

Woman, 42, Pursat province.

### Face-to-face interaction was a key information source in rural communities

Throughout the research communities, gaining information through face-to-face interaction

<sup>27</sup> Huyer, S. (2016), *Closing the Gender Gap in Agriculture*. Available at: <https://journals.sagepub.com/doi/pdf/10.1177/0971852416643872>

<sup>28</sup> Asian Development Bank (2015) *Promoting Women’s Economic Empowerment in Cambodia*. Available at: <https://www.adb.org/sites/default/files/publication/156499/promoting-womens-economic-empowerment.pdf>



was key. This was either through formal methods such as community meetings, or more informally through speaking to friends. In both regions, women felt they had less time to attend community meetings as they are responsible for household chores. Women in Kampot reported spending time talking with their neighbors and friends. They discussed health, children and family issues, and at times they do discuss issues affecting them owing to changes in the weather and environment, such as water shortages. However they did not report talking about solutions to these problems. In contrast, men in Kampot felt that as they go out for fishing, they gain information from speaking to others while at work and afterwards (however it was reported in the community validation exercises after the main fieldwork that fishermen stopped socializing so much in order to protect themselves from the virus).

“*Women in the village are with children so they don't have time to listen in any meeting in the village.*”

Man, 19, Pursat province.

### **Women and men appreciated support and information from village leaders**

In both regions, community members had a high level of trust in their village chief and commune chief. Women and men in both regions reported communicating directly with the village chief/deputy chief and found them easy sources of support when facing any challenge. People perceived these roles as key initiators in accessing support from NGOs or other government institutions in disaster situations or to respond to the impacts of climate-related changes.

In Pursat, women and men gave examples of interventions run via or by the village chief. These included awareness raising initiatives around water shortages, guiding villagers on how to dig wells without harming the environment, raising issues with the commune council, raising awareness of flood preparedness measures and constructing early warning systems. Meetings such as these focusing on agricultural techniques were more commonly attended by men. Meetings which addressed broader social issues (such as domestic violence or drugs) were attended more by women.

In both regions, community members reported two-way communication of information between villagers and village authorities. Community members reported receiving information occasionally from other institutions such as NGOs but they viewed these organisations as one-way communicators as they did not know how to contact them if needed. In Pursat, though community members reported various livelihood techniques offered by NGOs and local government, women and men sometimes could not attend such training as they had to work. In Kampot, villagers appeared to lack information from NGOs related to coping with climate change, compared to people in Pursat.

### **Support from NGOs varied**

According to key informant interviews with community-based organisations and development partners, the resources used to support villagers to deal with climate-related hazards are money, materials and smart agriculture techniques, as well as coordinating cooperation among stakeholders such as the local authority. Community validation exercises revealed that NGOs were more commonly supporting preparedness efforts, whereas the government usually supported after a disaster.



According to interviews with local NGOs, the very few NGOs implementing small-scale climate change interventions in Kampot, such as training on seed varieties and livestock, have nearly all disappeared in recent years as a result of a lack of donor funding. Interviews with community members suggested these NGOs faced a challenging working environment because people lacked trust in outsiders following a dispute between community members and a company run by a powerful businessman who tried to reclaim land in communal sea areas.

During the research period, only one NGO was running a training programme related to climate change adaptations which was training relating to drip irrigation systems and storm preparedness in Kampot. Even so, men often struggled to attend this training because of work while women were usually tied up with childcare and household chores. Other forms of support include women's community groups providing information on where to report domestic violence, and a women's NGO played a role in educating both women and men about gender-based violence. Households mentioned that when their homes have been damaged or destroyed by weather events, they have received support from the Cambodian Red Cross. One Muslim community visited as part of the research also received its own community support once or twice a year to help poor elderly people and construct wells.


In Pursat, the research indicated a few government and NGO interventions that supported people by providing agricultural and animal husbandry training, and rice and vegetable seeds. Men who have migrated could not attend this training, and poorer families could not spare the time to participate in it. Women who did attend had to take their children with them so were not able to make the most of these opportunities. NGO support to women focused on guidance around pesticide use. Role models also played a key part in providing information or ideas to others around climate change and adaptive measures. In Pursat, role models were farmers who had previously received NGO support on climate-smart agriculture techniques, which were helping them to increase their crop yields and incomes. Research participants however did not always feel they could replicate these actions because of barriers such as not having the money or materials to implement such actions themselves.

#### **NGO and government stakeholder view on institutional support**

The Ministry of the Environment has aimed to ensure that gender vulnerability in relation to climate change is addressed in commune investment plans (CIP) and commune development plans (CDP).

In the key informant interviews at a national level conducted at the beginning of the research, NGOs and government stakeholders initiatives reported that support for communities has focused on raising awareness of climate change, increasing knowledge on issues relating to climate change and its impact, improving adaptation techniques, providing information around early warning systems and climate smart agriculture. Stakeholders reported that some projects have aimed to support people to understand how they can change their livelihoods in response to climate change and increase their income.

Efforts had focused on empowering women to participate in climate change projects, but stakeholders questioned how effective this was, despite youth and women being recognised as key vulnerable populations where efforts should be focused. One of the weaknesses identified in fully integrating gender and climate change discussed identified by stakeholders was that projects



sometimes focused on counting the number of women involved, rather than analysing how engaged or able they were to effectively be involved in projects. Some projects can be short term of lack resources, which also prevents more in-depth analysis of barriers women may face and addressing those fully in project implementation.

Both NGO and the government stakeholders felt that there is an absence of a co-ordinating mechanism to track who is doing what in relation to Cambodia reaching the SDG goals and that space to discuss new initiatives could help both government and NGOs to align their climate change work together so that it can be tracked with the national outcomes. They also felt that more could be done to align the country's strategic plan on gender and climate change with the real implementation of projects.

### **Local government support**

The local authority has a commune budget to deal with hazards at village level, such as providing materials and training in new techniques. Local authorities also play a role in disseminating disaster-related information in public places such as the local hospital and veterinary clinic.

According to key informant interviews with community-based organisations and development partners, local authorities in the research locations had budgets to deal with weather shocks. These authorities played a role in disseminating information about how to cope and prepare for extreme weather. District-level disaster management committees in the research locations provided community training on growing crops and rearing fish. The commune council and local authorities provided seeds and dug or constructed canals. Children received emergency preparedness information at school. Examples of government support include providing technical support through meetings and training sessions with targeted groups about rice and vegetable seeds, and chicken farming, or investing in building up communities' capacity to dig ponds and build roads to facilitate access to services and markets, rather than providing direct financial assistance. These examples found that support is focused on community wide initiatives, rather than taking into account the needs of different groups (such as women) and the type of actions or support which would be most helpful to them.

### **Section 4: What are the drivers of gender-based vulnerability to taking action in response to climate change?**

This section draws together findings from the research to provide an analysis of how different actions, impacts and information sources around extreme weather and changes in the environment are not only different for women and men, but how these differences link to the social, structural and resource-based barriers which can impede women in effectively responding to these changes. Clearly identifying the barriers to enhanced adaptive capacity for women (or men) are very important. This is because each barrier provides a springboard for assessing what type of solutions or interventions could be effective in addressing such barriers. These solutions or interventions which could be a mix of policy level responses, programmatic level responses, or media and communication responses are discussed in section 5.



## Social barriers

Social barriers (such as social approval, community norms and discussion) can be key barriers which prevent people from taking action in relation to climate change.<sup>29</sup>

### Gender norms

*“My wife is responsible for cooking, washing, feeding chickens, looking after kids and doing other women (household and childcare) activities...after rice seeds [are] planted I migrate for one or two months for construction work and when the harvest season comes I return back to help, then I migrate again.”*

Man, 33, Pursat province.

The current research examined how different social barriers manifest themselves in relation to gender. The idea that women should primarily be responsible for managing the house and childcare while men are responsible for bringing in income is a gender norm accepted by both women and men in the study areas.

At the same time, the research found that women were having to cope with the effects of high temperatures, water scarcity or other weather extremes, often making the decision to take actions which could help support them and their families such as trying to earn additional income.

It was clear that women's lack of time for rest and their exposure to increased temperatures or more intense rainfall can have a detrimental impact on both their physical and mental health. The double responsibility of looking after the home and leading on agricultural work was particularly an issue for women in Pursat. Initial stakeholder interviews conducted as part of the research indicated that women's vulnerability often increases owing to migration by their husbands as they are left to deal with the effects of extreme weather and climate hazards. For example, men who migrated did not have to deal with the effects of water shortages in daily life, whereas women had to make frequent and arduous trips to collect water.

Despite this, neither men nor women valued the household and caring responsibilities that women undertake as they did not feel these activities generated any income (or did not recognise that they enabled others to generate income). At the same time, sometimes women's responsibilities for the household and children prevented them from taking on other work to contribute to household income. The research found that women who were married and had had young children were severely hindered in their ability to participate in economic activities.

*“Here most women are at home taking care of children and doing household work... some husbands value this role and some not. My husband never does any of this work (household and childcare). I value household work but many others do not value it and they think it is useless with no income – it's kind of not a good way of life for me to just use the money earned by husband. When I'm angry with my husband, I really want to go out and earn money.”*

Woman, 25, Kampot province.

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<sup>29</sup> In BBC Media Action's Climate Asia study, people said they were not responding to this challenge because they were fearful of discussing actions with others (reported by 37% of respondents), or because taking action did not fit with their religious beliefs or community culture (reported by 35%). Such social barriers were much more important in preventing people in Cambodia's Coastal region from taking action than their peers in Tonle Sap.



Having vulnerable family members, such as those with a disability, or households with sick or elderly members, exacerbates women's own vulnerability to the impacts of climate change. Poor female-headed households in the research locations were particularly vulnerable to such changes as they lacked the reliable income or financial resources to cope and recover from them. Community members said that elderly people were more vulnerable as they often have less energy or physical strength, and may also have to look after young children whose parents have migrated.

Community validation exercises found that community members felt children were adversely affected when their parents migrated. Children under five years were also vulnerable as they are more likely to become sick and malnourished as a consequence of consuming unsafe drinking water, to become over-heated when temperatures soar and they are less able to protect or save themselves during an emergency.

Therefore, the entrenched gender norm that women should lead on responsibilities for the household and children (even when they may also have responsibilities around agricultural work or income generating activities) means that women often have to cope with an array of different responsibilities. Given that women are the primary carers for children (and other dependents in the household), their susceptibility to the impacts of extreme weather and changes in the environment also place an additional responsibility on women, compared to men.

#### **Pursat case study: How one woman deals with her double responsibilities**

Sopha is a 40-year-old married mother-of-four living in Pursat province. Her parents and 16-year-old daughter-in-law also live with the family. Despite having chronic pain and numbness in one leg, Sopha looks after the household, works in the family rice field and vegetable plot, and looks after their cow. She also earns a small income selling maize, watermelons and pumpkins, and occasionally by washing dishes at events. Her husband, who works on a construction site, does not help with housework unless Sopha is sick or has just given birth.

Sopha is aware of, and concerned about, the impact of changing weather on farming. Although she has tried using pesticides, she thinks these are ineffective, and her rice production is low because of drought. Maize, watermelon and pumpkins are also thirsty crops that are particularly affected by the rising temperatures. The lack of water is a big concern for the whole village, both for farming and household use. When her children were small and her husband was away, she had to ride her bike to collect water on her own, regardless of how difficult it was and how much it hurt her leg.

As a result of climatic impacts, the family has large debts. Sopha has previously considered migrating to Thailand for work but her children do not want to leave school. Sopha is extremely worried and uncertain about her family's future. She felt it is likely that the whole family will have to migrate after selling land to pay off debts.



## Differing decision-making powers

*“Both my husband and I can make decisions, when I want to change from raising pigs to cows I can propose this to my husband. Although we discuss my husband is the one who always makes [the] final decision in my family.”*

Women, 42, Pursat province.

Stakeholder interviews for this research conducted prior to the fieldwork identified that social norms and women’s lack of education compared to men often meant they were more vulnerable as they had less decision-making power or skills within the family. When men hold all the decision-making power and have limited understanding of women’s needs, this can exacerbate women’s vulnerability to the impacts of climate change.

In the research communities, women may have perceived themselves as active participants in household decision-making, but the study found that they often were not able to influence big household spending decisions, such as investing in adaptive practices. Although women and men discussed big decisions and men appreciated women’s opinions – especially concerning household needs – men usually dominated the final decision because they were more economically and socially empowered and women conceded power to them. Women were usually trusted to make decisions on smaller expenditures such as food, clothes and healthcare, indicating they do have some level of financial independence and in female headed households, they made all their decisions themselves. In contrast, men tended to make decisions on bigger purchases related to their livelihoods such as the purchase of new machinery or boats.

*“At [a] household level men are the main decision makers and women need to seek permission from [their] husbands before deciding. Only widows decide by themselves...women could make more decisions on household tasks.”*

Male NGO worker, Kampot province.

The dynamics of decision-making did differ by location. In Kampot, as men were the main breadwinner and they had a good level of knowledge of the climate-related risks they faced and how to mitigate them (in fishing, for example), they were the main decision-makers. In contrast, in Pursat, women played more of a role in decision-making – women and men felt that both partners would need to be involved in taking decisions to prevent conflict from occurring. Women in Pursat were more knowledgeable and subsequently more empowered to make decisions to adapt practices relating to household finances, agriculture and livestock if needed, because they had been left with these responsibilities. Their more direct involvement in these practices as a result of their husband’s absence increased women’s confidence to discuss their ideas with their husbands – and their husbands seemed more likely to listen to them. Some were implementing various techniques thanks to support received from various organisations including NGOs, the Cambodian Department of Agriculture and community-based organisations (CBOs). However, they would not make decisions alone and would still discuss decisions with their husbands on the phone.

In Kampot, less-educated women in particular did not try to make any decisions as they felt they lacked the appropriate knowledge or experience to do so. When they had made





decisions which had failed, women were blamed by their husbands. In a few cases, husbands did not trust their wives and were very dominant and patriarchal. A few women had experienced violence from their husbands if they implemented an adaptation strategy without their permission and some women conceded decisions to men to avoid arguments.

Many key local authorities and influencers expressed the perception that women are able to make better decisions about household issues as they are close to the problems and have more resilience to adapt to climatic hazards that are happening around them. Whilst they all agreed on the point that both women and men should discuss and make decisions together responding actions, these stakeholders also conceded that in reality men usually dominant the decision making especially for big spending decisions although women actually manage the money.



Woman feeds livestock at her home

“Most of the time my wife takes care of livestock as I’m responsible for farming. She is at home so she can do it. If we want to sell our livestock product we discuss with each other but my wife won’t sell it if I don’t allow her to.”

Man, 33, Pursat province.

### Social contact outside the home

In both provinces, men were more likely to get together with others outside the home than women, who were more likely to be confined to the home by housekeeping and childcare duties. In Pursat in particular, farming duties also limited women’s opportunities to network with others. Women who had jobs in a factory or shop had no free time to mix with others.

In Kampot, where women appeared to have more free time, they gathered informally with neighbours and other women, but they rarely discussed climate-related topics. In comparison, male sea fishermen in Kampot learned from colleagues and from Vietnamese friends how to prepare for storms and strong winds. They were generally more likely to discuss climate-related topics because they had opportunities to meet more people through their work, which is often directly affected by the weather and climate. Having this knowledge and these networks meant that fishermen felt equipped to deal with storms and perceived them as less of a risk.

The research found women have more limited time or opportunities to network formally or informally with other community members (owing to the gender norm they should lead on responsibility for household responsibilities). This can impede their ability to learn new information or skills or access relevant NGO or government support which may help



themselves and their families to be able to cope more effectively with the impacts of changes in the weather and environment.

*“I agree that women have less communication with others compared to men because women are not usually able to go out.”*

Man, 30, Kampot province.

### Cultural norms

Overall, the study found that women in all of the research locations had differing decision making powers depending on the type of decision or whether they were a female headed household. Generally however, for key decisions around adaptation techniques men made the final decisions. This appeared to be more entrenched in one village in Kampot, where Muslim women reported having very little or no decision-making power, and also a lack of information. Muslim women from this village felt it was sinful to object to their husbands' decisions, so husbands were more likely to make the decisions and women were less likely to object to them. Furthermore, in this community, the village chief generally expected the male head of the household to attend community meetings. This resulted in women having limited social interaction with others. Women from that village only attended meetings if their husbands were away. Therefore, where gender norms are coupled with certain cultural norms (for example where women and men believe a woman should not question the decisions of her husband) this can also limit women's ability to be able to contribute to discussions or decisions around taking relevant actions which may support women and their families more effectively.

*“When making [a] decision [the] wife always need to care about [her] husband's feelings as [the] wife depends on [her] husband (income). In my religion, [the] husband has [the] right to make all the decisions – when [the] husband does not allow [his] wife to do anything and she wants to do it then she will heavily sin. Whatever decisions [the] husband makes, [his] wife should never reject.”*

Man, 22, Kampot province.

*“Women should follow [her] husband's decision making as our religion advises us not to disagree with [our] husband's decision – this [is] called a sin in my religion.”*

Woman, 28, Kampot province.

### Structural barriers

Structural barriers have been one of the key barriers preventing people taking action. How gender interacts with these structural barriers is discussed below.<sup>30</sup>

#### Limited public participation

Gender norms, such as having to take care of their children and household, mean women are often too busy to participate in meetings. Women can lack awareness about the importance or usefulness in participating – linked to having not done so in the past. When women do not have the opportunity to participate in formal (or informal) public consultation forums or meetings run by NGOs or government this limits women's access to support, information, networks and techniques which may help them adapt to changes in the weather and environment.

“In this community, women can express their opinions, but [the] community rarely listen to them...they like to listen to men who have earned [an] income, have more experience in the sea, and have more practicality. For us (women) we just heard about it (no experience). Most of the time the meetings [are] held with less women participation....”

Woman, 25, Kampot province.

Women themselves also felt they did not need to join such activities as they are busy with household work. They felt that it was more beneficial for their better-informed husbands to attend meetings. As noted above, the validation findings found that women in Pursat often attended meetings when their husbands were working away, but they usually needed to take their children with them, hindering their concentration. In Kampot, men attended meetings as they commonly related to fishing.

Where women have the opportunity to engage in community meetings or NGO sessions this would better equip them to be able to respond effectively to changes they are experiencing and help them to take action.

“I think men get more information on climate change than women through meetings at [the] village or commune. Normally, it is men who participate.”

Man, 33, Pursat province.

### **Kampot case study: Low-income woman motivated to engage in community meetings, despite barriers**


Savy (41) is a mother of one who divorced her ex-husband after experiencing physical violence. She lives in a tiny hut in the village of Prek Thnot in the Kampot province with her 15-year-old son, who dropped out of school in grade 1 because of bullying. Despite her lack of resources and money, Savy told researchers of her economic independence, even when she was married, and her ability to make decisions independently.

Savy's injuries from domestic violence prevent her from making a good living digging for shellfish or assisting fishermen at sea. She earns around 6,000 KHR (approximately 1.5 USD) a day cleaning fishing nets. This means she can only afford to eat one meal a day and has no electricity. As there is no piped water in her house, she has to buy water at a cost of 1,000 KHR a day.

Savy has noticed increasing temperatures and stronger winds, which affect her income as fishermen are often prevented from going to sea. She believes that the wind is stronger because people are “chopping down the mountains”. To protect her home during strong winds and heavy rain, she puts coconut leaves on the zinc roof of her hut to prevent it from flying away and to stop leaks.

Though she faces challenges, she is economically independent and makes an effort to participate in public life. When there are any official meetings within the village, she tries to

<sup>30</sup> The Climate Asia study found that, across Cambodia, structural barriers (such as needing institutional support from NGOs or government in order to act) were the biggest obstacles to people taking action in response to the impacts of climate change. Overall, 81% of people felt they needed government support to take action and 73% felt they needed support from NGOs.



find time to join them. However, she does not feel confident to join gatherings with other women or visit her neighbours as she feels she is looked down upon.

*“When there is a strong wind, I dare not hide myself in other people’s bigger houses. They look down on me. I am afraid they will say I am a thief attempting to steal their stuff.”*

### Fewer women in positions of power

The most influential people in the research communities were village chiefs and vice chiefs, who refer people’s concerns and suggestions to the commune chief or council.

Villagers placed great faith in these figures to help them respond to future climate changes. They have played a key role in disseminating information during weather shocks and they devise the disaster management plans. Both women and men trust that these people and their institutions will seek support from NGOs or other relevant government bodies to help villagers adapt to disaster or climatic impacts.

However, as observed from the fieldwork, there are far more men than women in the commune council and other positions of power, and women are almost never village chiefs or vice chiefs. One male respondent in Kampot mentioned one female vice-chief but claimed she did not have as much of a voice in the council compared to its male members. When women lack representation (or indeed if representatives are not well versed in the diverse needs of women and girls in their communities) there is a risk their needs and concerns in dealing with issues they are trying to cope with around changes in weather and environment may not be prioritised.

### Resource barriers

#### Women’s economic power

Household and childcare duties sometimes constrained women’s ability to do paid work and to migrate to work in factories (especially in Kampot). Early child-bearing is particularly restrictive in terms of preventing women from earning an income as they must stay at home and fulfil household and childcare responsibilities.

Limited education restricts the ability of both women and men to find well-paid work – but women have even lower levels of education than men, which further constrains their ability to secure skilled employment. Furthermore, gender norms accepted by both women and men meant that the common jobs available in the study areas, such as construction work, fishing and driving, tended to be sought by men – who are perceived to be better suited to those kinds of roles – and who also received higher pay.

As discussed above, neither women nor men appreciated the value of women’s housework or childcare tasks as they did not perceive them as generating income, even though they enable men to go out to work and earn. Though some men reported occasionally helping with household tasks, this only happened when there was no alternative and they were free from



their own work. Even in instances where a woman might be able to earn more than her husband, entrenched gender norms among both women and men that women's roles are in the house limited women from being recognised as income generators. For example, one woman in Kampot used to work in a garment factory and was able to earn more money than her husband. Even though he knew he would earn less, her husband preferred to go out to work rather than look after the household. Where women's economic contributions can be recognised, valued and encouraged, this can support families and communities to cope more effectively with changes in the weather and environment. This is because it means both women and men will be taking action (and recognised to be taking action) which can support themselves and their families to cope better in the future.

### Lack of materials and required finance to take action

Both men and women reported lacking the resources such as money to buy materials which could help them to adapt. As such, they have to take loans which can have an adverse effect on women who are especially concerned about debt as they usually oversee family income and expenditure. The lack of access to money and materials prevented men and women from being able to make themselves and their families safer, in the face of changes to weather and their environment. Examples included lacking money to repair storm damaged homes, lacking money to buy bigger boats for sea fishing in deeper waters and families lacking money to buy the required chemical fertilizers or seeds to adapt to required changes in farming practices.

#### Pursat case study: How one woman manages agricultural challenges

Chenda is a 28-year-old married mother-of-two living in her parents' house in Tamom village in Pursat province. Her daughters are 4 months and 18 months old. Chenda struggles to walk as a result of childhood polio.

As well as doing household chores with her mother, Chenda farms rice on the family's single hectare of land. Chenda's disability prevents her from rice farming alone so her father helps. *"The one who works in the rice field is my father. My husband never helps... He never helps with household work. Sometimes he helps take care of the children... He spends at most two or three days a month looking after the children. If they are sick, he never looks after them. I am the one who takes the children to the doctor... sometimes at 1 o'clock in the morning.*

In the past year pests and insects have damaged Chenda's crops far more than in previous years. Although Chenda uses pesticides, she does so in small quantities as she is afraid of damaging her family's health. Whether she uses pesticides or not, the quality of Chenda's rice is poor so she borrows money from her sister in order to buy pesticide and fertiliser. Water shortages are also a big issue for this community. Like others, Chenda tries to store rainwater in buckets for use in the dry season.



# Conclusions and recommendations

## Conclusions

**Women and men reported experiencing the same changes in weather, climate and the environment.** For example, both women and men cited key impacts including water scarcity, rising temperatures, pest attacks on crops and storms. Households in Tonle Sap have been particularly affected by drought while those in the Coastal region have suffered saltwater intrusion that damages rice crops. These changes in the weather and environment have had impact on women and men's economic security and food and water security as rural communities, they rely heavily upon fertile land, sufficient rainfall and plentiful natural resources to survive.

**The impact of changes in weather and environment were affecting men and women differently and the actions they were taking were also different.** This is because structural, social and resource-based barriers entrenched in deep-rooted gender norms and inequalities can limit, or dictate, what types of action women take compared to men. For example, both women and men in the study locations accepted a gendered division of labour – that men should be the family breadwinner and women should take lead responsibility of household management and childcare (in some cases, in addition to doing agricultural work). Women's and men's roles and actions in relation to coping with, and adapting to, climate change are rooted in this acceptance. As a result, women's motivations for taking action focused on the wellbeing and future of her family, children and prospects. Women were taking actions (sometimes to the detriment of their own health) to save and store water and food to ensure their families survival. Men were taking actions such as migrating to look for work (again women's ability to do this was limited owing gender norms dictating she should stay at home).

**However, it was evident that both women and men are contributing economically to the household.** Women provided examples of how they were often trying to supplement their income on top of their household responsibilities or were working with their husbands to adapt farming practices. In Pursat especially, although women were often having to cope with household responsibilities and agricultural work, this often meant they were more resilient to changes and able to cope with these additional responsibilities. This was also recognised by local leaders who felt that women were often the ones more across the needs of their families and taking the important actions which would ensure their families survival in the wake of a disaster. There was no recognition by women or men of the value and contribution women's housework or childcare tasks played in enabling wider income generating activities.

**Though there were examples of women taking action to respond effectively to changes in weather and their environment, it was also evident that sometimes gender norms interact with other barriers.** This was particularly the case for women with disabilities who were less able to participate in agricultural work or other physically demanding income-generating tasks. Women in Muslim communities had limited information and decision making input because they felt it would go against their religion to challenge their



husbands. This means some women were less able to network with people who may be more informed about how to take action, or having less knowledge and self-confidence around these issues and a male bias in decision-making dynamics. For example, poorer female-headed households lacked the reliable income or resources, networks and knowledge to cope, adapt and recover from extreme weather events.

**Decision-making dynamics** within the household were particularly male-centric when women had a lack of: economic power, hands-on experience, useful information, relevant support networks and support from men/their husbands. Women in the study locations had less access to information sources and networks, leading to women lacking confidence in discussing or challenging their husbands in decisions related to income and livelihoods. Although women may have perceived themselves as active participants in household decision-making, the study found that they often could not influence big spending decisions. It should be recognised however that women are often in charge of the family income, providing them with some financial independence. Women and men did discuss big decisions and men valued women's opinions – especially concerning household needs – however women usually left big decisions, such as investing in a new boat or adapting crops, to men.

In exploring the **root causes of gender-based vulnerability to the** impacts of, evidence from this research suggests that gender norms played a key role in limiting women's ability to network, learn discuss and influence decisions and actions to reduce climate change vulnerability within their households and communities. Furthermore, it is evident that gender has intersected with other key factors such as women's age, income and marital status, to increase their vulnerability to the impacts of climate change. Given that the research found that people believed that climate-related impacts will only get worse in the future, gender-based vulnerability risks being further exacerbated. Furthermore, there is a risk with the impact of the COVID-19 pandemic that that economic security of rural families is at further risk and women were already reporting that the impact of the pandemic has only served to increase their responsibilities for looking after their children at home and their family's health.

The research results have aimed to explore different drivers of vulnerability, through extensive literature reviews and testing and exploring those drivers with women and men in rural Cambodia. These drivers of vulnerability could contribute to future indicators to assess future gender vulnerability to climate change. In specific contexts, some drivers will be more present than others, depending on factors including the location, climatic extremes faced, cultural norms and income levels. These drivers provide a useful way to gain a comprehensive understanding of a community, their adaptation practices in response to climatic changes and the barriers they face in taking such action. It should be noted that as this study examined just two geographical regions of Cambodia, there may be other barriers and motivators to women and men taking action on climate change.

## Recommendations

At the very least, projects and interventions to address climate change vulnerability should aim to employ gender-sensitive approaches, including solutions to address the needs and concerns of women and girls in project activities and ensure equal benefits of outcomes. Ideally, they



should be gender transformative, challenging the root causes of gender discrimination by addressing discriminatory gender norms, stereotypes, and unequal power relationships between the sexes.

### **Recommendations for programming practice**

#### **Ensure that women's needs and priorities are taken into account in project design, implementation and monitoring.**

As a minimum, interventions should take a gender-sensitive approach and ensure there is substantial awareness of key concerns and issues affecting women's vulnerability to climate change within both their households and wider communities. For example, NGOs or government agencies should ensure that gender-disaggregated data is collected and analysed in climate-related risk assessments, needs assessments and disaster impact studies (examining risks of death, injury, and risks to livelihoods and property).

Data should be collected on women's needs, concerns and priorities, and analysed to determine how these interact with socio-demographic factors such as income, disability or location. Interventions that aim to tackle gender-based vulnerability to climate change can only be effectively designed and suitable for the whole community if they adequately reflect the different needs and priorities of women and men. Stakeholder interviews conducted for this study also recommended carrying out more in-depth research and analysis at community level, such as mapping the hazards that women and men face and the coping strategies they use. At the outset of a project, this understanding and research insights should be used to develop robust theories of change in a participatory way with all key stakeholders. The theory of change should recognise and capture that the way people think and act is influenced by many factors, including their social networks, wider communities and social structures and systems. These stakeholders should include community members themselves, as well as local NGO, CSO and government partners.

#### **Improve women's recognition of their own abilities, agency and value they can bring in supporting themselves, their families and wider communities to take relevant actions in response to changes in the weather and environment.**

Social barriers discussed above demonstrated that when women in the research locations lacked access to information, networks and support they find it more difficult to adapt to the impacts of climate change. However, women were taking actions to contribute financially to their families, taking important actions around food and water security and sometimes working to change farming practices to be more effective. Supporting women and men to recognise the value of these actions and to share and discuss solutions with other women would be helpful. As such, projects designed to tackle gender-based vulnerability to climate change could:

- Increase women's leadership, including women networks at the grassroots, to act as role models to other women who can encourage women to share their experience, voices and encourage participation
- Ensure that they can effectively reach and engage women from different backgrounds in project activities





- Design gender-sensitive outreach activities (such as the provision of childcare at community meetings or conduct door-to-door visits to access women)
- Encourage, where possible, gender-transformative approaches to outreach activities including discussion between women and men, demonstrating to the wider community the benefits of women attending community meetings and events and engaging in discussions collaboratively
- Showcase and amplify female community role models who have taken action in response to changes in the weather and environment who have benefitted from taking action
- Leverage women's informal networks (such as friendship groups or sets of neighbours) to share information on climate-related risks, solutions and actions, and provide a forum for women to discuss ideas
- Initiate training or support to women to negotiate effectively or discuss decisions with their husbands could also help to build women's confidence in key conversations related to taking action in response to changes in weather and the environment. These initiatives could be enhanced through engaging communication materials to convey key ideas and introduce role models or key actions to adapt to the impacts of climate change. A gender-transformative approach might involve enabling discussions between women and men on the benefits of joint decision-making, or training men on how to have more equal and supportive communication with their partners.

**Encourage effective political, civic and social participation of women in relevant committees or CSO groups focused on the impacts of climate change. Actions for programming and practice to encourage this could include:**

- Ensuring an understanding at the beginning of new projects tackling gender and climate related vulnerabilities of community power dynamics. This might include examining whether leaders' decision-making processes consult women or reflect women's voices around their needs and barriers in relation to coping with, and adapting to, the impacts of climate change.
- Set targets or quotas for women's participation in local decision making meetings and processes but ensure these are carefully monitored to ensure that numbers are met, but more importantly that there is active participation of women in those processes. This may require additional support, training or outreach programmes to encourage women to participate more, express themselves and add their voices in community decision making processes.
- It would also be critical to increase local decision-makers' knowledge and understanding among both women and men of the impact of gender norms in women's lives so that women's needs and voices are better reflected in decisions and actions relating to climate change. All of these can be channelled through the trusted local influencers such as village chiefs, women representatives, and commune representatives. For example, community-based, gender-sensitive training to build understanding of gender equality should be built into disaster risk reduction and resilience-building activities. This may mean that agencies and projects focusing on reducing climate-related vulnerability need to network or partner with other CSOs to draw on the right tools or expertise.



### **Ensure intersectionality is considered and cross-sectoral strategies are used.**

Responses to climate-related vulnerability need to recognise that gender-based vulnerability to climate change interacts with a range of other issues including domestic violence, poverty and migration. To reduce people's vulnerability to climate change, projects could:

- Identify the families or communities most likely to take greater risks and address the root causes of poverty. As poverty is such a key factor in climate-related vulnerability for both women and men, projects that can highlight effective actions that have a positive economic impact may help to engage both women and men.
- Ensure challenging harmful gender norms is a priority across any type of community based project, not just relate to climate vulnerability. Projects that shift gender norms and male attitudes are not just about decreasing gender vulnerability but are also interconnected with issues such as sexual health or women's low civic participation. Projects should recognise this interconnectedness and work with CSO, NGO and government partners to tackle it.
- Project could be successful if they aim to promote a new norm of masculinity— perhaps via projects that encourage men to take more responsibility for household tasks and demonstrate the positive impact that can have on family relationships and how those actions can free up women's time to earn money or attend meetings which could help with the overall economic security of the family.

### **Recommendations for policy makers**

#### **Policy level implementation of climate change interventions should translate into clear government initiatives which community members can recognise and understand how they can benefit from them.**

This research study found that women (and men) can take action when they have the right information, networks and support from NGOs or government. As such, it is important that policy level changes have clear plans for how initiatives will reach and engage women and men at the community level so they feel supported by government agencies.

#### **Policy level initiatives should take into account the different cross-cutting ways gender-based vulnerability to climate change can interact with other issues.**

The research found that climate change has different impacts on women across areas such as health and economic empowerment. Policy level initiatives should take into account the cross-cutting issues which affect women and collaborate with other key stakeholders in these areas to design effective climate change policy in relation to gender.

#### **Policy design should include a gender analysis to ensure women's vulnerability is taken into account.**

National, sub-national adaptation planning needs to be led by affected communities, women and men, and based on an understanding of the gendered nature of climate change impacts. As such, national level policy makers could encourage local authorities to ensure systematic gender analysis is conducted before passing up these issues to a more central level. Using research approaches such as the ones in this report can help with this.

### **Media and communication strategies**

There are a variety of ways in which media and communication initiatives can support



improved gender equality, shift gender norms and support women and men to be better equipped to deal with changes in climate. The first step for any media and communication strategy should be to use research insights such as those in this report to develop a communication strategy and framework to guide project design, implementation and evaluation.

Based on the research data from this study and previous BBC Media Action research on the impacts of climate change in Cambodia, ways that media and communication might be able to address gender-based climate vulnerability could include:

- ◆ Using existing media content or platforms that women and men access to engage them in climate-related content. For example, women in the study areas enjoyed entertainment-focused content on TV. The climate-related issues they worried about included water and food shortages, and debt. Covering climate-related issues and information in broader media formats could be effective. For example, TV and radio drama rooted in people's daily lives, focusing on the strains, humorous moments and triumphs of rural life, and family and community tensions alongside covering climate-related hazards could engage women and the wider family. Long-running media formats could start with familiar scenarios and then take people on journeys of change. Storylines could address tensions between women and men, and how these can be resolved. Characters could feature people dealing with similar issues and challenges to target audience members, demonstrating how they have overcome these problems.
- ◆ It is clear that women (and men) could benefit from more information about the actions they can take to respond to the impacts of climate change that they face. Media and communication initiatives that provide clear, relevant information could help with this. Partnerships with NGOs or CSOs and governments to develop high-quality media and communication materials have been effective in enabling women and men to learn more about simple, low-cost and effective solutions to climate-related issues. These can range from visual communication aids for use in NGO outreach activities that enable space for women and men discuss and learn new skills, to low-cost or free interactive voice response (IVR) systems accessible from simple mobile phones that provide short and clear information on key climate-related issues.
- ◆ Gender norms are very entrenched and influence many areas of everyday life and decision-making for women and men alike. High-quality strategic communication strategies might help to overcome this. This might include multimedia initiatives on shifting gender norms around what constitutes a “real man” or a “good girl” that reach and engage women and men at scale, coupled with face-to-face elements to enable space to discuss, reflect on and negotiate more positive and equal gender norms.

# Annex

## Annex I: Study participants

Target participants	Kampot	Pursat	Phnom Penh
Village level – local participants in FGDs and semi-structured interviews (SSIs)	51 participants (21 women) from 3 villages in Prek Thnot commune 18 out of 51 participants are from Muslim community	48 participants (25 women) from 3 villages in Me Teuk commune	
Commune and village level – key informants	11 participants (3 women) <ul style="list-style-type: none"> <li>- 2 commune chiefs</li> <li>- Commune committee for women and children</li> <li>- Village chief</li> <li>- Community fishery leader</li> <li>- Local NGO working at the ground</li> <li>- Role model rice farmer</li> <li>- 2 role model vegetable growers)</li> <li>- 2 mothers-in-law</li> </ul>	9 participants (5 women) <ul style="list-style-type: none"> <li>- 2 commune chiefs</li> <li>- Commune committee for women and children</li> <li>- Commune committee for disaster management</li> <li>- Village chief</li> <li>- Savings group leader</li> <li>- Role model rice farmer</li> <li>- Mother-in-law</li> <li>- Agricultural extension worker (part of Ministry of Agriculture project on the ground)</li> </ul>	
Village level – transect walk	<ul style="list-style-type: none"> <li>- Member of community fishery</li> <li>- Deputy village chief</li> </ul>	<ul style="list-style-type: none"> <li>- 2 village chiefs</li> <li>- Deputy village chief</li> </ul>	
National level – in-depth interviews with key stakeholders			<ul style="list-style-type: none"> <li>- 3 local NGO representatives, (1 from each organisation)</li> <li>- 1 International NGO</li> <li>- Government representatives from 2 ministries</li> </ul>



## Annex 2: Examination of social, structural and resource barriers

As discussed in the methodology section, the research started with a comprehensive literature which aimed to identify what are the current social, structural and resource based barriers which affect women’s vulnerability to extreme weather and changes in the environment. These barriers were explored in the research fieldwork. Researchers also anticipated uncovering other potential drivers of vulnerability through the fieldwork. The summary of these drivers of gender-based vulnerability are detailed below (see Table 1).

We hope these drivers could help future research, programming and practice to quickly assess in other communities and contexts what are the key drivers present, which may need to be addressed. It should be noted that as this study examined just two geographical regions of Cambodia, there may be other barriers and motivators to women and men taking action on climate change in other regions, these aim to provide a foundation only.

**Table 1: Drivers of gender-based vulnerability to climate change**

Barrier	Drivers of vulnerability identified in the literature review
<b>Social</b>	Women have the primary responsibility for unpaid domestic and care work, inhibiting their opportunities to network and consult with others on adaptation strategies and preparedness
	Women are likely to marry at a young age, which limits their opportunities for education and employment
	Men are more likely to migrate for work, while women lack social mobility and have family responsibilities so are less likely to migrate
	Women are expected to contribute financially as well as uphold family responsibilities - double the responsibilities that men have
	Women have less access to healthcare, food/nutrition security and social safety nets so may not be well or strong enough to take action
	Women with lower education levels are at higher risk of intimate partner violence which limits their confidence to take action
<b>Resource</b>	Women have less support from husbands and family members to attend meetings around climate change
	At a household level, men have more decision-making power and so women have less control over household income, expenditure on resources and have less adaptive capacity to overcome challenges
	Differing levels of access to information between women and men (including from the media)
	Differing range of economic opportunities available for women and men
	Differing access to loans and credit between women and men
<b>Structural</b>	Different access opportunities to institutional support between women and men
	Women have less contact with international and local NGOs
	Gender imbalance in positions of power (commune councils)
	Women are less likely to participate in decision-making processes at a community level
	Women lack influence over community disaster management plans

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