



State of Gender Equality and Climate Change in Cambodia

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Foreword

Climate change is considered a threat multiplier and is likely to impede sustainable development in Asia's least developed countries (LDCs). Cambodia is no exception and is one of the high-risk countries exposed to climate hazards, especially in the Lower Mekong region. The economic sectors that will be most affected include agriculture, fisheries, and water resources but infrastructure, as well as human and ecosystem health, will suffer as well.

Cambodia's increasing vulnerability to the negative impacts of climate change is linked to its low adaptive capacity and the widespread poverty that persists despite rapid economic development. This is compounded by the onset of the Covid-19 pandemic which has exacerbated impacts on the poor due to the lack of alternative or additional livelihood opportunities and the absence of social safety nets. In addition, we may expect the effects of climate change to become increasingly visible with the rise of extreme weather events and accompanying natural disasters.

Cambodia has enacted adaptation and mitigation measures through the formulation of national policies, investments in infrastructure and technology, and fostering behavioural change as responses to climate change. The government is committed to combating global climate change impacts and achieving its goals under the United Nations Framework Convention on Climate Change (UNFCCC). In 2020, Cambodia submitted its updated Nationally Determined Contribution (NDC) under the UNFCCC framework which includes a section on gender and social inclusion.

Cambodia has improved its performance on gender promotion over the last decade as demonstrated by its efforts to mainstream gender into policies, strategies and programs. The Cambodia Rectangular Strategy Phase IV, Cambodia Sustainable Development Goals framework, the Neary Rattanak V as well as the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) implementation are key laws, policies, and plans that address gender equality and climate change. This has formed a solid national machinery for gender equality and women's empowerment, which can strengthen gender mainstreaming efforts at both the national and sub-national levels.

In support of this work, the State of Gender Equality and Climate Change in Cambodia brings to light more evidence on the linkages between gender equality and climate change while providing country-specific recommendations on how to enhance gender-responsive policy implementation. By tackling the gendered impacts of climate change and raising awareness on the benefits and need for gender-responsive climate action, it is our hope that this assessment report will further bolster the integration of gender equality in climate-relevant policy areas for a more inclusive and climate-resilient future for all.



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Table of contents

Foreword	
Abbreviations	02
List of figures	04
List of tables	05
List of boxes	05
Acknowledgement	07
Executive summary	09
1. Introduction	17
	1.1 Background
	1.2 Objectives
	1.3 Research framework and method
	1.3.1 The DPSIR and global gender and environment outlook frameworks
	1.3.2 Priority sectors and gender integration tools
	1.3.3 Methodology
2. National circumstances, legal framework and institutional arrangements relating to gender equality and climate change	31
	2.1 Socio-economic situation
	2.1.1 Economy
	2.1.2 Demographic information
	2.1.3 Employment
	2.1.4 Health care
	2.1.5 Violence against women
	2.1.6 Gender dimension
	2.2 Climate change impacts across the country
	2.3 Emission trends
3. National laws, policies, strategies and action plans related to climate change and gender equality	45
	3.1 Climate change policy documents
	3.2 Gender policy documents
	3.3 Gender integration assessment in relevant laws and policy documents
	3.4 Climate change institutional arrangements
	3.5 Overview of existing national women's affairs and national climate change committees
	3.5.1 Institutional arrangements for the coordination of climate change response

		3.5.2 Institutional framework for gender mainstreaming in Cambodia
		3.6 Current Nationally Determined Contribution (NDC)
		3.6.1 Circumstances of Cambodia's NDC
		3.6.2 Analysis of existing and missing elements to streamline gender equality responses in the NDC
4. Key sectors and scope of the study	63	
		4.1 Energy
		4.1.1 The current state of gender integration in energy
		4.1.2 Drivers and pressures
		4.1.3 Impacts and effects
		4.1.4 Responses
		4.2 Agriculture
		4.2.1 The current state of gender integration in agriculture
		4.2.2 Drivers and pressures
		4.2.3 Impacts and effects
		4.2.4 Responses
		4.3 Rural development
		4.3.1 The current state of gender in rural development
		4.3.2 Drivers and pressures
		4.3.3 Impacts and effects
		4.3.4 Responses
		4.4 Forestry
		4.4.1 The current state of gender in the forestry sector
		4.4.2 Drivers and pressures
		4.4.3 Impacts and effects
		4.4.4 Responses
5. Good practices, experience and lessons	113	
		5.1 Cases involving energy
		5.2 A case involving agriculture
		5.3 A case involving rural development
		5.4 A case involving forestry
6. Conclusion and recommendations	121	
		6.1 Conclusion
		6.2 Recommendations
List of annexes	131	
References	147	

Abbreviations

ADB	Asian Development Bank
ASEAN	Association of Southeast Asian Nations
BAU	Business as Usual
BUR	Biennial Update Report
CamDi	Cambodia Disaster Damage and Loss Information System
CCAPs	Climate Change Action Plans
CCCA	Cambodia Climate Change Alliance
CCCSP	Cambodia Climate Change Strategic Plan
CCFF	Climate Change Financing Framework
CCTT	Climate Change Technical Team
CCTWG	Climate Change Technical Working Group
CCWC	Consultative Committee for Women and Children
CDM	Clean Development Mechanism
CDRI	Cambodia Development Resource Institute
CEDAW	Convention on the Elimination of All Forms of Discrimination Against Women
CF	Community Forestry
CMDGs	Cambodia Millennium Development Goals
CNCW	Cambodian National Council for Women
CO₂	Carbon Dioxide
COVID-19	Coronavirus
CSA	Climate-Smart Agriculture
DPSIR	Driver-Pressure-State-Impact-Response
DRR	Disaster Risk Reduction
FOLU	Forestry and Other Land Use
GCCAP	Gender and Climate Change Action Plan
GCCC	Gender and Climate Change Committee
GCCSP	Gender and Climate Change Strategic Plan
GDANCP	General Department of Administration for Nature Conservation and Protection
GDI	Gender Development Index
GDP	Gross Domestic Product
GGI	Gender Gap Index
GHG	Greenhouse Gas
GII	Gender Inequality Index
GMAGs	Gender Mainstreaming Action Groups
GMAP	Gender Mainstreaming Action Plan
GPCC	General Population Census Cambodia
HDI	Human Development Index
HDR	Human Development Report

HFO	Heavy Fuel Oil
IGES	Institute for Global Environmental Strategies
INDC	Initial Nationally Determined Contribution
IPCC	Intergovernmental Panel on Climate Change
IPPU	Industrial Processes and Product Use
LNP	Life and Nature Project
LPG	Liquefied Petroleum Gas
M&E	Monitoring and Evaluation
MAFF	Ministry of Agriculture, Forestry and Fisheries
MME	Ministry of Mines and Energy
MoE	Ministry of Environment
MOWA	Ministry of Women Affairs
MRD	Ministry of Rural Development
MRV	Measurement reporting and verification
NCCC	National Climate Change Committee
NCDD	National Committee for Sub-National Democratic Development
NCDD-S	National Committee for Sub-National Democratic Development Secretariat
NCDM	National Committee for Disaster Management
NDC	Nationally Determined Contribution
NPAPPE	National Policy and Action Plan on Energy Efficiency
REDD+	Reducing Emissions from Deforestation and forest Degradation
RGC	Royal Government of Cambodia
RTF	REDD+ Taskforce
SCCSPs	Sectoral Climate Change Strategic Plans
SDGs	Sustainable Development Goals
TAMD	Tracking Adaptation and Measuring Development
TVET	Technical and Vocational Education and Training
TWG-G	Technical Working Group on Gender
UN Women	United Nations Entity for Gender Equality and the Empowerment of Women
UN-Habitat	United Nations Human Settlements Programme
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNSCR	United Nations Security Council Resolutions
USAID	United States Agency for International Development
V&A	Vulnerability and adaptation
VRA	Vulnerability reduction assessment
WASH	Water, sanitation and hygiene

List of figures

Figure 1-1	Composite vulnerability index 2019	20
Figure 1-2	Maximum observed flood extent and percentage of households that are female-headed by province	21
Figure 1-3	Integrated gender and climate change assessment in the Global Gender and Environment Outlook framework	25
Figure 2-1	Cambodia's GDP growth rates for 2018-2021	32
Figure 2-2	The total population of Cambodia in 1962-2019 (in millions)	33
Figure 2-3	Share of female population in Cambodia in 2008-2019 (in per cent)	33
Figure 2-4	Urban and rural population of Cambodia in 1988-2019	33
Figure 2-5	Literacy rate (for the population aged 15 years and above) in Cambodia in 1998-2019 (in per cent)	34
Figure 2-6	Trend of physical domestic violence in 2005 and 2009 (in per cent)	36
Figure 3-1	Organisational chart of the National Council for Sustainable Development	37
Figure 3-2	Roles and responsibilities for NDC development and implementation	39
Figure 4-1	Sources of power generation, by per cent	48
Figure 4-2	Total primary energy supply from 2010 to 2018 by source, in per cent	69
Figure 4-3	Sources of lighting by the household head (in per cent)	71
Figure 4-4	Source of fuel in urban and rural areas by the household head (in per cent)	71
Figure 4-5	Employed population aged 5 and over by gender from 2008 and 2019, in per cent	82
Figure 4-6	Records of disasters during 1995-2019, number of cases per year	84
Figure 4-7	Crop damage during 1996-2020 (in hectares)	85
Figure 4-8	Sources of fuel by urban and rural use (in per cent)	94
Figure 4-9	Type of toilet facilities in urban and rural areas according to household head (in per cent)	95
Figure 4-10	Sources of drinking water in urban and rural areas by headed households (in per cent)	96
Figure 4-11	Rural employment status aged over 18 by gender (in per cent)	96
Figure 4-12	Rate of forest cover change from 1965 to 2016	107
Figure 4-13	Greenhouse gas emissions by sector, during 1994–2016 (in Gg.CO ₂ -eq)	109

List of tables

Table 2-1	The proportion of women in political positions and in the civil service in 2017 and 2018	38
Table 2-2	Share of wage employment for women aged 18 years and above in 2019	41
Table 2-3	Socio-economic indicators for the period 1990-2019	41
Table 2-4	Total GHG emissions by sector (in Gg. CO ₂ -eq using the global warming potential of the Fourth Assessment Report of the Intergovernmental Panel on Climate Change) in 1994-2016	43
Table 3-1	Main policy documents relating to climate change listed by year	46
Table 3-2	Main gender policies from the Ministry of Women's Affairs	59
Table 4-1	List of key policy documents relating to gender and climate change in energy	66
Table 4-2	Sectoral objectives in each sector by 2035	70
Table 4-3	List of key policy documents on gender and climate change in agriculture	81
Table 4-4	Active agriculture population in Cambodia, by sex and by zone, in 2008, 2011, 2104 and 2109/20 (in per cent)	83
Table 4-5	Agricultural lands owned by households, by sex of household head and zone, in 2019 (in thousands of hectares and per cent)	84
Table 4-6	Women's representation in agriculture at both national and sub-national levels (in per cent)	90
Table 4-7	List of key policy documents relating to gender and climate change in rural development	93
Table 4-8	Source of fuel of the household head according to urban and rural areas (in per cent)	94
Table 4-9	Women's representation in rural development from 2018 to 2023 (in per cent)	101
Table 4-10	List of key policy documents relating to gender and climate change in forestry	105
Table 4-11	Distribution of employed population aged 5 and over in forestry services by sex	108

List of boxes

Box 3-1	Mitigation and adaptation measures in Cambodia's updated NDC 2020	58
Box 4-1	Strategic priorities for rural infrastructure	102
Box 5-1	Case 1: Empowering women's entrepreneurship and livelihood generation through renewable energy	114
Box 5-2	Case 2: Promoting green and cleaner energy for rural Cambodian women through a biodigester	115
Box 5-3	Case of climate smart agriculture	116
Box 5-4	Climate-resilient rural roads benefiting rural women, the poor and vulnerable groups	117
Box 5-5	REDD+ integrating gender aspects into project implementation	119

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Executive summary

Background

The Royal Government of Cambodia (RGC) acknowledges climate change as a major challenge to Cambodia's efforts towards inclusive growth and sustainable development. To ensure economic, environmental and social equality in climate action, gender mainstreaming has been recognised as one of the core strategic frameworks in upcoming programs.

Although the government is committed to mainstreaming gender, the line ministries have integrated and implemented gender and climate change priorities in their sectoral strategies and plans to a limited extent, mostly relying on external project-level financial support. Some of the barriers to advancing gender mainstreaming include the lack of relevant expertise and capacity within line ministries and institutions to conduct in-depth gender analysis, limited knowledge on the development of advocacy and gender mainstreaming approaches, and inconsistent implementation of gender-responsive laws, policies, guidelines, plans and programs. Furthermore, within the line ministries, these challenges are linked to the limited understanding, knowledge, skills and methodologies for the systematic and comprehensive integration of gender. Aside from this, there is also limited coordination among relevant stakeholders, coupled with the insufficient domestic budget allocated for the implementation of gender-related plans and activities. Given their crucial roles in economic, environmental, socio-cultural dimensions, women need to contribute to climate change adaptation and mitigation.

The purpose of this assessment report on gender equality and climate change is to analyse the gendered impacts of climate change and to raise awareness about the benefits of, and need for gender-responsive climate action. The study has two main objectives: i) to strengthen country-driven processes by presenting more evidence of the links between gender equality and climate change and analysing gendered impacts in the key adaptation and mitigation sectors; and ii) to provide country-specific recommendations about how to enhance gender responsive policy implementation and further bolster the integration of gender equality in climate-relevant policy areas.

Methodology and scope of the study

The study uses a combination-research approach comprising a desk review, semi-structured interviews with key informants, secondary data analysis and multi-stakeholder consultation. Using the Driver-Pressure-State-Impact-Response (DPSIR) framework and the Global Gender and Environment Outlook of the UN Environment Programme (UNEP) to assess the state of gender equality and climate change policy, the conceptual analysis consists of five fundamental components: driving forces; pressures; state; impacts; and responses. The study includes a sectoral gender-based analysis of four priority sectors - energy and forestry for mitigation action and agriculture and rural development for adaptation action.

Key findings

The RGC has made great strides in mainstreaming gender equality in climate change actions. The measures to promote gender equality and to enhance environmental sustainability and climate resilience are included in various national policies, strategies and plans. Also, sectoral strategic development plans emphasise the priority of climate change and gender equality in the core components of the climate strategic framework. These plans are supported by sectoral plans and a Master Plan on Gender and Climate Change providing operational instruments for policy implementation.

Through the sector-level assessment and analysis, the report found that policies, strategies and plans acknowledge and provide the scope to recognise gender roles in the adaptation sectors covered by the report. However, the mitigation sectors rarely have explicit references to gender equality in policy and implementation.

Despite the recognition and acknowledgement of gender in climate change adaptation, the major challenge remains at the implementation stage due to the absence of specialised and tailored supporting activities, indicators and resources for translating the gender policy objectives into practical action. More importantly, there are no indicators or milestones relating to gender, and hence any gender-related outcomes are not captured by monitoring and evaluation (M&E) frameworks. Monitoring systems to measure gender assessments are not detailed enough for proper monitoring. The understanding, knowledge and skills for gender analysis for systematic and comprehensive integration are still limited.

Although the key policy and strategy of gender and climate change of the selected sectors (energy, agriculture, rural development and forestry) exist, the gender-specific action plans have been formulated in some cases developed to support the process of implementation, largely because of the budget shortfall and lack of human resources. The M&E framework of the current Cambodia Climate Change Strategic Plan (CCCSP), developed to monitor climate-related gender-specific vulnerabilities, is not sufficiently user-friendly for line ministries and sub-national agencies.

Summary of key findings by sector

Energy

Key energy policies include priority sectors such as industry, end-user products, buildings, rural electricity generation and distribution, and the use of biomass resources for residential and industrial purposes. The Ministry of Mines and Energy (MME) has drafted the National Policy and Action Plan on Energy Efficiency 2018–2035 under the technical and financial support of the Ministry of Environment (MoE), Asian Development Bank (ADB) and United Nations Development Programme (UNDP).

The policy and action plan have not considered the gender dimensions of energy and there is no mention of gender, women's roles or gendered impact assessment in the proposed actions. The Climate Change Action Plan for the Energy Sector 2021–2023, which has just been released, has no provision on gender and acknowledges gender only in the strategic objective to reduce sectoral, regional, gender vulnerability and health risks in respect of climate change impacts (in alignment with the CCCSP). It is unknown whether the set action plan towards the achievement of gender issues can be met, since there is neither a guidance manual for policymakers and practitioners for mainstreaming gender into climate change action, nor a gendered analytical section indicating whether or not women benefit from those provisions.

Agriculture

Agricultural policies, strategies and plans recognise the crucial role played by women in environmental conservation and production processes in agriculture. The Agricultural Sector Master Plan 2030, together with Agriculture Strategic Development Plan, Climate Change Strategic Plan and Action Plan for Agriculture, and Gender Mainstreaming Strategy, acknowledge the gender-differentiated roles and include provisions to promote gender equality in the objectives and processes of implementation.

The Agricultural Sector Master Plan and Agriculture Strategic Development Plan substantially mention the gendered impacts of climate change on agriculture in terms of damaged crops and decreased productivity due to increasing weather variability, natural disasters (flooding, droughts and windstorms), high temperatures and sea-level rise. The decline in rice yields due to the impacts of flooding, droughts and insect outbreaks, and the consequent loss of income and investment opportunities in agriculture, represent a push factor for rural women to migrate to cities. The ability of both men and women to adapt to the changes remains uncertain. In particular, women farmers have limited capacity to adopt new technologies to achieve agricultural intensification and diversification.

However, an analysis of the gendered impacts of climate change is not evident in these strategic action plans. As climate projects in the agriculture sector are largely dependent on external development funding, the engagement of women in climate change actions still relies largely on donor decisions and requirements conveyed through the agencies they fund. The Ministry of Agriculture, Forestry and Fisheries (MAFF) does not have a sufficient domestic budget for implementing gender activities: in accordance with its mandate, it focuses mostly on the production aspect of the agriculture sector.

Rural development

Both policy and strategy documents for Rural Development state that climate-resilient communities are important for gender-balanced socio-economic development as well as for more successful adaptation, mitigation and climate resilience. The Rural Development Strategy, Action Plan 2019-2023 considers the gender roles in rural economic development and response to climate change through women's equal participation in decision-making processes. The Climate Change Strategic Plan for Rural Infrastructure focuses on climate change impacts and adaptation priorities in the areas of policy and regulation development, rural entrepreneurship and business development, rural infrastructure improvement and capacity development relating to climate change adaptation. The strategy acknowledges the different roles of women and men in rural socio-economic and community development in the context of climate change.

The Rural Development Policy 2019-2023 recognises the sex-differentiated impacts of climate change in rural areas due to the socially accepted roles of women inside and outside the household. The low adaptive capacity of local women can be linked to high risks induced by climate change, and consequently results in the low resilience of women to its increasing impacts.

Built on the four pillars of resilience - economic, infrastructure, social and institutional - Cambodia's Women's Resilience Index gives a comparison between women and men in relation to natural disasters. The Women's Resilience Index is lower compared with that of men because of women's unstable and insecure sources of income, the low accessibility women have to structural protection from natural hazards (such as embankments, sea walls and flood barriers), limited access to shelters or safe places and early warning information, the poor resilience of housing and weak social safety nets and networks.

The Ministry of Rural Development (MRD) has integrated the gender mainstreaming strategy within the Rural Development Policy and has supported gender integration into the action plan across several phases, i.e., starting with the plan for 2012-2016, 2016-2018 and until 2019-2023.

The Master Plan on Gender and Climate Change 2018-2030 of the MoVVA also captures the gendered impacts of climate change in the context of rural development and contributes to strengthening women's resilience for better adaptation, mitigation and risk reduction. The selected projects by the MRD include gender equality in the implementation processes in the areas of clean water, sanitation and hygiene. Yet, analysis of climate change impacts on the different genders in the rural development sector is limited and a big gap remains.

Forestry

The main policies in this sector are the Law on Forestry in 2002, the National Forest Program 2010-2029, the National Forest Monitoring System and the National REDD+ Strategy, none of which refer to gender issues. The only mention of gender is in the objectives of the documents, where the National Forest Program pays attention to promoting women's participation in management at both national and local levels for improving the institutional structure of the Forestry Administration. For instance, the National Forest Program encourages the participation of women in management in the institutional structures and management of the Forestry Administration towards more efficient and effective forestry sector implementation. The National Forest Monitoring System promotes the capacity development of young officials, both men and women. The National REDD+ Strategy indicates specific gendered roles in the REDD+ Taskforce, technical team, and consultation group, and mentions that the gender group participated actively in the implementation of REDD+ activities.

The government is committed to promoting gender considerations in policy, strategy, planning and programs in the forestry and the natural resource management sector. Women participated in program activities aimed at raising awareness and producing forest inventories and also attended workshops. However, mainstreaming gender into project implementation remains a challenge. The implementation seems to be limited to donor-funded support. The Forestry Administration annually produces a book by updating statistics relating to Community Forestry in Cambodia as a fundamental tool for planning development and program implementation and further conducts research into forest and other services. The book counts the numbers of communities and their legal status by dividing them into province, district, commune, village and household. However, it still misses important information and data disaggregated by the sex, age and disability of community members. Another barrier is related to the collaboration among relevant government institutions and agencies. The gender dimension and climate change response in the forestry sector received a slight mention and was concentrated in MAFF's Climate Change Strategic Plan and Action Plan for Agriculture, Agri-Industry, Animal Production, Fisheries and Forestry 2013-2018.

Policy recommendations

To implement gender-responsive activities and mainstream climate change and gender considerations, along with the allocation of sufficient domestic and international resources in both the adaptation and mitigation sectors, overall recommendations could be drawn up as follows:

Enhancing coordination and facilitation

- Enhance the coordination mechanism between the Ministry of Women's Affairs (MoWA) and the MoE to improve mainstreamed capacity on gender and climate change policies, sectoral planning and programs;
- Integrate gender sensitivity at all levels of consultation and decision-making processes for a more effective adaptation and mitigation response to climate change;
- Improve institutional capacity for national women's machineries to ensure gender equality is fully included in climate change planning, budgeting, implementation, monitoring and evaluation, supported by sound coordination among donors and other funding agencies to provide both technical and financial support.

Research and capacity development

- Increase gender-focused research on climate change mitigation and adaptation and expand the use of existing gender-responsive research findings, lessons learned and best practices conducted and compiled by research institutes, academia, civil society organisations (CSO) and community-based organisations (CBOs);
- Promote gender parity and increase the number of women experts and researchers equipped with capacity and skill development in the areas of agronomy, climate change economics and mitigation;
- Acquire a deeper understanding of how to integrate gender equality considerations within climate change investments and finance, including mainstreaming gender into the roles and responsibilities of officials at national and sub-national levels.

Sex-disaggregated data on climate change impacts

- Strengthen the coordination among key government institutions, such as the MoWA, the MME, the Forestry Administration, the Ministry of Economy and Finance (MEF) and the Ministry of Planning (MoP) towards producing and using sex-disaggregated data and gender statistics in all sectoral ministries;
- Improve existing national information and datasets by inserting sex-disaggregated indicators into existing climate change adaptation and disaster risk reduction platforms; i.e., the vulnerability assessment and indicator tool produced by the National Council for Sustainable Development of the MoE, and the Cambodia Disaster Damage and Loss Information System (CamDi) of the National Committee for Disaster Management.

M&E framework

- Mainstream gender into sectoral climate change policies and strategies in line with a sound M&E framework on gender equality by integrated indicators and data collection methods;
- Strengthen the gender and climate change planning and M&E framework by revising and updating indicators and data collection methods to ensure consistency within the national gender indicators so that the data and values of indicators are reliable, and more gender statistics and data are used for policymaking support.

Policy recommendations by sector:

Energy

- Support more clean energy solutions such as use of biogas, medium-scale biodigester plants, or improved cooking stoves that address women's needs and reduce their time burden, and create more economic and business opportunities for local women;
- Strengthen coordination and collaboration with department partners, non-governmental organisations and the private sector in supporting the gender equality implementation of renewable energy projects;
- Establish gender mainstreaming requirement within energy policy, strategic plans and programs and climate change action plans for the energy sector including renewable energy to ensure that gender responsiveness is aligned with the strategic objectives, specific action plans and the available budget allocation in respect of climate change mitigation and green growth policies.

Agriculture

- Produce a gender-responsive climate change action plan and integrate it within the current gender mainstreaming policy and strategy of the MAFF by ensuring sufficient budget allocation for implementation and appropriate capacity development for targeted government officials;
- Simplify the process and integrate gender indicators into the Vulnerability Reduction Assessment tools for better in-depth gender impact assessment of climate change on men and women in the agriculture sector; and
- Integrate gender and climate change analysis in key policy, strategy and action plans to ensure the differential impacts of climate change on women and men are reflected in terms of their needs, priorities and capacities and recognising the critical roles of women as agents of lasting change.

Rural Development

- Support clean energy solutions that address women's needs, reduce their time burden, and create more economic and business opportunities and jobs that would generate diversified income for local women under the leadership of the MRD and in partnership with the MME;
- Improve local women's adaptive capacity to cope with the high risk of climate change. This could be enacted through more accessible weather broadcasting, early warning systems and physical infrastructure such as resilient housing, the provision of safe places, accessibility to energy for household consumption, and safe water and better sanitation;
- Establish a data platform at the MRD to demonstrate the use of sex disaggregated data to inform key policy, strategy and programs relating to climate change and prepare in-depth analysis in respect of sex-differentiated impacts of climate change.

Forestry

- Integrate gender equality in laws and policies, related to forestry, natural resources and environment management, and develop specific action plans and budget allocations to achieve gender targets as well as the objectives set in the policies;
- Build gender data into the current statistics systems relating to community forestry so that the Forestry Administration is able to conduct gendered impact assessments and analysis;
- Develop specific strategy and action plans for the Forestry Administration to combat climate change with the explicit focus on gender equality in forestry, and implement them by relying on sound technical and financial support, and upgrading the current Climate Change Strategic Plan and the Climate Change Priorities Action Plan in the agriculture, forestry and fisheries sectors;
- Enhance coordination and facilitation of three national governing bodies (the Forestry Administration and the Fisheries Administration of the MAFF, and the General Department of the Administration of Nature Conservation and Protection of the MoE) towards the coordinated promotion of gender considerations within policy, strategy, plans and programs in the forestry and natural resources management sector.



1. Introduction



1.1 Background

Around the globe, the climate is changing more quickly than anticipated, affecting not only the environment and ecosystems but also people's lives and livelihoods, especially those of women and girls. The climate science forecasts confirm that Cambodia is likely to be exposed to a temperature rise between 0.13°C and 0.36°C degrees per decade¹ reaching an extreme of 3°C by 2100². This means that Cambodia is extremely vulnerable to the impacts of weather variability and climate change and will be more so by the end of this century. The natural hazards caused by climate change negatively affect social and economic development and place at risk the resilience of the rural poor through higher frequency and stronger magnitude.

Yet the challenges women confront differ to those of men. One pervasive issue is the discriminatory traditional social roles and power hierarchies within the family, which are strongly rooted in society. Women, girls, men and boys are affected differently³ given the socially assigned discriminatory gender roles and responsibilities at the household and community levels⁴.

The discriminatory gender stereotypes limit women from developing the skills necessary to adapt to the changing climate and reduce the risk of disasters. Women are considered to be the most disadvantaged group, whose reproductive roles mean that they work at home or in places that are prone to natural hazards, especially floods. Since women now shoulder both reproductive and productive work, before a flood, women take care of the household's property and belongings, doing their best to prevent loss and damage. During a flood, women's responsibilities are to stay at home and look after family members while the men go out to look for food and to generate income. Consequently, women tend to become psychologically stressed, worrying that their children will drown, become seriously sick or be bitten by poisonous insects. Food insecurity, looking for fuel and collecting safe water for domestic use, pose more burdens on women than they do on men⁵.

¹ MEF and GSSD. 2018."Addressing Climate Change Impacts on Economic Growth in Cambodia."

² SMHI. 2020."Home - Climate Information."

³ CEDAW. 2018."General Recommendation No. 37 on Gender-Related Dimensions of Disaster Risk Reduction in the Context of Climate Change."

⁴ Habtezion, S. 2016."Gender and Climate Change: Overview of Linkages between Gender and Climate Change."

⁵ Sam, C. and S. Hay. 2014."Flood Impacts on Women: Exploring Possibility of Gender Sensitive DRR Planning."

Cultural norms are among the root causes of the perception of women as a passive and vulnerable group that needs protection from climate change and its associated disasters (CEDAW 2018a) and also is the reason why women occupy fewer official roles in the climate change adaptation and mitigation sectors.

Moreover, compared with men, women are more vulnerable to climate change due to their persistent poverty and limited educational opportunities, lack of decision-making power, and inadequate access to reproductive and sexual health services linked to pregnancy and childbirth⁶. More specifically, due to the prevailing stereotypes and long-term roots of gender inequality, women are still not sufficiently engaged in decision-making processes, and women's representation remains low. They also have lower access than men to information, education and training opportunities relating to the conservation and protection of natural resources and the environment (WOCAN, 2019 cited in MoE, FA-MAFF and FiA-MAFF 2021)⁷.

Women and girls living in poverty, indigenous women, women belonging to ethnic, racial, religious and sexual minority groups, as well as women with disabilities⁸ are commonly exposed and vulnerable to climate change and disaster-induced risks, and are less able to adapt to changes in climatic conditions due to their disadvantaged socio-economic status, the lower positions they are in, limited education, cultural norms, and restricted involvement in decision-making processes⁹. The existing gender-based inequalities, due to economically, socially and culturally constructed norms and stereotypes, are increasing the gender gap in relation to climate change and disasters; however, that inequality can be reduced. Considering that inequalities and climate change are not gender-neutral phenomena, awareness-raising and combat against the root causes of inequality must continue.

In practice, given the roles and experience of women as caretakers and household managers, they have the knowledge and skills to adapt to change in environmental conditions and can come up with practical solutions¹⁰. Recognition of the important role and contribution of women as agents of change is the key factor for success in the long-term in the battle to reduce the negative effects of climate change. The efforts to minimise these impacts on women and girls are crucial and need all relevant governmental bodies to mainstream gender responsiveness into national climate and environmental policies, which should be equipped with adequate technical and financial support to achieve the full and equal participation and involvement of women and girls in the decision-making process¹¹.

Cambodia submitted a sixth periodic report to Convention on the Elimination of All Forms of Discrimination Against Women which highlights progress on gender mainstreaming in relation to rural women, natural disasters and climate change. The achievements include an improvement in women's economic empowerment, increased outreach of financial support through micro-finance institutions (MFIs) towards expanding businesses and enterprises owned by women, the expansion of the water supply and sanitation and hygiene to rural women, and the promotion of innovation, resilience and extension within agricultural services¹².

⁶ MoWA. 2014."Women in Public Decision-Making and Politics."

⁷ MOE et al. 2021."Second Forest Reference Level for Cambodia under the UNFCCC Framework."

⁸ CEDAW. 2018."General Recommendation No. 37 on Gender-Related Dimensions of Disaster Risk Reduction in the Context of Climate Change."

⁹ Habtezion, S. 2016."TRAINING MODULE 2: Gender, Climate Change Adaptation and Disaster Risk Reduction."

¹⁰ Habtezion, S. 2016."Gender and Climate Change: Overview of Linkages between Gender and Climate Change."

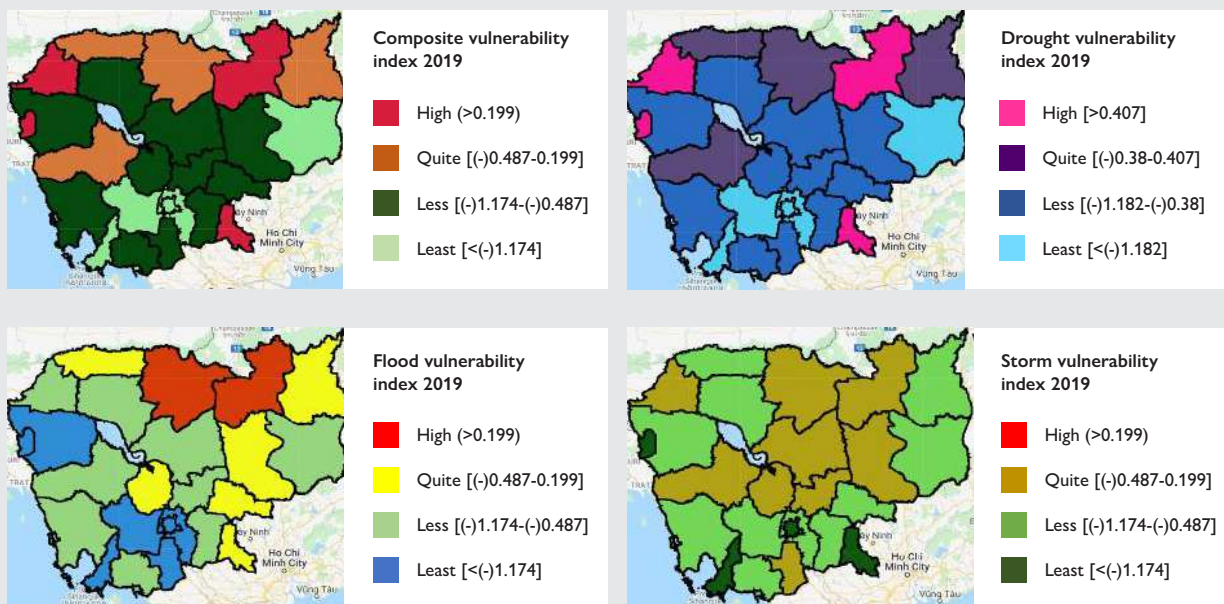
¹¹ CEDAW. 2018."General Recommendation No. 37 on Gender-Related Dimensions of Disaster Risk Reduction in the Context of Climate Change."

¹² CEDAW. 2018."Sixth Periodic Report Submitted by Cambodia under Article 18 of the Convention, Due in 2017."

Climate change vulnerability is a core issue which should be carefully assessed, and the climate change vulnerability map is a tool for identifying the level of risk due to climate-related hazards and the conditions of community resilience (GIS Consultancy 2018). The vulnerability mapping for Southeast Asia by Yusuf and Francisco (2009)¹³, and the Greater Mekong sub-region by Dau et al. (2015)¹⁴ identified Cambodia as the country in the region that was most threatened. Located in a disaster-prone area, the country was shown to be exposed to climate variability and suffered from a low adaptive capacity. Yusuf and Francisco (2009) proved that the most vulnerable areas to climate risk throughout the period 1980-2000 were mountains and plateau regions, while Dau et al. (2015) argued that the Mekong floodplain was the zone most at risk from 1980 to 2014.

The National Committee for Sustainable Development of the Ministry of Environment (NCSD/MoE) examined the vulnerability index by province to gauge the impacts of drought, flooding and storms using the Commune Database 2019. Figure 1-1 shows that, out of all provinces, the four located in the Tonle Sap and mountain areas (Pailin, Banteay Meanchey, Svay Rieng and Stung Treng) are at high risk and the other four provinces (Oddar Meanchey, Ratanak Kiri, Preah Vihear and Pursat) are quite vulnerable to climate-related natural hazards. The remaining provinces are ranked as “less” and “least” vulnerable¹⁵.

Figure 1-1 Composite vulnerability index 2019



Prepared by: NCSD, MoE, Cambodia

- Source: CDB, 2019
- Index calculation: Neha Raiet al., 2015 Developing a National M&E framework for Climate Change, TAMd in Cambodia
- Map Platform: Google Earth Engine
- Citation: Gorelick, N., Hancher, M., Dixon, M., Ilyushchenko, S., Thau, D., & Moore, R. (2017). Google Earth Engine: Planetary-scale geospatial analysis for everyone. Remote Sensing of Environment.

¹³ Yusuf, A.A. and F. Herminia. 2009. "Climate Change Vulnerability Mapping for Southeast Asia". SMHI. 2020. "Home - Climate Information."

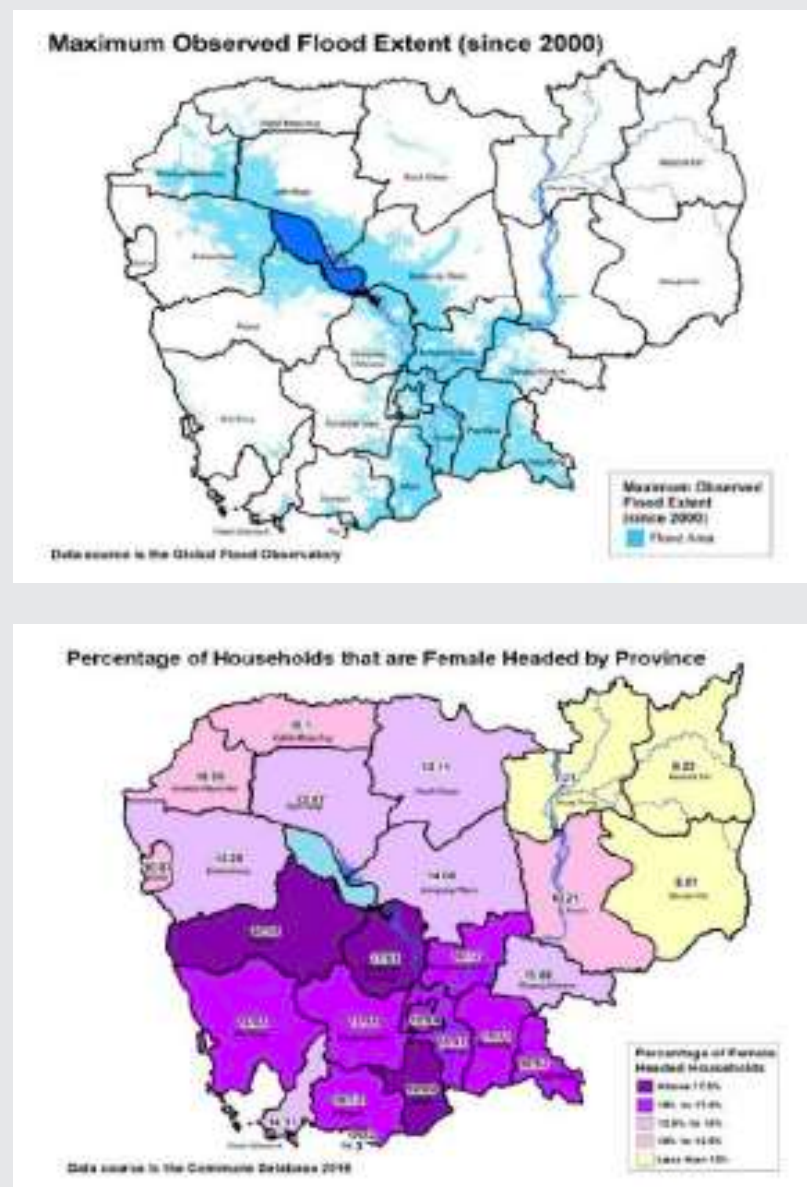
¹⁴ Dau, V. et al. 2015. "Climate Change Vulnerability Mapping for Greater Mekong Sub-Region."

¹⁵ NCSD-MoE. 2020. "Data Portal: Vulnerability Assessments."

Figure 1-2 shows the maximum observed flood events that took place along the Tonle Sap and Mekong floodplain zones where the highest percentage of women-headed households were located – between 15 per cent and 17.5 per cent - in Kampong Speu, Kandal, Prey Veng, Svay Rieng, Kampong Cham, Phnom Penh, Pursat, Kampong Chhnang and Takeo. Environmental stresses and migration pressures force women to find more jobs as part of their significant roles in diversifying income to sustain family livelihoods and food security during a time of the change in the environment¹⁶.

Figure 1-2

Maximum observed flood extent and percentage of households that are female-headed by province



¹⁶ Oudry, G. et al. 2016. "Assessing Vulnerabilities and Responses to Environmental Changes in Cambodia."

Cambodia is highly vulnerable to both short-term climate variability and long-term climate change, which is manifested by floods, droughts, windstorms and seawater intrusion. The driving force for economic growth and sustainable livelihood improvement relies on climate-sensitive sectors, such as agriculture, water resources, forestry, fisheries and tourism¹⁷.

Women, children, people with disabilities and people experiencing poverty are disproportionately vulnerable to climate change¹⁸. Women represent about 64 per cent of the labour force in agriculture, and are mostly engaged in manual work with low wages¹⁹, which makes them particularly vulnerable due to reliance on climate-sensitive livelihoods. According to the Asia Foundation, female-headed households, accounting for 20 per cent of rural households, are confronted with major challenges in accessing irrigation water and agricultural land mainly because of their exclusion from decision-making in water management. Excluding women from irrigation planning discussions is the norm, and thus women household heads are disadvantaged in the decision-making process in respect of water distribution and operations²⁰. Moreover, a large percentage of farmers now use electric tillers and other machinery that optimises the processes in the sector. This revolution has not yet reached women, who are typically considered incapable of handling such machinery or of performing this kind of physical labour. Consequently, access to new technology puts men in a better position to undertake commercial or higher-income agricultural activities²¹. Thus, such an imbalance means that women lose out in this sector.

The related policies and strategic plans include the Gender Mainstreaming Action Plan (GMAP), Women in Leadership, Women's Empowerment, and Ending Violence Against Women 2017-2021²². It is worth noting that the Strategic Plans on Gender, Climate Change, Green Growth, and Disaster Risk Management have been integrated within the Cambodia Climate Change Strategic Plan (CCCCSP) 2014-2023 and the Master Plan on Gender and Climate Change 2018-2030²³ along with the implementation budget²⁴. However, MoWA experienced a huge funding shortfall from the national budget for implementing the Gender and Climate Change Action Plan 2014-2018, and active programs and projects are operational under the support of development partners.

¹⁷ Oudry, G. et al. 2016.

¹⁸ RGC. 2015."Cambodia's Intended Nationally Determined Contribution."

¹⁹ Bresney, S. et al. 2019."Water, Gender, and Poverty in Cambodia's Stung Chinit Watershed."

²⁰ Asia Foundation. 2019."Water, Gender, and Poverty in Cambodia's Stung Chinit Watershed."

²¹ Bresney, S. et al. 2019."Water, Gender, and Poverty in Cambodia's Stung Chinit Watershed."

²² Ibid.

²³ MoWA. 2018."Master Plan on Gender and Climate Change 2018-2030."

²⁴ RGC. 2019."Cambodia's Voluntary National Review 2019 of the Implementation of 2030 Agenda."



1.2 Objectives

This assessment report is “a tool” to raise awareness about the benefits, advantages and need for gender-responsive climate action, to analyse the gendered impacts of climate change, and to suggest ways to enhance and mainstream gender equality within climate-relevant sectoral policies. In addition, this report will assist Cambodia to improve its readiness for the new gender-responsive climate finance projects and lay the foundations for the preparation of such climate financing projects that promote equitable benefits.

The report aims to:

1. Strengthen country-driven processes to present more evidence relating to national links between gender equality and climate change and to analyse the gendered impacts of climate change in the key climate change adaptation and mitigation sectors;
2. Recommend areas for further policy work and research and ways to enhance gender analysis and the integration of gender equality considerations within climate-relevant policy areas.

1.3 Research framework and methodology

1.3.1. The DPSIR and global gender and environment outlook frameworks

In 2004, UNEP started using the Driver-Pressure-State-Impact-Response (DPSIR) framework for an assessment of the state of environmental degradation, which was recognised and widely used for the integrated environmental assessment reports prepared for country, regional and global assessments (for example in the fifth ASEAN State of the Environment report by the ASEAN Secretariat (2017))²⁵. The framework consists of five fundamental dimensions: driving forces; pressures; states; impacts; and responses. The framework formulates crucial measurements, structures and indicators that enable policymakers to provide feedback about environmental quality and an assessment of results²⁶.

Later, in 2016, UNEP modified the DPSIR framework by integrating the gender analysis framework and presented it in the Global Gender and Environment Outlook. The updated framework relies on the analytical flows of Driver-Pressures-State-Effects/Impacts-Responses/Policies, but it also adds the element of Knowledge/Perceptions to take into account the gender dimension and the role of traditional and indigenous knowledge. The analysis of environment and gender reflects the differentiated experiences of women and men (girls and boys) and their needs, encounters, vulnerabilities and resilience. Figure 1-3 shows the incorporation of gender and climate change assessment into the DPSIR framework.

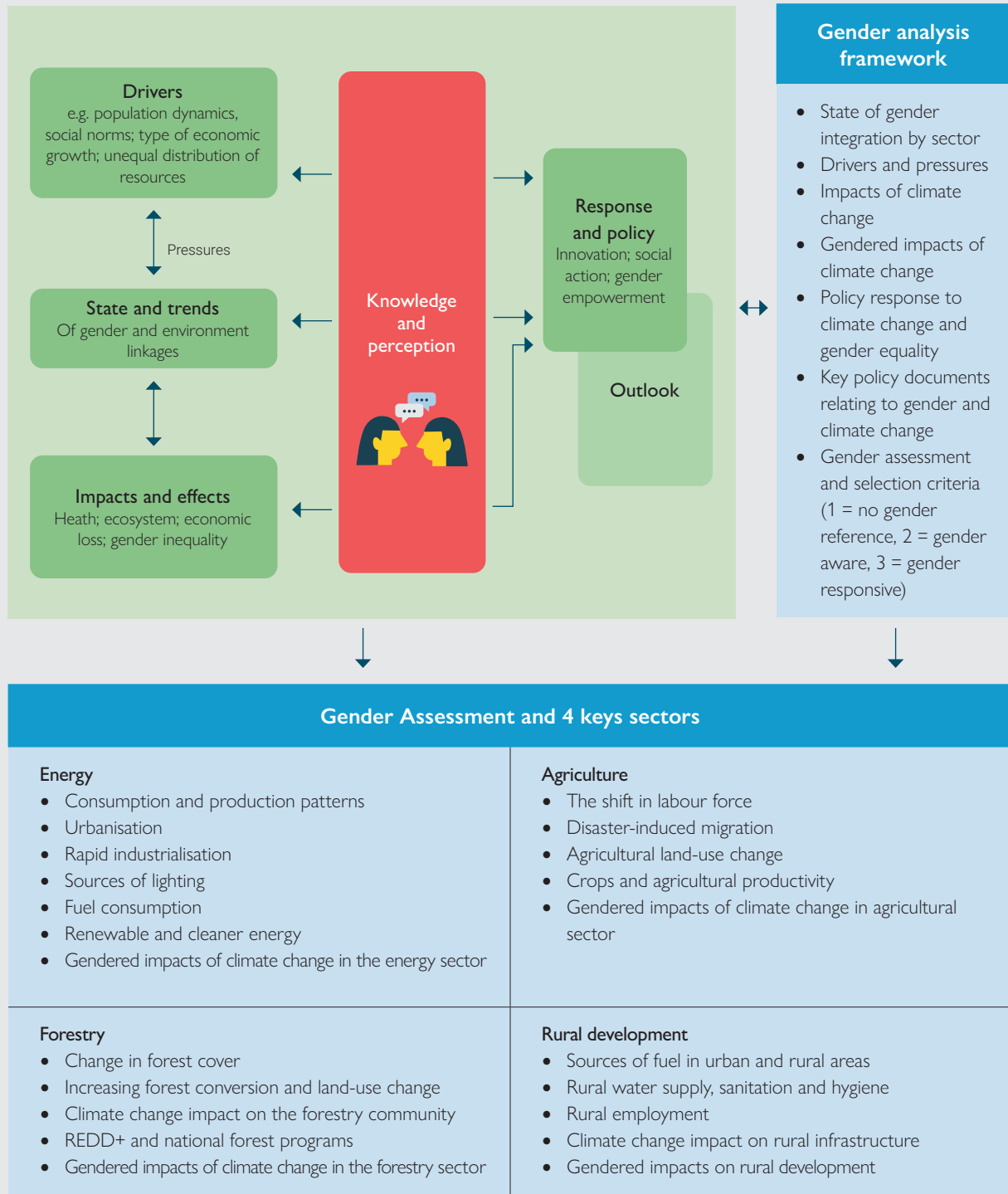
In each sector presented in this report, all components of State-Drivers-Pressures-Impacts-Responses have been applied. Starting from the state of gender equality and climate change, each element is analysed by applying sector-specific gender analysis and sex-disaggregated data and indicators, and impacts on the present state of gender equality and climate change on society and the emissions profile. Subsequently, the drivers comprise the economic situation, social norms and long-term impacts (from a gender and social inclusion point of view). The economic activities lead to pressures, which are the root causes (short-term), the current sectoral policy landscape and the level of gender integration. Finally, responses cover key components such as: recommendations for policy work and research on gender integration; the institutional approach and an overview of stakeholders; cross-sectoral integration; the benefits of proposed actions from the gender point of view; and the monitoring and evaluation, and tracking, of gender benefits.

²⁵ ASEAN Secretariat. 2017."Fifth ASEAN State of the Environment Report."

²⁶ Kristensen, P. 2004."The DPSIR Framework."

Figure 1-3

Integrated gender and climate change assessment in the Global Gender and Environment Outlook framework



²⁷ Seager, J. 2016. "Global Gender and Environment Outlook."

1.3.2. Priority sectors and gender integration tools

The study covers four priority sectors of climate change adaptation and mitigation and provides sectoral gender-based analysis. Four key sectors in climate change adaptation and mitigation were prioritised and selected based on a review of the government policy documents such as the CCCSP 2014-2023, the Intended Nationally Determined Contributions of Cambodia 2015, and the First Biennial Update Report of the Kingdom of Cambodia 2020. The selection was brought into the discussion at the national consultation meeting on 15 July 2020 and separate consultations with key relevant ministries and development partners, such as the Ministry of Women's Affairs, the Ministry of Environment and ActionAid Cambodia. The analysis of the selected sectors covers:

- **Energy:** Consumption and production patterns; urbanisation; rapid industrialisation; sources of lighting; fuel consumption; renewable and cleaner energy; and the gendered impacts of climate change in the energy sector
- **Agriculture:** The shift in the labour force; disaster-induced migration; agricultural land-use change; frequent occurrence of disasters and climate change; crops and agricultural productivity; and the gendered impacts of climate change in the agriculture sector
- **Rural development:** Sources of fuel in urban and rural areas; the rural water supply, sanitation and hygiene; rural employment; climate change impact on rural infrastructure; and the gendered impacts on rural development
- **Forestry:** Change in forest cover; increasing forest conversion and land-use change; climate change impact on the forestry community; REDD+ and National Forest Program; and the gendered impacts of climate change on the forestry sector.

The report uses three selection criteria for the assessment of gender inclusion and gender policy implementation in different sectors. The selection criteria were developed after considering several different sources: Cambodia's updated NDC selection criteria; the assessment indicators by Paudyal et al. (2019)²⁸; and grading gender integration by Gumucio and Rueda (2015)²⁹, and Ampaire et al. (2020)³⁰.

Cambodia's updated NDC selection criteria signify the level of gender integration for the sectoral ministry's assessment of whether gender is important to their adaptation and mitigation measures in prioritising climate actions for NDC revision. The measures are classified into three criteria, namely: *no impact on equality, no gender inclusion possible; medium impact on equality, medium gender inclusion possible; and a good possibility to build equality, gender inclusion* (GSSD-MOE 2020a, 25).

To conduct gender and climate change assessment in agriculture policy documents, in the conceptual diagram of gender-agriculture-climate change nexus, Paudyal et al. (2019) set criteria for gender mainstreaming and climate change responses in the agriculture sector. Criteria one and two indicate an acknowledgement of gender roles and climate change impact on agriculture, criteria three and four emphasise policy provisions for gendered impact and climate change responses in agriculture, and criterion five differentiates the gendered impacts of climate change on agriculture.

²⁸ Paudyal, B.R. et al. 2019. "Gender Integration in Climate Change and Agricultural Policies: The Case of Nepal."

²⁹ Gumucio, T. and M.T. Rueda. 2015. "Influencing Gender-Inclusive Climate Change Policies in Latin America."

³⁰ Ampaire, E.L. et al. 2020. "Gender in Climate Change, Agriculture, and Natural Resource Policies: Insights from East Africa."

Gumucio and Rueda (2015) employed five levels of gender integration, further developed by Ampaire et al. (2020). The grading framework assesses gender inclusion in policies, development and action plans. Grade 1 is for those documents that have not mentioned gender; grade 2 mentions gender only in the objectives or under cross-cutting issues; grade 3 has gender referenced throughout the document but the absence of an implementation plan, grade 4 includes both gender concerns and sufficient implementation activities but lacks details about financial support; and grade 5 fully integrates gender in the whole document with the detailed action plan and sufficient funding allocation.

Combining both critical measures of policy evaluation, this report applies three criteria for evaluating gender integration, namely, no gender references, gender aware, and gender responsive.

Table1: Level of gender integration

Level	Level of integration	Indicators of integration
Level 1	No gender references	Neither gender reference nor inclusion: The policy, strategy or plan does not consider gender issues or gender roles
Level 2	Gender aware	- Gender is partly included in the policy, strategy or plan and there is recognition of the gender-differentiated roles, namely women's roles - Gender is mentioned only in the objectives or under cross-cutting issues - Gender is referenced throughout the document but without any clear implementation plan
Level 3	Gender responsive	- The policy, strategy or plan not only acknowledges the important role of women but also provides measures to promote gender equality in the objectives and processes of the implementation - Gender is mentioned throughout the document, with a clear implementation strategy and allocation of some financial resources



1.3.3. Methodology

1.3.3.1 Qualitative analysis

The report is based on the findings of the peer-reviewed papers/journals on gender and climate change and reliable international and national policy documents such as the Intergovernmental Panel on Climate Change (IPCC) reports, Nationally Determined Contribution (NDC) and Climate Change Adaptation Action Plan, as well as climate change and academic research documents focusing on gender.

The report reviews existing laws and regulations to assess whether gender and climate change adaptation and mitigation are integrated and documented. The review looks into the national policies and strategic plans, regulations, and guidelines related to climate change, along with documents relating to disaster risk management, and other social and environmental safeguards. The review scopes and focuses on the key sectors of agriculture, rural development, forestry and energy.

1.3.3.2 Quantitative analysis

The report uses national datasets including the Commune Database³¹, Socio-economic Survey 2019³², Cambodia's general population census 2019³³ and other available national datasets to illustrate sex-disaggregated data and descriptive statistics relating to the status of men and women in the four selected sectors.

1.3.3.3 Consultations and peer review

The consultation was conducted in three stages. In total, 42 participants were consulted, of whom 24 were male and 18 were female. The first consultation was held on 15 July 2020 with national focal points and key representatives from development partners and civil societies. The purpose was to conclude the proposed methodology and framework and the scope of the report and to collect all relevant feedback and comments to finalise the outline of the inception report before the data collection and analysis.

The second meeting was organised with individual key stakeholders to broadly explore the effectiveness of the government's implementation of the climate change measures and the indicators for gender and climate change, and whether or not the indicators could be used as a government tool. At the final meeting, the findings of the report were shared through consultations with the key stakeholders from the relevant ministries, namely the MoE, MAFF, MRD, the Forestry Administration and the MME (See Annex 5).

The peer review was conducted by gender and climate change experts from UNEP and UN Women and proofreading was conducted by the MoE and MoWA's key officials and CDRI's line management.

³¹ NCDD. 2017."Commune Database 2017."

³² NIS. 2020."Report of Cambodia Socio-Economic Survey 2019/20."

³³ NIS. 2020."General Population Census Cambodia 2019."



2. National circumstances, legal framework and institutional arrangements relating to gender equality and climate change

2.1 Socio-economic situation

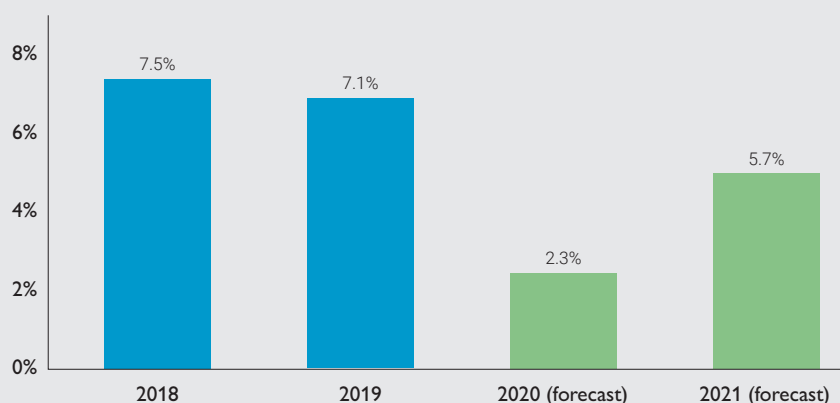
2.1.1 Economy

Cambodia's gross domestic product (GDP) has increased at a remarkable rate over the past decade. In 2018 and 2019, the GDP growth rate went above 7 per cent (7.5 per cent for 2018 and 7.1 per cent for 2019). However, the Asian Development Bank has indicated that the projected forecast for 2020 shows that the growth rate will go down to 2.3 per cent and will rise back to 5.7 per cent by 2021 (Figure 2-1).

Cambodia's economy relies heavily on tourism, agriculture, the garment industry, and construction and the real estate sector. Garments, industry and tourism, accounting for 16.0 per cent and 32.7 per cent, respectively, were the fastest growing sectors in Cambodia contributing to the stable average annual GDP growth rate of 7.5 per cent over the two past decades from 1994 to 2015. The shares of the agriculture and fishery sectors in GDP is about 27 and 12 per cent, respectively³⁴.

Figure 2-1

Cambodia's GDP growth rates for 2018-2021



2.1.2 Demographic information

Cambodia Socio-economic Survey 2019 counted a total population of 15.3 million³⁵. The population rose gradually from 5.7 million in 1962 at a 1.4 per cent growth rate per annum (Figure 2-2). By agro-ecological zone, the population in Cambodia was largely condensed in the central plain area where 49.2 per cent of the population were located. Some 32.3 per cent were living in the Tonle Sap region, 11.3 per cent in the plateau and mountainous areas and 7.1 per cent in the coastal and sea zone. Cambodia is a rural country. The rural population was significantly higher than the urban population in 1988, 2008, 2013 and 2019 (Figure 2-4). The urban population accounted for 39.4 per cent in 2019, doubled from 19.5 per cent in 2008.

The total female population was 7,980,374, accounting for 51.19 per cent of the total population in 2019. The proportion of women has dropped over the past two decades - from 51.36 per cent in 2008 to 51.19 per cent in 2019 (Figure 2-3).

³⁵ NIS. 2020. "Report of Cambodia Socio-Economic Survey 2019/20."

Figure 2-2

The total population of Cambodia in 1962-2019 (in millions)

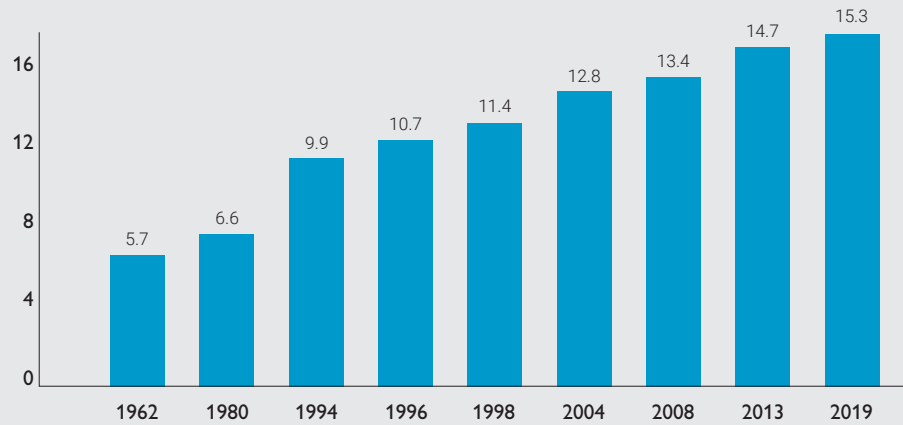
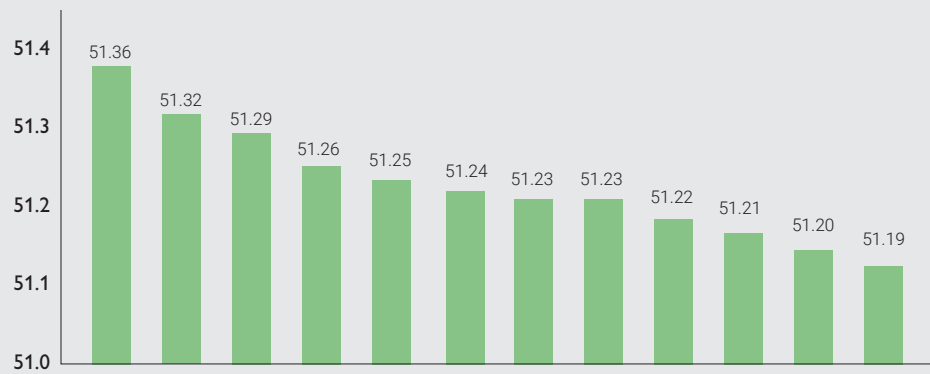


Figure 2-3

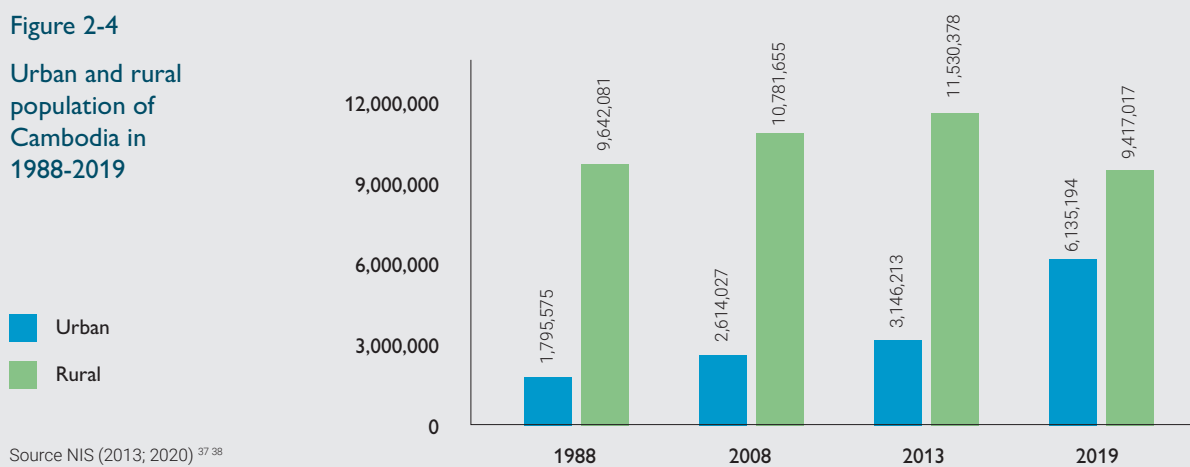
Share of female population in Cambodia in 2008-2019 (in per cent)



Source: The World Bank (2020)³⁶

Figure 2-4

Urban and rural population of Cambodia in 1988-2019



Source NIS (2013; 2020) ^{37, 38}

³⁵ NIS. 2020. "Report of Cambodia Socio-Economic Survey 2019/20."

³⁶ World Bank. 2020. "Share of Female Population Cambodia."

³⁷ NIS. 2014. "Cambodia Socio-Economic Survey 2013."

³⁸ NIS. 2020. "General Population Census Cambodia 2019."

2.1.3 Employment

2.1.3.1 Employment and access to decent work for men and women

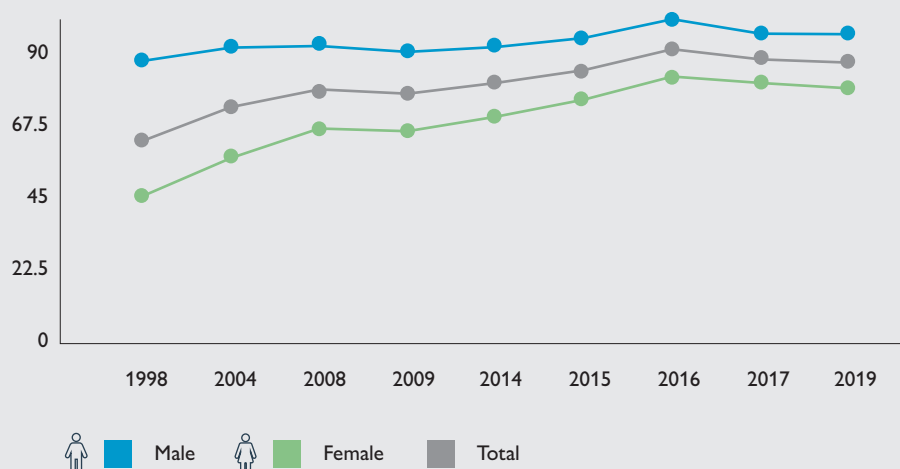
The female employment rate in 2012 was 77.8 per cent while the male employment rate was 85.3 per cent (ADB 2013). Gender equality in the labour market in Cambodia is slowly improving. The female shares of employment in the primary sector³⁹ dropped from 75.1 to 56.5 per cent in 2008 to 2019, and rose from 9.0 per cent to 19.7 per cent in the secondary, and from 15.9 per cent to 23.8 per cent in the tertiary sectors over the same period⁴⁰. However, women earn, on average, only an estimated 71 per cent of male annual earnings. Women also spend significant time on unpaid domestic and care work, which affects the time available to engage in paid work on the same terms as men⁴¹. In 2019, out of 4,229,927 women aged 5 and older, 1,497,394 (35.4 per cent) had unpaid jobs⁴².

2.1.3.2 Literacy, education and training

The literacy rate for the population aged 15 years and older in Cambodia slowly increased during the period 1998-2016. It rose from 67.3 per cent in 1998 to 84.4 per cent in 2016 but slightly dropped to 82.5 per cent and 81.9 per cent in 2017 and 2019, respectively. The literacy rate for men is higher than it is for women in general - 79.5 per cent compared with 57.0 per cent in 1998, and 87.2 per cent compared with 77.1 per cent in 2019 (Figure 2-5).

Figure 2-5

Literacy rate (for the population aged 15 years and above) in Cambodia in 1998-2019 (in per cent)



Source: UNESCO (2020)⁴³

The enrolment rate in tertiary education for girls and boys is not far different. In 2018, the tertiary enrolment rate of girls was 13 per cent compared to a little over 14 per cent for boys⁴⁷. However, women's participation in Science, Technology, Engineering and Mathematics (STEM) education is much lower than that of men (14 per cent of women compared with 86 per cent of men)⁴⁸.

Women do not place a high value on vocational training programs as the work opportunities have been associated with low-income levels⁴⁹. Only a few opt for Technical and Vocational Education and Training (TVET) after they complete high school education. Many who cannot afford higher education choose to become entrepreneurs. Thus, there is an emerging trend in the government and non-profit organisations prioritising the provision of entrepreneurial training for women in Cambodia⁵⁰.

⁴⁷ World Bank. 2020. "Share of Female Population Cambodia."

⁴⁸ World Bank. 2020.

⁴⁹ ADB. 2013. *Gender Equality in the Labor Market in Cambodia*.

⁵⁰ Ibid.



2.1.4 Health care

Access to health care has improved significantly for women and men. Increasingly, there are more programs that cater to the needs of women related to sexual and reproductive health. However, the maternal mortality rate is still relatively high at 160 per 100,000 live births⁵¹. Health care services in rural areas are still limited due to a shortage of qualified care providers, a lack of medicines and poor equipment at facilities (Frieson, Men Chhean Rithy et al. (2011) cited in MoWA (2014b))⁵². Teenage pregnancy remains a major health concern as the rate increased from 8 per cent in 2010 to 12 per cent in 2014⁵³.

There are some social protection programs for women and girls provided by the government under support from development partners and non-governmental organisations (NGOs). The national budget increased by 22 per cent from 2012 to 2015 the amount contributed to the National Social Protection Policy Framework 2016–2025, called Social Assistance and Social Security through the Health Equity Fund, making available a special payment of US\$10 for poor pregnant women during a visit to a public health centre. At the commune level, the Committee for Women and Children helps to support and promote health care and social services for women and girls in their respective communes. The government has contracted private law firms to provide legal services for poor women so that they can receive legal assistance. The government also instituted a law to support a social security scheme in 2002, and the National Social Security Fund became operational in 2007 as an insurance scheme covering accidents during working hours. By 2019, 1.3 million female workers were benefitting from the scheme⁵⁴.

⁵¹ WHO. 2021. "Maternal Mortality in 2000-2017."

⁵² MoWA. 2014. "Gender and Health Cambodia Gender Assessment."

⁵³ UNFPA Cambodia. 2015. "Teenage Pregnancy in Cambodia."

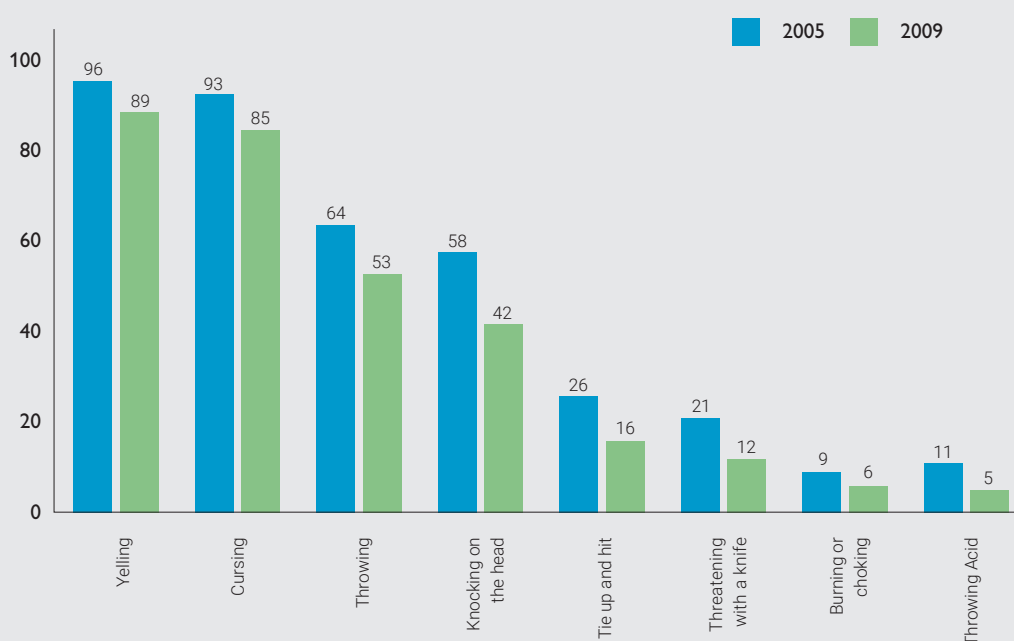
⁵⁴ MoWA. 2019. "Cambodia Report to Beijing+25."

2.1.5 Violence against women

According to the survey 2005 and the follow-up 2009 by MoWA, the incidents of physical domestic violence declined dramatically - from 64 per cent to 53 per cent - between 2005 and 2009. Notably, yelling and cursing were the main forms of physical violence (Figure 2-6). Both physical and sexual violence remain a major concern for adult women. As indicated in the Cambodia Demographic and Health Survey 2014, 20 per cent of women aged 15-49 were exposed to physical violence at least once in their lifetime, and 6 per cent of them had experienced sexual violence at least once since they were born. Two in ten ever-married women aged 15-49 had been involved in both physical and sexual violence inflicted by their husbands and nearly half of them experienced physical injuries⁵⁵.

Figure 2-6

Trend of physical domestic violence in 2005 and 2009 (in per cent)



⁵⁵ NIS and DHG. 2014. "Cambodia Demographic and Health Survey 2014."

2.1.6 Gender dimension

2.1.6.1 Gender Development Index (GDI)

The GDI was introduced in 2014 by the UNDP to measure the sex-disaggregated Human Development Index (HDI), defined as a ratio of the female to the male HDI. The GDI measures gender inequalities in three fundamental components of human development, namely health, education and command over economic resources, and is calculated for 167 countries. The 2019 female HDI value for Cambodia⁵⁷ was 0.570, and 0.618 for males, leading to a combined GDI value of 0.922 by female to male ratio, classifying it into Group 4⁵⁸. In comparison, the GDI values for Lao People's Democratic Republic and Myanmar are higher at 0.927 and 0.954, respectively.

2.1.6.2 Gender Inequality Index (GII)

Cambodia's GII value equals 0.474, placing it in 114th place out of 162 nations in the 2018 index. For every 100,000 live births, 161.0 women die from "other causes" during pregnancy; and the birth rate of women aged 15-19 is 50.2 per 1,000 women. Furthermore, gender inequalities are captured in the low level of women's participation in leadership and unbalanced women's access to education and employment, according to the 2018 index. The share of women holding a parliamentary seat in the National Assembly is 19.3 per cent, while 15.1 per cent of adult women have attained a secondary level of education, compared with 28.1 per cent of men. The participation rate of women in the labour market is 75.2 per cent compared with 87.6 per cent of their male counterparts⁵⁹.

2.1.6.3 Women's political representation

Cambodian women's participation in the political sphere remains very low compared with that of men. Women accounted for only 14.8 per cent of the seats in the Senate in 2012⁶⁰ although that increased to 19.9 per cent in 2018⁶¹. In the National Assembly, female representation was merely 20.3 per cent from 1999 to 2013 and remains almost unchanged at 20.8 per cent in 2018. Of nine deputy prime ministers, only one is female as of 2018. There are no female senior ministers. In ministerial positions, women held only 10.3 per cent compared with nearly 90 per cent for men. The female secretary of state appointees in 2013 accounted for 20.3 per cent of the total; this dramatically dropped to 15.8 per cent in 2018, while female under-secretary of state appointees accounted for 17.6 per cent in 2014 and decreased to 15.3 per cent in 2018. In 2017, there was only one-woman governor out of 25 provinces/capital⁶², and merely 3.5 per cent of governors at the district level were female. Women's representation at the commune level is slightly higher - at 7.8 per cent by 2017 (Table 2-1).

⁵⁶ MoWA. 2015."Key Gender Statistics in Cambodia."

⁵⁷ MoWA. 2015.

⁵⁸ Countries with absolute deviation from gender parity of 7.5–10 per cent are considered to be countries with medium-low equality in HDI achievements between women and men and are classified as group 4.

⁵⁹ MoWA. 2015."Key Gender Statistics in Cambodia."

⁶⁰ MoWA. 2015.

⁶¹ MoWA. 2019."Cambodia Report to Beijing+25."

⁶² As of 2021, one more woman governor was appointed bringing the total to two.

Table 2-1 The proportion of women in political positions and in the civil service in 2017 and 2018

The proportion of women in political positions and in the civil service	Per cent
Female deputy prime ministers in 2018	10.0
Female deputy prime ministers in 2018	20.8
Seats held by women in the Senate in 2018	19.9
Female ministers in 2018	10.3
Female secretaries of state in 2018	15.8
Female undersecretaries of state in 2018	15.3
Female provincial governors in 2017	4.0
Female deputy provincial governors in 2017	17.3
Female district/municipality/khan governors in 2017	3.5
Female district/municipality/khan deputy governors in 2017	26.0
Female commune chiefs in 2017	7.8
Female first commune deputy chiefs in 2017	14.2

2.1.6.4 Social norms and gender stereotypes

Gender stereotypes have been deeply rooted in Cambodian society, and they are a constraint for women's participation in decision-making, women's access to economic opportunities and women's autonomy. A gender policy assessment by MoWA revealed that traditional stereotypes and norms were the main barriers hindering Cambodia's women from gaining broader opportunities for economic empowerment, reproductive health, participation in family and social decision-making processes, acting against domestic violence, and enjoying an education and career development⁶⁴. Social and gender norms and a higher level of poverty also limit women's access to information, resources and education and have become major challenges for women to continue their studies in upper grades and to pursue higher education and TVET⁶⁵.

The Cambodia Gender Analysis report by the ADB shows that traditional norms and a low level of education, as well as illiteracy, are the major causes that prevent women and girls from having their voices heard, and enjoying preference in their families and in society as a whole⁶⁶. Women's representation in the public realm remains low, and their ideas and concerns tend to be ignored⁶⁷.

⁶³ MoWA. 2019."Cambodia Report to Beijing+25."

⁶⁴ Ibid.

⁶⁵ Ibid.

⁶⁶ ADB. 2012."Country Gender Analysis."

⁶⁷ MoWA. 2014."Women in Public Decision-Making and Politics."

Traditional norms divide roles and responsibilities between men and women in the family and the community as a whole. For example, women's responsibilities focus mainly on daily housework including finding food and firewood, while off-farm work to generate income is generally a husband's responsibility⁶⁸. The roles and duties of women in water security and governance are crucial to livelihoods in the Lower Mekong Region. However, women's voices in environmental and natural resource management, particularly in water use and allocation, have hardly ever been considered in the decision-making process. Women are often excluded from a wide range of opportunities or not given a chance as they are considered to be unimportant or incapable of being involved in long processes due to their domestic tasks⁶⁹.

2.2 Climate change impacts across the country

Cambodia is among the countries most at risk of the adverse impacts of climate change. In the Global Climate Index 2021, Cambodia ranked 14th in the world during the period 2000-2019 as a country that suffered the biggest losses and damages to resources and economic flows as a result of climate-induced disasters⁷⁰. A study by Yusuf and Francisco (2009) shows that Cambodia is not highly exposed to climate hazards, except for in the Mekong Delta on the border with Viet Nam. However, the country is vulnerable to climate change due to its limited adaptive capacity and high dependence on climate-sensitive livelihoods such as rain-fed agricultural farming and natural resource collection⁷¹.

The geographical characteristics of Cambodia determine what type of natural hazards each region is most vulnerable to. While the geographical distribution of droughts is more widespread, floods mostly affect lowland areas such as the floodplains along the Mekong River. Although there are some actual benefits from the seasonal flooding experienced in the central plains, such as bringing nutrients to the soil and providing fish, other lowland and coastal zones tend to be more negatively affected. For parts of the country where mountain ranges are the dominant geographical feature, there is a higher risk of localised landslides as well as flash flooding. Typhoons and storms are not often considered to be a significant threat to Cambodia as the country is sheltered by mountain ranges which help to lessen their impact⁷².

The climate change phenomena that Cambodia frequently experiences are floods, droughts, windstorms, and seawater intrusion in the coastal areas. These natural hazards have caused considerable economic losses and social and environmental impacts. The effects of annual flooding alone can cost from US\$100 million to US\$170 million per year⁷³. The huge impact is because approximately 80 per cent of Cambodia's land is covered by the Mekong River and Tonle Sap basins⁷⁴. Moreover, according to USAID (2019), in 2015 adverse climate impacts resulted in losses of approximately US\$1.5 billion, equivalent to 10 per cent of annual GDP. Over the last decade, Cambodia has experienced more frequent and severe floods, droughts and windstorms which pose a serious challenge to the socio-economic development of the country. As well as occurring more frequently, these climate-induced disasters have resulted in increasingly high physical and economic impacts, in particular in rural areas, where 90 per cent of people are engaged in agricultural activities as their livelihood options⁷⁵.

⁶⁸ Nhem, S. and Y.J. Lee. 2019. "Women's Participation and the Gender Perspective in Sustainable Forestry in Cambodia: Local Perceptions and the Context of Forestry Research."

⁶⁹ Nguyen, H. et al. 2019. "Exploring Gender Dimensions of Water Insecurity and Governance in the Lower Mekong Region."

⁷⁰ Eckstein, D. et al. 2021. "Global Climate Risk Index 2021."

⁷¹ Yusuf, A.A. and F. Herminia. 2009. "Climate Change Vulnerability Mapping for Southeast Asia."

⁷² UNDRR. 2019. "Disaster Risk Reduction in Cambodia: Status Report 2019."

⁷³ RGC. 2010. "Cambodia Post-Ketsana Disaster Needs Assessment."

⁷⁴ UNDRR. 2019. "Disaster Risk Reduction in Cambodia: Status Report 2019."

A significant example of this is the serious floods that hit Cambodia back in 2011 and 2013⁷⁶. In 2011, a total of 350,000 households (around 1.5 million people) were affected by the flood and 52,000 households were evacuated from their homes. The estimated loss due to this flood was US\$630 million. Two years later, in October 2013, continuous heavy rainfalls resulted in flash floods, affecting more than half a million people. More than half of Cambodia's provinces were affected, with the Mekong region being particularly inundated as the river's water levels rose with the rainfall. According to Cambodia's Post-Flood Early Recovery Assessment Report, the damage and loss caused by the 2013 flood was US\$356 million in total, of which US\$153 million was the estimated value of the damage to physical assets in the affected areas, and US\$203 million the estimated losses in production and economic flows⁷⁷.

Similarly, in 2012, 11 out of the 24 (now 25) provinces throughout Cambodia experienced drought, and tens of thousands of hectares of rice-growing areas were negatively affected⁷⁸. In 2016, 18 out of all of the provinces were affected by the El Niño-triggered drought, which caused serious water shortages for both domestic and agricultural uses. Up to 2.5 million Cambodians were estimated to have been susceptible and at high risk to their health, food security and livelihoods⁷⁹. According to the flash flood report from the National Committee for Disaster Management (NCDM) in October 2020, 20 provinces in Cambodia were affected by the flood. From 1 September to 27 October 2020, 44 people died, approximately 11,896 households were evacuated from their homes and around 134,003 houses were affected. About 627 km of the national road, provincial road, and red gravel road, and 1,685 km of rural road were also affected. The same report showed that 951 schools and 284,961 ha of rainy season rice were flooded⁸⁰.

The sectors most vulnerable to climate change effects in Cambodia are agriculture, infrastructure, forestry, human health and coastal zones⁸¹. The impacts of drought, flood, sea-level rise and severe weather can alter ecosystems, disrupt food production and water supply, damage infrastructure and settlements, cause morbidity and mortality, degrade natural resources, and impose severe consequences for mental health and human well-being. During the period between 1996 and 2013, floods damaged 67 per cent of all the paddy fields in Cambodia, while drought caused a 31 per cent loss of the total crop during the same period⁸². The Ministry of Economy and Finance (MEF) and the General Secretariat of National Council for Sustainable Development (GSSD) in 2018 reported that rice production could drop by 10 per cent for every 1°C rise of temperature, and coffee and rubber production might also decrease significantly. Furthermore, the fishing industry, tourism and coastal infrastructure are also expected to be affected⁸³. The negative impacts of climate change will affect mostly poor people, women, children, and other vulnerable groups, who are considered to have little means to adapt⁸⁴.

Climate models predict that temperatures in Cambodia will continue to rise in the future (by between 1.35°C and 2.5°C by 2100) and, in addition to the increased frequency of severe floods experienced over the last decade, by 2050, rainfall patterns will become even more unpredictable⁸⁵. Therefore, it is more important than ever for the government to further strengthen the process of mainstreaming climate change into national and sub-national development planning for Cambodia.

⁷⁶ Leng, H.A. 2014."Country Report of Cambodia's Disaster Management."

⁷⁷ RGC. 2014."Post-Flood Early Recovery Need Assessment Report."

⁷⁸ UNDP Cambodia. 2019."Cambodia, Looking to the Horizon, Prepares for Drought."

⁷⁹ Catitas Cambodia. 2016."Cambodia: Drought Emergency Appeal 2016."

⁸⁰ NCDM. 2020."Data on Impact and Damage by Floods 2020."

⁸¹ GSSD. 2015."Cambodia's Second National Communication under the United Nations Framework Convention on Climate Change."

⁸² NCDM and UNDP. 2014."Cambodia Disaster Loss and Damage Analysis Report 1996 - 2013."

⁸³ MEF and GSSD. 2018."Addressing Climate Change Impacts on Economic Growth in Cambodia."

⁸⁴ Nang, P. et al. 2014."Adaptation Capacity of Rural People in the Main Agro-Ecological Zones in Cambodia."

⁸⁵ Watt, B. et al. 2012."The State of Climate Change in Cambodia."

Table 2-2 Share of wage employment for women aged 18 years and above in 2019

Economic sectors	Cambodia	Phnom Penh	Other urban	Other rural
	Number in thousands			
Agriculture (Primary)	1,419	7	190	1,222
Industry (Secondary)	979	160	328	491
Service (Tertiary)	1,562	453	500	608
Total	3,960	620	1,019	2,321
	In per cent			
Agriculture (Primary)	35.8	1.5	15.9	50.2
Industry (Secondary)	24.8	28.3	17.7	24.9
Service (Tertiary)	39.4	70.2	66.4	24.9
Total	100	100	100	100

Source: NIS (2020) ⁸⁶

Table 2-3 Socio-economic indicators for the period 1990-2019

Year	1990	2000	2015	2019	Change in 1990-2019 (%)
Human development index	0.38	0.42	0.57	0.581	52.90
Gender inequality index	0.66	0.60	0.48	0.47 (2018)	-28.78
GDP (2017 US\$ billion using purchasing power parity (PPP))	NA	18.12	55.00	72.35	299.28 (2000-2019)
GDP per capita (2017 US\$ thousand using PPP)	NA	1491.30	3543.70	4388.80	194.30 (2000-2019)

Source: The World Bank (2020) and UNDP (2020) ⁸⁷⁸⁶ NIS. 2020. "General Population Census Cambodia 2019."⁸⁷ UNDP. 2020. "Human Development Report 2020."



2.3 Emission trends

According to the latest records from the MoE, the total emissions of greenhouse gases (GHG) were estimated to be 163,592 Gg.CO₂-eq in 2016 (with forest and other land uses (FOLU), increased from 42,450.28 Gg.CO₂-eq in 1994). Notably, FOLU is the main driver in reducing GHG emissions. The total GHG emissions without FOLU (due to deforestation and environmental degradation) doubled between 1994 and 2016. FOLU alone contributed 80.1 per cent of the total GHG emissions in 2016, while agriculture accounted for 11.2 per cent, energy 5.9 per cent, waste 1.7 per cent, and industrial processes and product use (IPPU) 1.1 per cent (Table 2-4).

The updated NDC report estimates that in the Business as Usual (BAU) scenario the total GHG emissions (without FOLU) will rise to 155 million tCO₂e/year by 2030. The share of FOLU will drop to 49.2 per cent. By 2030, the fastest-growing emitting sector will be energy, with a projected share of 22.2 per cent, followed by agriculture 17.5 per cent, (IPPU) 9.0 per cent and waste 2.1 per cent⁸⁸.

Table 2-4 Total greenhouse gases emissions by sector (in Gg. CO₂-eq using the global warming potential of the Fourth Assessment Report of the Intergovernmental Panel on Climate Change) in 1994-2016

Inventory Sector	1994	2000	2005	2010	2015	2016	Change in 1994-2016 in %
Energy	2,690.95	3,102.73	3,454.41	5,306.37	8,356.31	9,601.61	256.81
IPPU	3.81	6.04	12.73	492.84	1,001.38	1,821.15	47699.21
Waste	1,534.32	1,859.50	2,146.20	2,365.29	2,688.19	2,760.68	79.92
Agriculture (3A+3C)	11,202.58	13,032.31	15,336.38	18,136.08	18,068.35	18,397.67	64.22
Forest and Other Land Use (FOLU) (3B)	27,018.62	27,018.62	27,018.62	131,011.24	131,011.24	131,011.24	384.9
Total (without FOLU)	15,431.65	18,000.59	20,949.73	26,300.58	30,114.23	32,581.11	111.13
Total (with FOLU)	42,450.28	45,019.21	47,968.35	157,311.82	161,125.47	163,592.35	285.37
GHG emissions per capita (Mg CO ₂ eq) 2016	10.37 Mg CO ₂ eq per capita						

Source: NIS (2020) ⁸⁶

⁸⁸ NCSD. 2020."First Biennial Update Report of the Kingdom of Cambodia: To the United Nations Framework Convention on Climate Change."



3. National laws, policies, strategies and action plans related to climate change and gender equality

3.1 Climate change policy documents

In 2016, as a least developed country, Cambodia was one of the lowest emitters of greenhouse gases (GHG), with only 10.37 Mg CO₂ eq per capita, placing the country among the lowest contributors to the cause of climate change in the world. Nevertheless, Cambodia remains one of the nations most vulnerable to the impacts of climate change due to its high dependence on climate-sensitive sectors and limited adaptive capacity. To deal with this problem, the Royal Government of Cambodia (RGC) has made an explicit effort to mainstream climate change within national and sub-national planning and strategy to ensure “a greener, low-carbon and climate-resilient, equitable, sustainable, and knowledge-based society”⁹⁰.

Climate change mainstreaming in Cambodia has evolved at three levels: national, sector, and sub-national levels. The government's Rectangular Strategy Phase IV has incorporated climate change responses to strengthen technical and institutional capacities in environmental management and mainstream it into various policies, regulations and plans⁹¹. Cambodia has undergone considerable progress in the planning and implementation of climate change adaptation plans and programs, which is reflected in various policy documents. Table 3-1 lists key policy documents relating to climate change and the assessed level of gender mainstreaming.

Table 3-1 Main policy documents relating to climate change listed by year

Year	Name of document	Implementing duration	Level of gender mainstreaming
			• No gender references • Gender aware • Gender responsive
2000	Cambodia Millennium Development Goals (CMDGs)	2000-2015	Gender responsive Goal 3: Promote gender equality and empower women: Reduce significantly gender disparities in upper secondary and tertiary education; Eliminate gender disparities in wage employment in all economic sectors; Eliminate gender disparities in public institutions; and reduce significantly all forms of violence against women and children.
2002	Cambodia's Initial National Communication	2002	No gender references
2005	Law on the Prevention of Domestic Violence and the Protection of Victims	2005	Gender aware Eliminate gender-based violence in education, dissemination and training, and the prevention of gender-based violence and the protection of victims.
2009	The National Green Growth Roadmap	2009	Gender aware Integrate gender equality into green growth; development and implementation of the role of gender in green growth.

⁹⁰ Ibid.

Table 3-1 Main policy documents relating to climate change listed by year (continued)

Year	Name of document	Implementing duration	Level of gender mainstreaming • No gender references • Gender aware • Gender responsive
2013	Cambodia Climate Change Strategic Plan (CCCSP)	2014-2023	Gender aware In Strategic Objective 2: Reduce sectoral, regional, gender vulnerability and health risks to climate change impact; but there is no instruction of budget allocation which results in a big gap in budget implementation.
2014	National Action Plan on Violence Against Women (NAPVAW)	2014-2018	Gender responsive Policy, strategies, action plan, financing and M&E framework.
2014	Census of Agriculture in Cambodia	2013	Gender aware The report recognises the gender role by providing sex-disaggregated data in some agricultural statistics. But there is no in-depth gender analysis.
2015	Intended Nationally Determined Contributions of Cambodia	2015	Gender aware Acknowledges the important role of gender in the document namely to reduce sectoral, regional, gender vulnerability and health risks resulting from the impacts of climate change.
2016	Climate Change Action Plans (CCAPs) of the Ministry of Environment	2016-2018	Gender aware Reduce sectoral, regional, gender vulnerability and health risks as a result of climate change impacts. But no budget allocation was identified.
2017	National Adaptation Plan Process in Cambodia	2017	Gender aware Supports the implementation of the NAP financing framework.
2018	National Strategy for the Development of Statistics	2019-2023	Gender aware Roles of MoWA in gender statistics, data analysis (SPSS and STATA), the Gender Reproductive Project, and management.
2018	Rectangular Strategy for Growth, Employment, Equity and Efficiency Phase IV	2018	Gender responsive Rectangle I: Human resource development: 1). Improving the quality of education, science and technology; 2). Vocational training; 3). Improving public healthcare and nutrition; and 4). Strengthening gender equality and social protection.
2018	Phnom Penh Waste Management Strategy and Action Plan	2018-2030	No gender references

Table 3-1 Main policy documents relating to climate change listed by year (continued)

Year	Name of document	Implementing duration	Level of gender mainstreaming - No gender references - Gender aware - Gender responsive
2018	Mainstreaming Gender into Agriculture Climate Change Adaptation (CCA) Investments: Guidance Manual for Policy Makers and Practitioners	2018	Gender responsive Gender mainstreaming guidance is expressed in three levels of implementation: the document analyses gender gaps and needs at the policy level, identifies gender-response and gender balance at the program level, and verifies gender indicators at the beneficiaries level.
2018	Mainstreaming Gender into Water, Sanitation and Hygiene (WASH) (MRD) CCA Investments: Guidance Manual for Policy Makers and Practitioners	2018	Gender responsive The manual identifies 5 Steps for mainstreaming gender into WASH CCA Investment: i) Scoping – SWOT analysis of gender mainstreaming and its recommendations; ii) Institutional recognition and endorsement; iii) Development of the gender mainstreaming framework; iv) Resource considerations and v) Reviewing and improving the processes.
2019	Climate Public Expenditure Review	2017	Gender aware In 2017, only 10 per cent of external climate change expenditure was tagged as being gender-sensitive, which is only marginally better than overall official development assistance to Cambodia, and still very low.
2019	NDC Roadmap and Stakeholder Engagement plan	2019-2030	Gender aware Rectangle I. Human resource development: i) Improving the quality of education, science and technology; ii) Vocational training; iii) Improving public healthcare and nutrition; and iv) Strengthening gender equality and social protection.
2019	National Strategic Development Plan (NSDP)	2019-2023	Gender responsive Strengthening gender mainstreaming mechanisms of sectoral and national programs, including climate change.
2020	First Biennial Updated Report of the Kingdom of Cambodia	2020	Gender aware The document acknowledges the roles of MoWA in strengthening gender climate change capacities, and piloting gender-based climate change adaptation/mitigation projects.
2020	Cambodia's Updated Nationally Determined Contribution	2020	Gender responsive Acknowledges the important role of gender in cross-cutting areas, proposes six gender actions for CCA implementation. Gender is integrated into the online NDC tracking system and each proposed priority action for NDC is conducted with a gender impact assessment.

Table 3-1 Main policy documents relating to climate change listed by year (continued)

Year	Name of document	Implementing duration	Level of gender mainstreaming
			• No gender references • Gender aware • Gender responsive
2020	National Action Plan to Prevent Violence Against Women	2019-2023	Gender responsive Acknowledges the important role of gender in cross-cutting areas, proposes six gender actions for CCA implementation. Gender is integrated into the online NDC tracking system and each proposed priority action for NDC is conducted with a gender impact assessment.
2020	Review of public investment in the agriculture sector in Cambodia	2020	No gender references

Source: Authors' compilation

Among these, the CCCSP 2014-2023 is the main document as it provides key strategic goals and objectives signifying climate change mitigation and adaptation. The CCCSP also has associated action plans developed by 14 relevant line ministries. These plans are Cambodia's first-ever comprehensive national policy documents, detailing the country's adaptation priorities and providing the roadmap for the de-carbonisation of key economic sectors and the enhancement of carbon sinks⁹².

Cambodia National Adaptation Programme of Action (NAPA) provides an assessment of country vulnerability and has identified priority sectors for the formulation of adaptation responses, namely agriculture, water resources, forestry, health and the coastal zone. The plan emphasises the major interventions, which consist of capacity building and training, awareness-raising and climate education, as well as physical infrastructure development towards improving social and economic benefits for people living in the community⁹³.

The recent adoption of the National Adaptation Plan (NAP) Process further improves coordinated planning/programming, implementation and financing. The NAP also highlights the need for the establishment and operation of an overall M&E system to ensure a learning process for climate change adaptation by the introduction of the Tracking Adaptation and Measuring Development (TAMD) framework for monitoring and reporting climate change effectiveness⁹⁴.

⁹² NCSD-MOE. 2013."Cambodia Climate Change Strategic Plan 2014–2023."

⁹³ MoE. 2006."Cambodia National Adaptation Programme of Action (NAPA)."

⁹⁴ Rai, N. et al. 2015."Developing a National M&E Framework for Climate Change Tracking Adaptation and Measuring Development (TAMD) in Cambodia Developing a National M&E Framework for Climate Change: TAMD in Cambodia."

3.2 Gender policy documents

In 2019, approximately 60 per cent of Cambodia's population were living in rural areas and most of them rely on climate-sensitive sectors, mainly rain-fed agricultural farming and natural resources to support their livelihood. Women have been greatly affected by the impacts of climate change as they have a key role in producing, processing and trading agricultural, forestry and fishery products, as well as simultaneously supporting and taking care of family members. Moreover, they are also actively involved in the management and use of natural resources. The sustainability of the environment, therefore, depends on the knowledge and participation of women, which need to be taken into account in policymaking and implementation.

With this in view, the Ministry of Women's Affairs (MoWA) formulated the Gender and Climate Change Strategic Plan (GCCSP) 2013-2023 and the Master Plan on Gender and Climate Change 2018-2030 to address gender aspects in the adaptation to, and mitigation of climate change and environmental sustainability.

The main policy, strategy and plan concerning climate change responses in key gender policy and strategy formulated by MoWA are shown in Table 3-2 below. Similar to gender assessment of the critical measures of policy evaluation, this section applies three criteria for evaluating climate integration, namely, no reference to climate change, aware of climate change, and fully climate change inclusive. "No reference to climate change" means the document has not included climate action, while those in which climate change is mentioned as a strategic objective with a specific action plan are called "Aware of climate change". "Fully climate change inclusive" refers to policies, strategies and programs that specify a climate change response with specific action and budget plans.



Photo: UN Environment Programme

Table 3-2 Main gender policies from the Ministry of Women's Affairs

No	Name of Policies	Year	Description	Level of climate change integration: • No climate change reference • Aware of climate change • Fully climate change inclusive
1	Neary Rattanak	2014-2018 2019-2023	Neary Rattanak is a five-year strategic plan of MoWA that was adopted in 1999. From 2014, there have been Neary Rattanak IV (2014-2018) and Neary Rattanak V (2019-2023). The Neary Rattanak Strategic Plan responds to the Rectangular Strategy of the government to empower women in many priority sectors such as the economy, education, attitude change and public leadership, to combat violence against women, trafficking and sexual exploitation, and to further mainstream gender in policies and programs across all sectors of the government. MoWA sets out six main strategies for the current Neary Rattanak V 2019-2023	Aware of climate change The Strategic Plan 2014-2018 integrates climate change response within the cross-cutting issues section meaning that the document is aware of the gendered impacts of climate change on women and men, girls and boys and other vulnerable groups. Fully climate change inclusive The Strategic Plan 2019-2023 fully integrates climate change response by including as one of the main strategies in the fifth policy the fact that the government is putting more attention and importance on the problem for a five-year implementation plan, financial resources and monitoring and evaluation.
2	Gender and Climate Change Strategic Plan (GCCSP)	2013-2023	The strategic response of the GCCSP focuses on adaptation strategies that seek to respond to the immediate needs of vulnerable women and men in rural and urban areas as well as mitigation strategies that seek to reduce the greenhouse gas emissions through promoting job opportunities and green and clean economic development. These strategies are supported by increasing gender awareness, capacity building in respect of the impacts of climate change, participation in climate change responsive policy and decision-making, research and development, and financing.	Fully climate change inclusive The strategic plan emphasises gender in the climate strategic framework, goals and objectives and financing strategy and mechanisms.

Source: Authors' compilation

Table 3-2 Main gender policies from the Ministry of Women's Affairs (continued)

No	Name of Policies	Year	Description	Level of climate change integration: • No climate change reference • Aware of climate change • Fully climate change inclusive
3	Gender and Climate Change Action Plan (GCCAP)	2014-2018, 2019-2023	GCCAP was first published to cover 2014-2018 and the second published GCCAP covers 2019-2023. This action plan aims to address particularly vulnerable women and other groups such as children and the elderly through capacity building in policy-making, leadership development, livelihood- and green growth-related activities. The plan has been developed following the CCCSP 2014-2023. The planning process of the GCCAP is supported and guided by the Cambodia Climate Change Alliance (CCCCA).	Aware of climate change GCCAP 2014-2018 addresses gender in the climate strategic framework, goals and objectives, financing strategy and mechanisms, and legal requirements. GCCAP 2019-2023 emphasises four sector priorities with a clear action plan. Although the GCCAP will be integrated into the annual planning and budgeting procedures with possible funding contributions from international development partners, MoWA has experienced a funding shortfall in implementation.
4	Master Plan on Gender and Climate Change	2018-2030	The Master Plan envisages the institutionalisation of gender mainstreaming in climate change adaptation, mitigation and disaster risk reduction investments for contributing to equitable climate resilience and a sustainable society in Cambodia. To realise that transformation, short (2018-19), medium (2019-23), and long-term (2023-2030) goals have been identified to complement the commitments of the RGC in the NSDPs, Neary Rattanak and CCCSP 2014-2023 along with the relevant Sustainable Development Goals (SDGs).	Fully climate change inclusive Gender mainstreaming into the climate change investment project in the short (2018-2019), medium (2019-2023) and long-term (2023-2030). Five guidance manuals for sector climate change investment projects in education, health, WASH, and public transport.

Source: Authors' compilation

In addition to the sectoral programs in health, education, economic empowerment and legal protection, MoWA has been active in ensuring that gender is mainstreamed into key policy documents, such as the NSDP, the Public Investment Program (PIP), the Cambodia Millennium Development Goals and the Cambodia Sustainable Development Goals (SDGs), as well as in on-going government reform efforts including Decentralization and De-concentration reform, Public Administration Reform, Public Financial Management and Legal and Judicial Reform.

3.3 Gender integration assessment in relevant law and policy documents

In 2014, the NIS produced a study on women and men in Cambodia showing sex-disaggregated data in demography, education and other key sectors. Gender data relies on the national census, socio-economic surveys, the Commune Database, survey data and other national datasets. Some sex-disaggregated data have been collected but most are project-based and cannot represent the situation at the national level. Thus, gender data is not yet sufficient and needs to be systematically considered at the national level. Climate change data is taken from IPCC reports, the NDC, the Climate Change Adaptation Action Plan, and academic research documents that relate to it. There is a need to establish a reliable national gender-climate-change database. The MoP and the MoWA are taking a lead on setting a plan to work on that.

A total of 70 laws, policies, strategies, plans and guidelines on climate change, the environment, gender, agriculture, rural development, forestry and energy, published between 1994 and 2021, have been reviewed to assess to what extent gender is integrated into the policy and implementation processes. Out of all documents reviewed, 6 per cent are laws and regulations, 53 per cent are policies and strategies, and 41 per cent plans and programs.

This assessment shows that only 24 per cent of the total number of documents reviewed are explicitly gender-responsive. This means that these respective laws, policies, strategies, plans and programs not only acknowledge the important role of women but also provide measures to promote gender equality in the objectives and processes of the implementation. The reviewed documents delivering gender-awareness account for 50 per cent. Those include gender in sectoral policies, strategies or plans, recognising the gender differences and women's roles in their respective objectives and strategies. Twenty-six per cent of the documents listed above do not mention gender at all, which means that there is no gender inclusion in the sectoral policies, strategies or plans as they do not show any concern for gender, or gender roles. (See Annex 6: List of documents.)

Although there are ongoing efforts to mainstream gender in climate change action at national and sub-national levels, it is notable that there is limited capacity in line ministries and institutions for in-depth gender analysis, advocacy and gender mainstreaming. And there are gaps in the implementation of gender-responsive laws, policies, guidelines, plans and programs. Even though the RGC has adopted both climate change mitigation and adaptation measures, it claims to require technical and financial support to scale-up such measures, both at national and sub-national levels. The challenges are associated with the scarcity of knowledge and skills and a lack of experience: an approach to systematically and holistically enable a gender mainstreaming mechanism is needed. In general, a line ministry pays less attention to gender-based vulnerability to climate change and provides limited specific commitment and mechanisms to mobilise the necessary resources.

Furthermore, there is limited coordination among relevant stakeholders, coupled with an insufficient budget for implementing gender-related plans and activities. Line ministries, to some extent, integrate and implement gender and climate change priorities in their sectoral strategies and plans mainly through external project support. In general, sectoral policies, as well as policies and programs for gender equality, have not yet taken the needs of women and girls fully into consideration. Furthermore, social norms continue to constrain the development of women's potential and hinder their empowerment in economic, social, public and political life.

⁹² United Nations."United Nations Development Assistance Framework Cambodia 2019- 2023."

⁹³ Khlok Vichet Ratha. 2019."Integrating Gender into National Environmental Policies in Cambodia."

⁹⁴ Ibid.

⁹⁵ Ibid.



3.5 Overview of existing national women's affairs and national climate change committees

3.5.1 Institutional arrangements for the coordination of climate change response

The National Climate Change Committee (NCCC) was established in 2006 with the mandate to coordinate and monitor the implementation of the government's policies, strategies, regulations, plans and programs in response to climate change issues. With an amendment in 2014, the NCCC has functioned since its establishment as the inter-ministerial mechanism for coordinating climate change response in the country. Its functions have been taken over by the NCSD since the establishment of that council in May 2015.

The NCSD is an inter-ministerial institution that is mandated to facilitate the national climate change response. Specifically, its objective is to coordinate the core duties of promoting sustainable development, the green economy, biodiversity conservation and biosafety. The NCSD comprises 36 ministries and agencies and 25 capital/provincial governors and is chaired by the minister of environment. The NCSD was consolidated from four bodies, namely, the National Council for Green Growth and its Secretariat, the NCCC and its Secretariat, the National Biosafety Secretariat, and the National Biodiversity Steering Committee. The General Secretariat supports the operation of the NCSD under the direct oversight of the Council's Executive Committee which consists of 12 members from key ministries, who are members of the Council. Efforts have been made by the NCSD to improve the coordination of climate change activities in Cambodia and to promote a stronger, comprehensive and effective climate change response, which includes the preparation of the Cambodia Climate Change Strategic Plan 2014-2023, the Sectoral Climate Change Action Plans and the Climate Change Financing Framework¹⁰⁰.

¹⁰⁰ NCSD. 2015. "Climate Change Financing Framework."

The Cambodia Climate Change Office (CCCO) of the MoE was established in 2003 to be responsible for a wide range of climate change-related activities including the formulation of draft climate change plans and policies, the implementation of the UNFCCC (the United Nations Framework Convention on Climate Change), an assessment of new technologies to adapt to the adverse impacts of climate change or to mitigate GHG emissions, capacity building and awareness-raising. The office also serves as the Secretariat of the UNFCCC, the Intergovernmental Panel on Climate Change (IPCC), the Kyoto Protocol and the Clean Development Mechanism (CDM) Focal Points for Cambodia. The CCCO coordinates inter-ministerial technical working groups specialised in sectors (energy and forestry), along with climate change themes (GHG inventory, mitigation, vulnerability and adaptation, and UNFCCC implementation). The status of the CCCO was upgraded from office to department (Department of Climate Change) by the government in October 2009. This indicates the government's strong commitment to strengthening climate change institutions in the country.

A Climate Change Technical Team (CCTT) was established as an inter-ministerial body to provide technical support to the NCCC in fulfilling its mandate. The Department of Climate Change (DCC) within the MoE serves as the Secretariat for the NCCD and coordinates the activities of the CCTT. There are climate change focal points and working groups appointed by key line ministries to oversee climate change-related activities, such as the development of Sectoral Climate Change Strategic Plans, action plans and projects. The MoE also has a gender and climate change focal point in each of the 27 departments of the ministry and focal points at provincial departments. However, there are not yet focal points at the district, commune or village levels.

The MoE was appointed as the Designated National Authority (DNA) for the CDM in July 2003. The DCC, acting as the Secretariat of the Cambodian DNA, has been actively promoting CDM projects in Cambodia, with technical support from the Institute for Global Environmental Strategies (IGES) of Japan, the Government of the Netherlands via the United Nations Environment Programme (UNEP), and the European Union (EU). The activities include technical and institutional capacity strengthening, CDM awareness-raising, CDM project identification, and facilitation of host country approvals under the requirements of the Kyoto Protocol of the UNFCCC.

The intended function of the National Committee for Disaster Management (NCDM) is summarised in its mission statement, which is to lead the management of disasters in Cambodia. It is chaired by the prime minister and comprises ministers from each government agency, plus the Royal Cambodian Armed Forces, the Cambodian Red Cross and the Civil Aviation Authority.

3.5.2 Institutional framework for gender mainstreaming in Cambodia

The Ministry of Women's Affairs (MoWA) is the leading national machinery for the promotion of gender equality and women's empowerment in Cambodia. MoWA acts as a catalyst and advocates to encourage public institutions, civil society and the private sector to integrate gender equality into their policies and programs. It is also a coordinator and facilitator for gender mainstreaming across government. It is responsible for monitoring and evaluating policies and programs to assess their contribution to achieving the government's goals in promoting gender equality and the empowerment of women. MoWA also supports the Cambodian National Council for Women (CNCW) in promoting the implementation of CEDAW, and the legal protection of women through the development and enforcement of laws.

In 2001, the Cambodian National Council for Women (CNCW) was established. The CNCW is the national inter-ministerial council made up of secretaries of state of line ministries and relevant institutions, who have responsibilities to support the RGC by facilitating, following up and evaluating the implementation of national laws and other regulations concerning the promotion of women's status and the welfare of women in Cambodia. In addition, the CNCW has special responsibility to coordinate reporting on the implementation of CEDAW and has conducted extensive training on this topic.

In 2004, a Technical Working Group on Gender (TWG-G) was established as one of the 19 Technical Working Groups of the Government-Donor Coordination Committee (GDCC). The TWG-G is chaired by the minister of women's affairs with the United Nation Development Programme and the Japan International Cooperation Agency (JICA) as co-donor facilitators. Civil society organisations also participate in the TWG-G. Gender Focal Points are appointed in the other Technical Working Groups.

In 2005, with strong advocacy and encouragement from MoWA and the TWG-G, many Gender Mainstreaming Action Groups (GMAGs) were established in line ministries, replacing the previous system of gender focal points. GMAGs are chaired at the secretary of state level and should include male and female officials from every department. The priority task of the GMAGs is to prepare Gender Mainstreaming Action Plans (GMAPs) to provide a mechanism for the implementation and monitoring of gender equality policy commitments made by the government in a given sector, and to harmonise the inputs of different stakeholders.

In 2013, MoWA established a Gender and Climate Change Committee (GCCC) to supervise the overall work on gender equality in climate change, green growth and disaster risk management. The GCCC consists of officers from different departments of MoWA. There are four sub-groups in the committee, linked to climate change, green growth, disaster risk reduction, and the Tonle Sap-Mekong project. Activities mainly focus on gender mainstreaming, climate change adaptation and resilience.

At the sub-national level, the Consultative Committee for Women and Children (CCWC) has been established at the capital, provincial, municipality, district and commune levels. They provide suggestions and recommendations to the council, boards of governors, governors and other council committees on issues related to gender equity and women's and children's issues that fall within the authority, function and duties of the council.

The Women's Development Centre (WDC) at the sub-national level is under the control of the Ministry of Women's Affairs and the Provincial Department of Women's Affairs. Its goal is to introduce value-chain-based, gainful local economic activities for rural women. The centre helps women to start and manage their business ventures, and also offers training for women focusing on skills such as weaving, manufacturing, handicrafts, hairdressing, tailoring and food processing. There are a total of 18 Women's Development Centres in 14 provinces in Cambodia, with 138 administrative staff and trainers and an average of 1,900 graduates per year¹⁰¹.

Despite the progress made in recent years to promote the status of women in Cambodia, much more needs to be done to realise a gender-equal society, as in the international commitments made by the government, such as CEDAW. Improving the situation of women and children is central to the government's strategy to alleviate poverty. Also, achieving good governance will require the active participation and commitment of all segments of society, enhanced information sharing, accountability, transparency, equality, inclusiveness and the rule of law.

¹⁰¹ MoWA. 2021. "Women's Development Centers."

3.6 Current Nationally Determined Contribution (NDC)

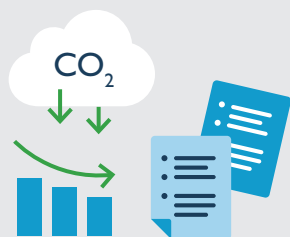
3.6.1 Circumstances of Cambodia's NDC

Cambodia is committed to combating the impact of global climate change and fulfils its capacities and responsibilities under the United Nations Framework Convention on Climate Change (UNFCCC). Cambodia submitted Intended Nationally Determined Contributions (INDC) under the UNFCCC's framework in 2015 and ratified the Paris Agreement in January 2017. The submissions of the First Biennial Update Report (BUR) and updated NDC were made in August and December 2020, respectively¹⁰².

The updated NDC prioritised 58 adaptation actions in agriculture, the coastal zones, energy, human health, industry, infrastructure, livelihoods, tourism, combating poverty, protecting biodiversity, and water resources. In addition, 32 actions for the mitigation target cover energy, waste, industry, transport, agriculture, building and the FOLU sectors¹⁰³. Box 3-1 shows mitigation and adaptation measures that were elaborated in Cambodia's updated NDC 2020.

Box 3-1

Mitigation and adaptation measures in Cambodia's updated NDC 2020



Mitigation measures:

As indicated in the updated NDC, Cambodia is committed to reducing the total emission of 64.6 million tCO₂e/year under the NDC scenario from a total BAU 155.0 million tCO₂e by 2030. The reduction of emissions from FOLU account for 50 per cent, followed by energy (40 per cent), agriculture (23 per cent), industry (IPPU) (42 per cent), and waste (18 per cent). Thirty-two mitigation actions focus on seven sectors: energy, waste, industry, transport, agriculture, building, and the FOLU collected from relevant core ministries and agencies such as MAFF, MISTI, MLMUPC, MME, MoE, MoEYs, MoT, MPWT, and NCDD.

Adaptation measures:

The government prioritised 58 adaptation actions to reduce vulnerability in agriculture (17 actions), coastal zones (two actions), energy (two actions), human health (five actions), industry (one action), infrastructure – including roads, buildings and urban land use planning - (15 actions), livelihoods, poverty and biodiversity (seven actions), tourism (three actions) and water resources (six actions). A total of 29 enabling actions are designated to be facilitated and implemented by many ministries and agencies relating to education (four actions), gender (six actions), governance (two actions), information (four actions), knowledge sharing (one action), and policy and planning (12 actions).

Figure 3-2 shows the roles and responsibilities of key ministries and stakeholders in governing the implementation of the NDC at three different levels, namely, i) Policy approval, 2) Policy development, coordination, monitoring and reporting, and iii) Planning, implementation and reporting.

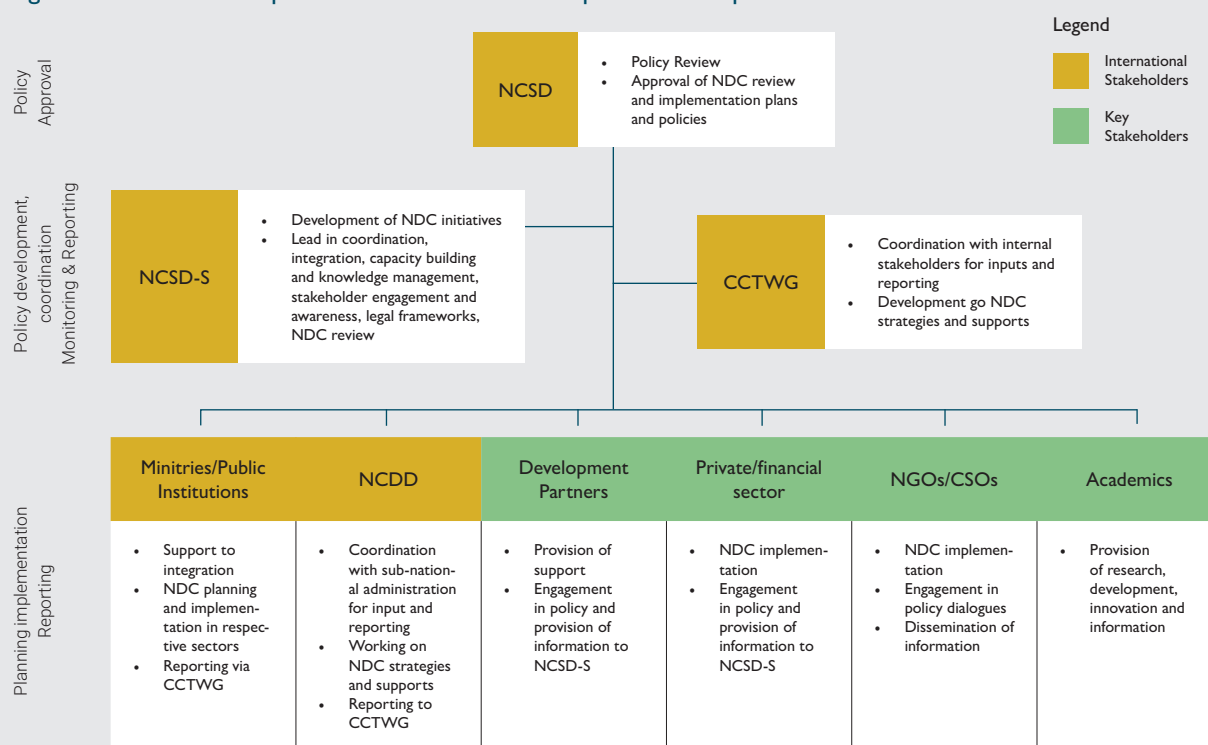
¹⁰² GSSD-MOE. 2020."First Biennial Update Report of the Kingdom."

¹⁰³ GSSD-MOE. 2020."First Biennial Update Report of the Kingdom."

At the policy level, NCSD has a function to review all climate-related policies, approve the NDC assessment and implement plans and policies. At the policy development, coordination, monitoring and reporting level, GSSD coordinates the development of NDC initiatives and directs facilitation, incorporation, capacity development, stakeholder involvement, and the mainstreaming of legal frameworks. In this stage, the Ministry of Economy and Finance (MEF) has specific roles in supporting the integration of NDC implementation in national and subnational planning and budgeting, and the Ministry of Planning (MoP) is responsible for supporting measurement, reporting and verification (MRV) development and implementation. At the same time, the CCTWG plays a crucial role in coordination with internal stakeholders for inputs and reporting, and for the development of NDC strategies and support.

The planning, implementation and reporting stage engages both internal stakeholders and key stakeholders to support national and sub-national integration, NDC planning and implementation, resource mobilisation, engagement in policy dialogues, provision and dissemination of research, development and innovation. The relevant stakeholders comprise ministries/public institutions, sub-national government agencies, development partners, the private sector; the financial sector, NGOs/ Civil Society Organisations (CSOs), and academia/ research institutes^{104 105}.

Figure 3-2 Roles and responsibilities for NDC development and implementation



¹⁰⁴ GSSD. 2017."National Adaptation Plan Financing Framework and Implementation Plan."

¹⁰⁵ NCSD. 2019."Cambodia NDC Roadmap and Stakeholder Engagement Plan."



Cambodia's Updated NDC 2020 indicated gender mainstreaming, youth engagement and private sector involvement as cross-cutting issues. Committed to gender integration as part of development and implementation processes, line ministries proposed six gender actions for CCA implementation and set targets for women's involvement and participation, ranging from 15 per cent to 70 per cent at all levels. The gender-responsive focus was integrated within the process of stakeholder engagement and consultation¹⁰⁶. Moreover, gender is integrated into the online NDC tracking system, and each proposed priority action for NDC includes a gender impact assessment¹⁰⁷.

In supporting the policy intervention, the roadmap for NDC implementation was established in line with significant efforts to mainstream climate change adaptation and mitigation into national planning¹⁰⁸. A national M&E framework for climate change is operational, and the national GHG emissions inventory system is being implemented and recorded in the BUR 2020¹⁰⁹.

The national M&E framework for climate change action applies a Tracking Adaptation and Measuring Development conceptual framework (called a "twin-track framework"). The framework is used to assess the implementation and achievements of national projects and programs, which have been fully incorporated within national and sub-national development planning. The assessment tools comprise the institutional readiness indicators and impact indicators, which include a core set of eight national-level indicators (five national-level institutional indicators and three indicators for climate resilience/vulnerability reduction and low-carbon development at the national level).¹¹⁰

¹⁰⁶ GSSD-MoE. 2020."Cambodia's Updated Nationally Determined Contribution."pp.7.

¹⁰⁷ Ibid.

¹⁰⁸ NCSD. 2019."Cambodia NDC Roadmap and Stakeholder Engagement Plan."

¹⁰⁹ GSSD-MOE. 2020."First Biennial Update Report of the Kingdom."

¹¹⁰ Five national-level institutional indicators were used to evaluate the status of: 1) climate change policies and strategies, 2) integration of climate change adaptation into development planning, 3) coordination, 4) climate information, and 5) climate change adaptation finance systems. Three indicators were used to assess climate resilience/vulnerability reduction and low-carbon development at the national level: 1) percentage of communes vulnerable to climate change (resilience indicator), 2) families affected by floods, storms and droughts (impact indicator), and 3) GHG emissions.

3.6.2 Analysis of existing and missing elements to streamline gender equality responses in the NDC

Notably, the means for implementing the NDC priority actions remain obscure due to the scarcity of financial support, limited capacity and technology and lack of an M&E tool. Although adaptation and mitigation priorities include gender considerations, and these are well reflected in the NDC document, the latest commitments and potential opportunities have not been fully integrated into sustainable development policy, planning and programming.

Although public expenditure on climate change action keeps increasing - from 0.9 per cent of GDP in 2009 to 1.3 per cent of GDP in 2014¹¹¹- Cambodia experienced a huge financial gap of 92.7 per cent for implementing the approved 15 sector CCAPs; that resulted in 171 actions¹¹² being left unfunded. Most funding support for climate response came from development partners and international donors, and it is believed that Cambodia remains dependent on international funding for climate change action. In 2019, only 15 per cent of total climate expenditure took gender-related actions into consideration, while up to 75 per cent of gender-related spending included climate change responses¹¹³.

Cambodia lacks experts and researchers in the fields of GHG inventory and mitigation, climate vulnerability assessment and adaptation measures, climate change and energy, climate agronomy, and climate economy¹¹⁴. These gaps will present a great barrier against achieving the targets of the national climate change response and global commitments.

Technology transfer and database management remain scant. The implementation of technology transfers in adaptation and mitigation actions took place in very few sectors. In addition, the existing technology needs and availability indicated in the National Technology Needs Assessment report is out of date¹¹⁵. Collecting and consolidating the data for the GHG emission inventory remain a great challenge. Neither a tool for baseline assessment nor the sex-disaggregated data is in place.

¹¹¹ GSSD. 2017."National Adaptation Plan Financing Framework and Implementation Plan."

¹¹² GSSD-MoE. 2020."Cambodia's Updated Nationally Determined Contribution."

¹¹³ NGO Forum on Cambodia. 2021."Cambodia's Citizens Climate Change Budget for 2018-2019."

¹¹⁴ GSSD-MoE. 2020."Cambodia's Updated Nationally Determined Contribution."

¹¹⁵ Ibid.



4. Key sectors and scope of the study

Some sectoral policies promote gender equality. For example, the NCCC¹¹⁶ inserted a gender and climate change strategic plan in strategic objective 2 – to mainstream gender issues, gender equality and gender-sensitive indicators into climate change responses. Moreover, MoWA has been implementing specific gender and climate change actions and supporting gender mainstreaming into 11 sectoral line ministries. As a result, the MoE, MRD, Ministry of Health, MAFF, Ministry of Water Resources and Meteorology, Ministry of Public Works and Transport and the NCDM have integrated gender-based vulnerabilities within climate change responses and these have been emphasised in their respective objectives and strategies¹¹⁷. With financial support under the Cambodia Climate Change Alliance (CCCA) Phase 2, MoWA made efforts to mainstream gender in climate change adaptation focusing on the education sector through curriculum development. Although the recognition of gender perspectives has been integrated into many ministries' strategic and action plans, gender-responsive work is unsatisfactory. One of the main challenges is that there is no definite indicator to measure the achievement of each ministry regarding gender implementation.

The following section presents an analysis of four selected sectors – energy, agriculture, rural development and forestry – aligned with the updated framework that provides the analytical flows of Driver-Pressures-States-Effects/Impacts-Responses/Policies. The analysis is based on the available gender indicators, national policies and strategic plans, regulations, and guidelines related to climate change, disaster risk management, and other social and environmental documents.

4.1 Energy

4.1.1 The current state of gender integration in energy

The energy sector contributes to Cambodia's economic growth and development and supports the agriculture, industry, trade, transport and rural development sectors by creating jobs, increasing household incomes, harmonising livelihoods, and promoting a better society and economy. In Cambodia, electricity demand has drastically increased over the past decade and it is necessary to ensure a sufficient, sustainable, reliable, quality and affordable energy supply. At the same time, maintaining environmentally friendly energy consumption is another angle of the government's policy towards inclusive growth and sustainable development, green growth and reducing greenhouse gas emissions into the atmosphere. Gender-inclusive, cleaner technology development, chemical management, energy efficiency and renewable energy development including solar, wind, hydro, and biomass and biogas sources are the core strategies needing consideration in energy policy development.

The RGC has recognised and prioritised energy and climate change commitments as the main tasks in the second phase of its Rectangular Strategy, which aims to achieve growth, employment, equity and efficiency, based on four pillars: enhancement of the agricultural sector; enforcement of the physical infrastructure; capacity building and human resource development; and generation of employment through private sector development.

The National Energy Policy, as formulated in October 1994, is the overarching energy policy from the government aiming to provide reliable, affordable energy services to all end-users including the various economic sectors and social groups of the country in the most sustainable manner.

¹¹⁶ NCSD-MOE. 2013."Cambodia Climate Change Strategic Plan 2014–2023."

¹¹⁷ Khlok Vichet Ratha. 2019."Integrating Gender into National Environmental Policies in Cambodia."

The National Policy, Strategy and Action Plan on Energy Efficiency in Cambodia 2013 claimed that the efficient use of energy is paramount to Cambodia's social and economic development and, not least, to the competitiveness of the private sector. With the development of the National Policy, Strategy and Action Plan on Energy Efficiency, the Ministry of Industry, Mines and Energy (MIME) is seeking to address the need for the improvement of Cambodia's energy efficiency to cope with the increasing energy demands of the population and industry in a cost-efficient manner.

The policy, strategy and action plan document includes the priority sectors (i.e., industry, end-user products, buildings, rural electricity generation and distribution, and the use of biomass resources for residential and industrial purposes) and takes care of three critical aspects in the priority sectors; i.e.: the National Energy Efficiency Policy, which defines the policy targets; Energy Efficiency Strategy, which outlines the strategies on how to achieve the policy targets; and the Energy Efficiency Action Plan, which summarises the activities and action points to implement the proposed strategies. A closer review of the documents reveals that the policy and strategy have not considered the gender dimension and there is no mention of gender and/or women's roles in the proposed action plans.

In 2019, the MME was drafting the National Policy and Action Plan on Energy Efficiency (NPAPEE) 2018–2035¹¹⁸ under the technical and financial support of the MoE, ADB and UNDP. The policy, which is being finalised and released in the near future, targets a reduction in energy demand in the priority sectors of buildings, industry and transport. Currently, neither the above-mentioned master plan nor the policy have integrated gender-sensitive energy requirements and planning and there is no reference to gender.

The Climate Change Action Plan for the Energy Sector 2021–2023¹¹⁹, which was released in early 2021, mainly focuses on contributing to a reduction of GHG emissions in energy through an improvement in energy efficiency and renewable energy in the context of climate change by using the current legal framework and the new regulations that have been compiled¹²⁰.

The document emphasises the specific gendered impacts of climate change on vulnerable groups such as the elderly, people with disabilities, and women and girls. The action plan has been established to fulfil the Climate Change Strategic Plan for Mines, Industry and Energy 2014–2023, in which the strategic plan addressed gender mainstreaming as a cross-cutting issue towards more effective and efficient implementation, especially access to energy in rural areas and increasing sources of energy for households and communities to avoid biomass reliance. However, there is a missing analysis on gender in the climate change action, financing, and monitoring and evaluation framework indicators. The document applied the older version of the action fiche detailing important features such as a climate change action plan and objectives, the type of climate response in mitigation or adaption, an indicator of success, timeframe and costing and funding sources. However, the template has no gender indicators to show how many women or girls are included or promoted, or any gender criteria.

¹¹⁸ Khlok Vichet Ratha. 2019.

¹¹⁹ MME. 2020. "Climate Change Action Plan for Energy Sector 2021 – 2023."

Table 4-1 List of key policy documents relating to gender and climate change in energy

Year	Name of document	Governing bodies	Implementing duration	Level of gender mainstreaming • No gender references • Gender aware • Gender responsive
1994	National Energy Policy	Ministry of Industry, Mines and Energy	1994	No gender references
2001	Law on Electricity	Royal Decree of the Kingdom of Cambodia. Formulates all activities concerning the supply of electricity, the provision of services and uses and other related power supply activities	2001	No gender references
2004	Cambodia Rural Electrification Strategy and Implementation Plan and the establishment of the Rural Electrification Fund	By Royal Decree Kingdom of Cambodia • Power to the Poor (P2P) Program • P2P for ID Poor Households under Output-Based Aid (OBA) • Program for Solar Home Systems	2004	No gender references
2006	Master Plan Study of Rural Electrification by Renewable Energy in the Kingdom of Cambodia	Ministry of Industry, Mines and Energy	2006	No gender references
2012	Climate Change Strategic Plan for the Mines Industry and Energy 2014-2023	Ministry of Industry, Mines and Energy	2014-2023	Gender aware Gender is set in the strategic objectives and cross-cutting issues section. The strategy considers gender mainstreaming in action plans and programs.
2013	National Policy, Strategy and Action Plan on Energy Efficiency in Cambodia	Ministry of Industry, Mines and Energy	2013	No gender references
2015	Climate Change Action Plan for the Mines and Energy Sector 2015-2018	Ministry of Industry, Mines and Energy	2015-2018	Gender aware One of the action plans is to reduce sectoral, regional gender vulnerability and health risks relating to the impact of climate change.

Table 4-1 List of key policy documents relating to gender and climate change in energy (continued)

Year	Name of document	Governing bodies	Implementing duration	Level of gender mainstreaming
				• No gender references • Gender aware • Gender responsive
2016	Cambodia National Energy Statistics	Ministry of Mines and Energy	2016	No gender references
2019	National Energy Efficiency Policy 2018-2035	Royal Government of Cambodia	2018-2035	No gender references
2019	Cambodia Basic Energy Plan	Ministry of Mines and Energy	2019	No gender references
2020	Climate Change Action Plan for the Energy Sector 2021-2023	Climate Change Working Group for the Mines and Energy Sector	2021–2023	Gender aware Gender and climate change are incorporated within Strategic Objective 2: Reduce sectoral, regional and gender vulnerability and health risks caused by the impact of climate change. The action plan mentions the significant contribution of renewable energy and energy efficiency to the future of decarbonised emissions. However, there is no gendered analytical section indicating whether women will benefit from those provisions. There should be gender promotion or gender indicators in these policies.

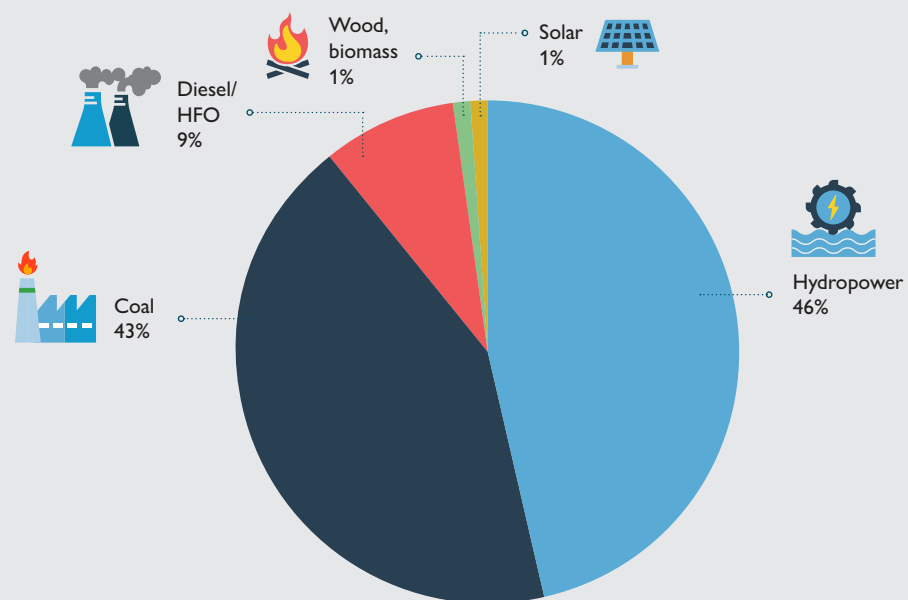
4.1.2 Drivers and pressures

The driving forces of the energy sector that contribute to the impact of climate change include unsustainable consumption and production patterns, urbanisation and rapid industrialisation, as well as sources of lighting and fuel consumption.

The Electricity Authority of Cambodia (EAC) reported that, in 2019, the major sources of power generation were hydropower (46 per cent) and coal (43 per cent). Diesel/heavy fuel oil (HFO) together with wood and biomass, and solar accounted for 11 per cent (Figure 4-1).

Figure 4-1

Sources of power generation, by per cent

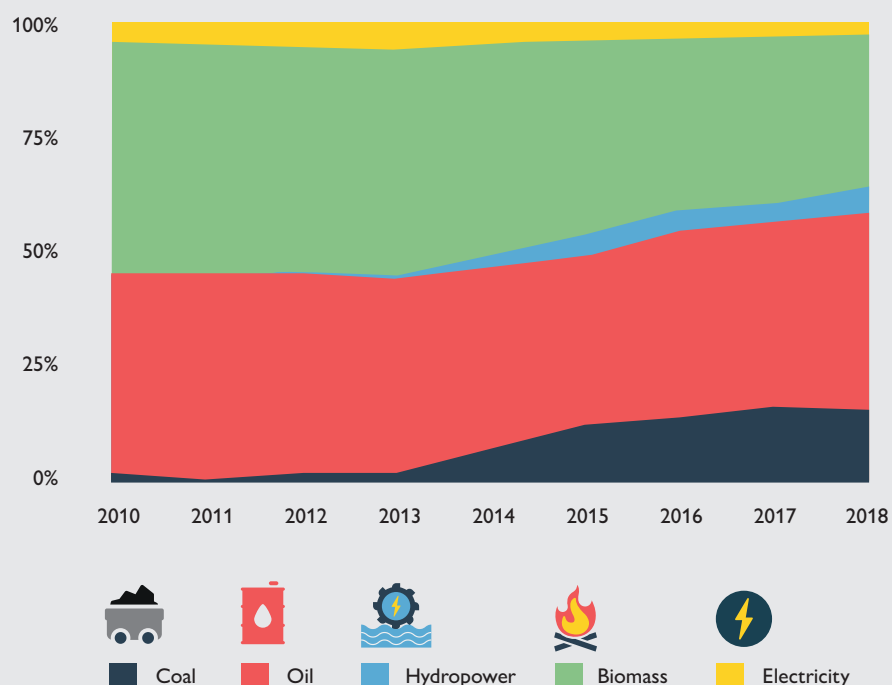


The main sources of the primary energy supply have come from oil and biomass over the past decade. However, there was a steady change to coal and hydropower from oil and biomass between 2013 and 2018. Notably, the share of biomass dropped gradually from 51 per cent in 2010 to 42 per cent in 2018, while the combined share of coal and hydropower dramatically rose from 4 per cent to 23 per cent between 2013 and 2018 (Figure 4-2).

¹²¹ EAC. 2019. "Report on Power Sector for the Year 2019."

Figure 4-2

Total primary energy supply from 2010 to 2018 by source, in per cent



The increase in urbanisation - at 4 per cent per annum - and the booming construction sector with the growth of transport, have led to an increase in electricity demand and fuel consumption. Total fuel consumption in 2018 was 4,425 Kilotonne of Oil Equivalent (Ktoe), of which the transport sector accounted for 42 per cent, followed by the residential sector (23 per cent), industry (19 per cent) commerce (14 per cent), agriculture (1.4 per cent) and non-energy purposes/products (0.6 per cent). The government is targeting a reduction in energy consumption but has not yet mentioned the specific sources of energy. Renewable energy has become one of the energy sources to slow down energy consumption. In 2019, renewable energy generated by hydropower, biomass and solar shared 48.5 per cent of the total power generation. Several projects, which were implemented to promote the renewable energy sector, included financial support for solar power home systems, large-scale solar farms, and some pilot projects. However, neither policies nor guidelines are in place to specify what the energy supplies for this sector might be. As indicated in the BUR, by 2019, 12 energy supply-related projects were registered at the Clean Development Mechanism Executive Board (CDM EB) of the UNFCCC. Those are relevant to the use of renewable energy - heat from industrial waste, agricultural and livestock waste to generate power and heat, and hydropower.

¹²² ERIA. 2019. "Cambodia Basic Energy Plan."

From the NPAPEE, Table 4-2 describes the target for a reduction in energy consumption by 2035 for each sector, set at 20 per cent for the three main sectors: buildings, industries and transport. The contribution of the building and transport sectors is expected to reach 7.1 per cent each and the industrial sector 5.8 per cent of the total reduction by 2035 compared with 2014.

Table 4-2 Sectoral objectives in each sector by 2035

Sector	EE Target by Sector	% in TFEC (2014)	Saving Share in TFEC in 2035	Saving Emission MtCO ₂ in 2035
Buildings	25%	29%	7.1%	1.05 MtCO ₂
Industries	25%	23%	5.8%	0.90 MtCO ₂
Transport	15%	48%	7.1%	1.05 MtCO ₂
Total	45%	100%	20.0%	3 MtCO₂

*Note: EE = energy efficiency, TFEC= Total Final Energy Consumption, MtCO₂=Metric Tons of carbon dioxide equivalent

The MME has achieved its target of 74.78 per cent of the total households with access to electricity at the end of 2019, 10 years ahead of the planned policy that set 70 per cent of all households to be electrified by 2030 (EAC 2019). By 2019, the General Population Census Cambodia (GPCC) indicated that 97 per cent of both male and female-headed households in urban areas had access to electricity compared with 77 per cent of families in the rural areas. Twenty per cent of male- and 18 per cent of female-headed households in rural areas rely on batteries as their source of energy for lighting (Figure 4-3). The remaining households that have no access to electricity are located in remote areas, where the government is unable to install transformer devices.

All the villages in the Kingdom of Cambodia have access to electricity of any type by the year 2020... At least 90 per cent of all households in the Kingdom of Cambodia have access to grid quality electricity by 2023^{127 128}.

With little difference between male- and female-headed households, the sources of fuel for households in urban settlements are LPG accounting for 57 per cent for male-headed households and 56 per cent for female-headed households, followed by firewood and charcoal at 39 per cent and 40 per cent for male and female-headed households, respectively. Firewood and charcoal account for the highest per centages as the sources of fuel, accounting for almost the same – 86 per cent for males and 89 per cent for females. Electricity use as the source of fuel in both types of households in rural areas is quite small at about 2 per cent. LPG and others as the source of fuel constitutes 12 per cent and 9 per cent for male-headed and female-headed households, respectively (Figure 4-4).

¹²⁷ MME. 2020."Climate Change Action Plan for Energy Sector 2021 – 2023."

¹²⁸ RGC. 2018."National Strategic Development Plan 2019-2023."

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Figure 4-3

Sources of lighting by the household head (in per cent)

Source: Authors' calculations based on the General Population Census

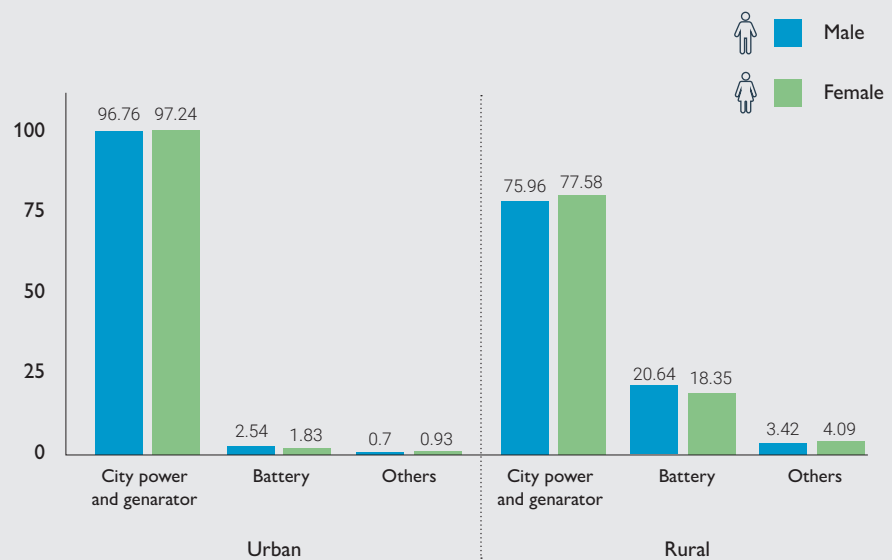
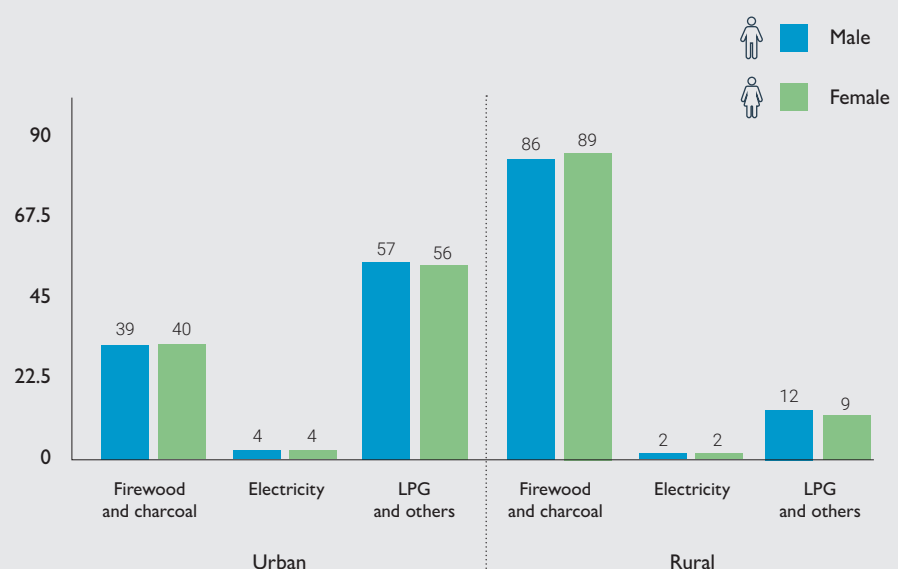


Figure 4-4

Source of fuel in urban and rural areas by the household head (in per cent)

Source: Authors' calculation based on the General Population Census Cambodia 2019





The Rural Electrification by Renewable Energy Policy (2006) and the Rural Electrification Master Plan (2006) aimed to create an enabling framework to increase rural electricity rates through renewable resources. The RGC planned to achieve 100 per cent of rural villages having access to electricity by 2020 and at least 70 per cent of the nation having access to the country's electricity grid by 2030. It has been planned that rural electrification in Cambodia is accomplished by the use of two main components: government-driven grid extension (on-grid) and private/community-driven electrification in the off-grid areas surrounding the on-grid areas.

The target was attained by the end of 2019 when 74.78 per cent of Cambodian households had access to grid quality electricity, and in 2020 only 2.61 per cent of total villages were not electrified for reasons such as difficulty in connecting to the grid given the remote areas with scattered households, road inaccessibility, location on islands, and floating villages. For those villages without electricity connection, the government has supported some sort of energy supply with solar and battery illumination¹²⁹.

However, according to the World Bank's report, only 13 per cent of the electrified households have access to 23 hours electricity supply per day that is considered reliable, good quality, affordable and safe and healthy: 88.2 per cent and 65.6 per cent of households can access four hours and eight hours of electricity supply a day, respectively, due to frequent power instability, and appliance damage resulting from voltage fluctuation¹³⁰. The same report showed that fewer female- than male-headed households had access to on-grid electricity.

¹²⁹ MME. 2020."Climate Change Action Plan for Energy Sector 2021 – 2023."

¹³⁰ Dave, R. et al. 2018."Cambodia beyond Connections: Energy Access Diagnostic Report Based on the Multi-Tier Framework."

4.1.3 Impacts and effects

4.1.3.1 Impacts of climate change on the energy sector

The literature review reveals the impacts of climate change on the energy sector including a forecasted temperature increase leading to increasing electricity demand for residential, commercial and industrial premises¹³¹.

In Cambodia, energy from hydropower is expected to rise dramatically over the next 20 years. However, the hydropower project will have a negative impact on residents, including women, in terms of displacement and ecological risks resulting from clearance for dam reservoirs. Moreover, dam projects can result in increased domestic duties for women and rising domestic violence due to inappropriate resettlement schemes¹³². It will be important, if further hydro development goes ahead, that effective and gender responsive resettlement schemes are in place.

Eight hydropower plants generating a total installed capacity of 1,329 megawatts (MW) have been operational since 2002, and the other three plants with 835 MW capacity are expected to be completed by 2024¹³³. The RGC announced in November 2020 revisions to its Power Development Plan for 2020-2030 to use natural gas with an installed capacity of 3,600 MW between 2027 and 2030. The increased shares of natural gas from 23 per cent in 2030¹³⁴ to 39 per cent in 2050 will discount a contributed rate of coal from 32 per cent to 21 per cent of the total energy generation¹³⁵.

In an interview, the MME official mentioned that any development project, especially relating to hydropower, provides both positive and negative impacts. To minimise the adverse effects, a Cost-Benefit Analysis (CBA) study is conducted before the project approval. There is always compensation as a part of the relocation processes for those who are affected. Moreover, the established inter-ministerial committee and a special team provide ongoing support to the resettlement process. However, a study of two cases - the Kamchay and Lower Sesan 2 hydropower dams - by Sam, Nong and Ky (2016) suggested that both women and local people in general were not meaningfully included in the processes of the social and environmental impact assessment (SEIA) for reasons such as incomprehensible and inadequate information-sharing with local people, gender not being considered in facilitation and consultation processes, the under-representation of women, and women's disempowerment in decision-making¹³⁶. To prepare a full SEIA for Chapter 8 – Economic Analysis and Environmental Value - of the assessment report, the economic and environmental assessment was conducted to provide a basic analysis of the benefits and the value of environmental damage caused by the project with the project owners and decision-makers¹³⁷. However, it was observed that neither gender analysis nor guidelines about how to include the gains and losses to women were integrated within the project development.

¹³¹ MIME. 2013."National Policy, Strategy and Action Plan on Energy Efficiency in Cambodia."

¹³² Hill, C. et al. 2017."Lessons Learnt from Gender Impact Assessments of Hydropower Projects in Laos and Viet Nam."

¹³³ MME. 2019."Workshop on SDG7 Implementation in Asia and Pacific: National Expert SDG Tool for Energy Planning (NEXSTEP) and the Asian Pacific Energy Resources Modeling Platform."

¹³⁴ Cambodia Construction Association. 2020."Cambodia's Latest Energy Plan to Bring in More National Gas Power Plants - Construction & Property News."

¹³⁵ Cambodia Construction Association. 2020."Cambodia's Latest Energy Plan to Bring in More National Gas Power Plants - Construction & Property News."

¹³⁶ Ibid.

¹³⁷ MoE. 2009."Declaration on General Guidelines for Development Initial and Full Environmental Impact Assessment Reports."

The energy policy document notes the negative impacts on rural household health from the use of primary cooking fuel, mainly burning fuelwood, which produces toxic smoke, contributing to asthma and acute respiratory infections. However, specific impacts on women and girls were excluded from the document¹³⁸. The policy document also highlights the major issues of generating non-hydro renewable energy – biomass, wind and solar– which are of most help to women and girls in reaching optimal utilisation. The main barriers are the higher up-front costs and no clear target for renewable energy in the energy mix¹³⁹. Cambodia has not set a target for renewable energy use and this results in no specific guidance for the private sector to invest in the project and no contribution to the security of the national energy supply. At the same time, realising the scale-up of renewable energy initiatives significantly contributes to national sustainable energy security, environmental benefits, and climate change mitigation actions, key government institutes, such as the MME, the MoE, the MEF and the EAC, work together to develop regulations and incentives for renewable energy¹⁴⁰.

4.1.3.2 Gendered impacts of climate change on the energy sector

Analysis of the gender-specific impacts of climate change in the energy policy documents is scant, although many scholars conclude that gendered impacts are significant in terms of access to electricity for female-headed households, the different use of energy for living and generating incomes, and time requirements for collecting firewood^{141 142}. According to a study by UN Women (cited in UN Environment 2020)¹⁴³, women in the Asia Pacific region spend up to three hours collecting fuel for household energy use each day.

Saing (2018) found that rural electrification increased the welfare of households and improved children's education. However, the study suggested that more boys than girls seemed to benefit from such a program in terms of years of schooling and enrolment rate¹⁴⁴. Chhay and Yamazaki (2020)¹⁴⁵ investigated the effects of rural electrification on changes in employment. The study emphasised that such a program increased self-employment for both men and women by enabling them to move from agricultural jobs in rural areas.

Given the awareness about impacts, it is unknown whether or not the government will integrate gender aspects into energy transition efforts to align climate change mitigation and green growth policies¹⁴⁶.

There is no official document describing the statistics of employment in energy-related sectors. There is, thus, no reference to gender-aggregated data in the sector. According to the GPCC 2019, the distribution of employed persons aged five and over in the electricity, gas, steam and air-con supply industry is 17,388 (0.2per cent). Males accounted for 75.7 per cent of these workers, compared with 24.3 per cent who were females¹⁴⁷.

¹³⁸ ERIA. 2019."Cambodia Basic Energy Plan."pp.56.

¹³⁹ ERIA. 2019, pp.57.

¹⁴⁰ Ibid. pp.56.

¹⁴¹ Dave, R. et al. 2018."Cambodia beyond Connections: Energy Access Diagnostic Report Based on the Multi-Tier Framework."

¹⁴² GCCA-UNDP. 2013."Gender and Energy. Gender and Climate Change. Asia and the Pacific."

¹⁴³ UN Environment. 2020."Gender Integration in Renewable Energy Policy: A Guideline for Renewable Energy Policy and Decision Makers."

¹⁴⁴ Saing, C.H. 2018."Rural Electrification in Cambodia: Does It Improve the Welfare of Households?"

¹⁴⁵ Chhay, P. and K. Yamazaki. 2021."Rural Electrification and Changes in Employment Structure in Cambodia."

¹⁴⁶ Resurrección, B. and M. Boyland. 2017."Gender Equality in Renewable Energy in the Lower Mekong: Assessment and Opportunities."

¹⁴⁷ NIS. 2020."General Population Census Cambodia 2019."68.

Increasing disasters pose a major problem for health because of the lower intake of food and water, which can lead to an increased incidence of poverty in terms of malnutrition. Higher temperatures cause outbreaks of epidemic diseases, plant or animal infections and insect invasions. Using firewood generates household air pollution causing health, social and environmental problems. Respiratory and eye diseases for users are common health-related issues¹⁴⁸ as well as lung problems¹⁴⁹ while access to clean energy cooking stoves and electricity improve the quality of health and support safety¹⁵⁰. This implies that women and girls, whose primary job is to cook for a family, are more prone to health problems due to their exposure to pollutants and emissions, and inadequate ventilation structures. The ADB has suggested that the practice of gender mainstreaming in energy policy and programs could be focused on cleaner fuel and efficient technologies for cooking, an improvement in cooking stoves, biogas digester programs, the promotion of LPG for cooking, renewable energy entrepreneurs' schemes, and the expansion of electricity connection¹⁵¹.

Renewable energy jobs are to be found in the manufacturing, construction and engineering sectors, where women are less represented and are dominated by males. In this sector, women serve as small-scale energy users. For instance, in Cambodian businesses owned by women and focusing on agriculture, energy use is relatively low. Dave et al. (2018) and the GCCA-UNDP (2013) found fewer female-headed households had access to electricity, and women often faced energy insecurity. This, therefore, limited the access of girls to further education, and women to expanded employment opportunities.

Currently, men lead in energy decision-making in the process of the generation, transmission and distribution of energy. The experience of some SEA countries indicates that, although more women are employed in the energy sector, men are still dominant in higher positions, including in leading roles within the public sector. Furthermore, although environmental policies have addressed gender concerns in renewable energy in the Lower Mekong Region countries, males and females remained separate and siloed. Most women are employed in the administration, finance, human resource and operation support sections while men work in higher positions. It is notable that many women run renewable energy businesses but most are from rich family backgrounds, while those in low-income households are unlikely to expand their enterprises and gain access to credit or loans. Gender norms keep those women performing dual productive work and domestic obligations¹⁵².

Han, Kimura and Sandu (2020) strongly suggest that affordable access to electricity has a positive impact on welfare and the environment. However, access to, and gain from electricity is gender imbalanced among rural households in Cambodia. As indicated in Chhay and Yamazaki (2020), women are more likely to have limited access to electricity than men. The study further argues that, although rural electrification has increased non-agricultural employment, more men than women tend to be involved in non-agricultural wage employment. In contrast, the incidence of women in non-agricultural unpaid jobs is higher than it is for men.

¹⁴⁸ Mika, K. et al. 2021. "Situation Analysis of Energy Use and Consumption in Cambodia: Household Access to Energy."

¹⁴⁹ Han, P. et al. 2020. "Household-Level Analysis of the Impacts of Electricity Consumption on Welfare and the Environment in Cambodia: Empirical Evidence and Policy Implications."

¹⁵⁰ Dave, R. et al. 2018. "Cambodia beyond Connections: Energy Access Diagnostic Report Based on the Multi-Tier Framework."

¹⁵¹ ADB. 2012. "Country Gender Analysis."

¹⁵² Mortensen, S. and M. Boyland. 2019. "Integrating Gender in Transitions to Renewable Energy in the Lower Mekong Region."

4.1.4 Responses

4.1.4.1 The policy responses to climate change in the energy sector

There are few policy documents that mention gender equality in the energy sector. Similarly, the gendered impact of climate change in the energy sector receives scant attention. The documents mostly focus on national policy responses in achieving the national targets of energy supply, leaving gender responses behind. For example, the key indicators of the energy sector proposed by the NSDP 2019-2023 document, relate to: the number of villages having an energy supply; energy consumption per person per year; how many houses have energy supply; renewable energy sources; the length of the national transmission line; and so on¹⁵³.

The RGC has identified that the rural poor in Cambodia, the majority of whom are women, are most vulnerable to the impacts of climate change because of their high dependence on agriculture and natural resources. There is a need to mainstream gender into climate change response measures. The government's efforts towards this end include existing policies and laws and the Sectoral Climate Change Strategic Plans (SCCSPs), to ensure that this cross-cutting issue is supported by all government agencies especially at national and sub-national levels, as well as development partners, NGOs, CSOs, research institutes and academia, and the private sector¹⁵⁴.

The Rural Electrification Policy aims to achieve equal access to electricity in rural areas with affordable prices as a measure towards poverty alleviation, and encourages the private sector to invest in renewable energy, such as the generation of home-based solar power, and small and medium-sized power generation with new technology. Through the National Energy Efficiency Policy 2018-2030 – energy and climate change – the MME works together with the NCCC to carry out many projects in the field of energy efficiency and renewable energies with the objective of reducing GHG emissions. However, there is no gender reference in the policy.

4.1.4.2 The policy response to gender equality and climate change in the energy sector

This report claims that strategy and action plans in the energy sector can be assessed as "gender aware". For example, strategic plans – the Climate Change Strategic Plan for Mines, Industry and Energy 2014-2023; the Climate Change Action Plan (CCAP) for the Mines and Energy Sector 2015-2018; the Climate Change Action Plan for the Energy Sector 2021-2023; and the National Green Growth Strategic Plan and Cambodia Sustainable Energy for All Readiness Plan – all mention gender among their respective objectives. The strategic objective 2 of the CCAP for Mines and Energy Sector 2015-2018 is to reduce vulnerability and the risks of climate change impacts on sectoral, regional, gender and health by promoting the energy infrastructures to be climate-proof or climate-resilient. It also specifies that a climate risk analysis should be conducted for the existing electricity infrastructure, and that recommendations should be provided¹⁵⁵. However, gender mainstreaming is one of the core challenges embedded in the multi-stakeholder implementation along with the lack of budgeting and implementation planning, legal and procedure documents, and collaboration and coordination¹⁵⁶.

¹⁵³ RGC. 2018."National Strategic Development Plan 2019-2023."

¹⁵⁴ NCSD-MOE. 2013."Cambodia Climate Change Strategic Plan 2014-2023."pp.12.

¹⁵⁵ MME. 2015."Climate Change Action Plan Mines and Energy Sector 2015-2018."pp.5.

¹⁵⁶ MIME. 2013."Climate Change Strategic Plan for Manufacturing Industry and Energy 2013-2018."

The Climate Change Action Plan in the Energy Sector 2021-2023 claims to reduce GHG emissions through low carbon technologies with three strategic objectives¹⁵⁷. This commitment follows the EU and UNDP low emission capacity building program. One of the eight national strategies on climate change responses outlines an activity *“to reduce the vulnerability of women and risks to human health impacted by climate change by region and sector”*¹⁵⁸.

Climate Change Action Plans In The Energy Sector recognise the adverse impacts of climate change on vulnerable groups, especially women and girls, since they play important roles in food security, nutrition, energy, livelihoods, health, and natural resource management which are directly affected by climate change. Access to clean energy for cooking activities and other uses has a strong connection to gender-based social inclusion. Gender is addressed in the strategic objectives and cross-cutting issues sections but there is neither detailed action plans and programs for gender mainstreaming, nor specific budget allocation to carry out this commitment. The action plans mention the significant contribution renewable energy and energy efficiency make to the future decarbonised emissions. However, there is no gendered analytical section detailing whether or not women will benefit from those provisions. Thus, there should be gender promotion or gender indicators in these policy documents.

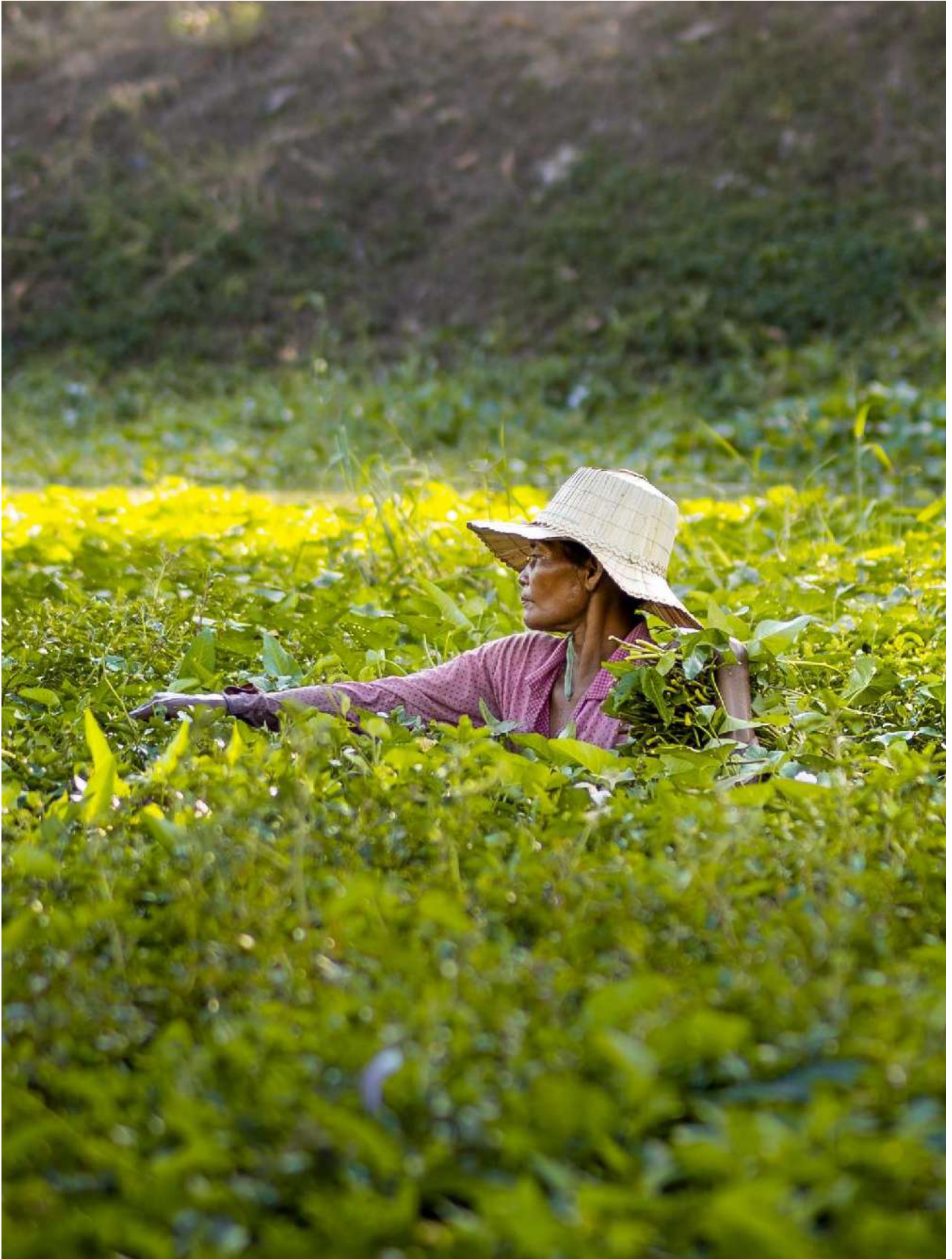
During the consultation meeting officials stressed that the MME has mainstreamed gender into the sector of extractive industries. The policy document covers the years 2021-2025. However, the process was disrupted due to the Covid-19 pandemic. In energy, the gender aspect has not received much of a mention. The same officials added that one of the achievements related to gender is that the ministry has succeeded in increasing the proportion of female officers¹⁵⁹. There are also other projects from local partners such as NGOs and private companies. Some examples include the KrisEnergy project and the Women Entrepreneurship Program at Prey Nub, along with a Korean company project on solar energy. The officials mentioned that the ministry had done much work to promote people's access to electricity and the use of renewable energy. However, the main challenge is whether or not men and women can benefit, equally, from using electricity, or whether there are differences in the challenges and benefits between men and women, and other gender-related issues. It is still doubtful whether the set strategy can be achieved since there is no guidance manual for policymakers and practitioners for mainstreaming gender into climate change action.

Strategic plans to address gender are not in place in the energy sector and, thus, there is neither a specific action plan nor a budget allocation for gender mainstreaming action. Although a gender working group exists at the ministry level, the core activities of gender response are not sufficient enough for the energy development sector. The SEI (2018) found that, despite good policy relating to gender mainstreaming in the energy sector of the Lower Mekong Region countries, gender dimensions or responsive approaches in the main policy documents produced in respect of Cambodia's energy sector remain comprehensively limited¹⁶⁰. The study proposed some action points to promote the energy sector including: a focus on gender equal opportunities in the energy workforce; exploring the community energy model and strengthening women's collective power; supporting women in the production of renewable energy; and creating gender-responsive renewable energy policies.

¹⁵⁷ The three strategic objectives are: i) Preparing new policies for development; ii) The model of highly efficient usage; and iii) Mobilising sustainable resources.

¹⁵⁸ MME. 2020. "Climate Change Action Plan for Energy Sector 2021 – 2023." pp.24.

¹⁵⁹ The annual meeting is organised by the National Council for Gender Committee (NCGC) and chaired by the prime minister. All ministries regularly submit details about their progress in gender mainstreaming.



4.2 Agriculture

4.2.1 The current state of gender integration in agriculture

Agriculture makes a significant contribution to Cambodia's economic growth and development and accounted for an average of 31.8 per cent of GDP from 2000 to 2019¹⁶¹. However, the sector is susceptible to the impact of climate change and this leads to income inequality among rural households, and gender disparity in the farming labour force.

Agricultural policy and strategy have recognised the crucial role of women in environmental stability and production processes in agriculture, forestry and fisheries. In 2006, gender was initially mainstreamed in agriculture policy and strategy. The policy and strategy fully integrated gender response through action plans and implementation processes, with comprehensive guidance relating to budget allocation¹⁶². Gender work has substantially developed from that point to better respond to gender integration and effectively implement gender issues in agriculture within a specific timeframe. As an example, these are addressed in the Gender Mainstreaming Policy and Strategic Framework in Agriculture 2016–2020, and separately by sub-sector, namely, the Action Plan for Gender Equality Promotion and Child Labour Elimination in the Fisheries Sector from 2016 to 2020. Gender mainstreaming and measures to achieve equality appear in their objectives and strategies, action plans, implementation, sources of funding support, and monitoring and evaluation.

To operationalise gender integration in the sector, MAFF approved the Gender Mainstreaming Policy and Strategy in Agriculture 2016–2020 aiming to effectively implement and achieve gender equality and women's empowerment in the Agriculture Strategic Development Plan. The document highlights in its text “the significant contribution of Cambodian women to agricultural labour, production, harvest, processing and marketing, and climate change is a cross-cutting issue that affects agriculture, livestock, fisheries and forestry practices”¹⁶³.

Since climate change appeared in government policy, both gender mainstreaming policy documents included gender considerations in their cross-cutting issues and showed awareness of the different impacts of climate change on men and women¹⁶⁴.

The Climate Change Strategic Plan for Agriculture, Agri-industry, Animal Production, Fisheries and Forestry 2013-2018, and the Climate Change Priorities Action Plan 2014-2018 were approved by MAFF in 2013 and 2014, respectively, to contribute to the CCCSP 2014-2023. The strategy and action plan are explicitly gender-responsive in policy, strategies, key activities, management and financial management, and monitoring and evaluation frameworks. They also recognise the gendered impacts of climate change and propose to promote an understanding of the impacts of climate change and the need for disaster risk reduction among males and females^{165 166}.

The Agricultural Sector Master Plan 2030 included gender concerns by focusing on

¹⁶¹ ADB. 2020.“Key Indicators Database.”

¹⁶² MAFF. 2006.“Gender Mainstreaming Policy and Strategy in Agriculture.”

¹⁶³ ADB. 2020.“Key Indicators Database.”

¹⁶⁴ MAFF. 2013.“Climate Change Strategic Plan for Agriculture Agri-Industry Animal Production Fisheries and Forestry 2013-2018.”

¹⁶⁵ Ibid.

¹⁶⁶ MAFF. 2014.“Climate Change Priorities Action Plan for Agriculture, Forestry and Fisheries Sector 2014-2018.”

gender roles in all provincial and municipal departments and the relevance of gender in all aspects of work. Moreover, the master plan recognises the impact of climate change on agricultural production, human health, animals, fish production and system ecologies¹⁶⁷. The Agriculture Strategic Development Plan 2019-2023 emphasises gender roles in strategic development, raising awareness about gender, strengthening women's networks in agriculture, increasing the influence, capability and number of qualified women in leadership roles, and improving accessibility and resource management and extension services for rural women¹⁶⁸. Other policy documents - gender mainstreaming, climate change strategic plans and action plans - also take gender concerns into account (Table 4-1).

The Agriculture Strategic Development Plan 2019-2023 calls for gender mainstreaming to be integrated within strategic development through: i) Updating the policy and strategic plans of the agriculture sector; ii) Raising awareness about gender among MAFF officials at both national and sub-national levels; iii) Strengthening women's networks in agriculture; iv) Increasing the influence, capability and number of qualified women in leadership roles at both national and sub-national levels and; v) Improving the accessibility of training in resource management and extension services, including increasing the efficiency of rural women so that they can better contribute to improved family livelihoods and national economic development¹⁶⁹.

Given that gender is an important consideration in the development and the process of the NDC update, MAFF has set targets for 2030 relating to women's participation, ranging from 15 per cent to 70 per cent at all levels¹⁷⁰. As stated in the prioritised strategy of the Climate Change Action Plan for Agriculture, Forestry and Fisheries, the importance of women's participation in climate change adaptation and mitigation is widely recognised¹⁷¹. However, there are no specific key activities, management and financial management processes, or monitoring and evaluation frameworks in the policy to realise this.

¹⁶⁷ MAFF. 2020. "The Agricultural Sector Master Plan 2030."

¹⁶⁸ MAFF. 2019. "Agriculture Strategic Development Plan 2019-2023."

¹⁶⁹ Ibid. pp.59.

¹⁷⁰ GSSD-MoE. 2020. "Cambodia's Updated Nationally Determined Contribution."

¹⁷¹ MAFF. 2013. "Climate Change Strategic Plan for Agriculture Agri-Industry Animal Production Fisheries and Forestry 2013-2018."

Table 4-3 List of key policy documents on gender and climate change in agriculture

Year	Name of document	Governing bodies	Implementing duration	Level of gender mainstreaming
				• No gender references • Gender aware • Gender responsive
2006	Gender Mainstreaming Policy and Strategy in Agriculture	Ministry of Agriculture, Forestry and Fisheries	2006	Gender responsive The policy clearly states gender mainstreaming in the policy, strategic plan, and implementation process with the guidance relating to budget allocation.
2013	Climate Change Strategic Plan for Agriculture, Agri-industry, Animal Production, Fisheries and Forestry	Ministry of Agriculture, Forestry and Fisheries	2013-2018	Gender aware The strategy addresses gender-responsiveness in the policy, strategies, key activities, management and financial management, and monitoring and evaluation framework.
2014	Climate Change Priorities Action Plan in the Agriculture, Forestry and Fisheries Sector	Technical Working Group for Policy and Strategy to Respond to Climate Change, Ministry of Agriculture, Forestry and Fisheries	2014-2018	Gender aware To support the strategic plan 2014-2023, the action plan highlights gender responsiveness in the policy, strategies, key activities, management and financial management, and monitoring and evaluation framework.
2015	Action Plan for the Promotion of Gender Equality and the Elimination of Child Labour in the Fisheries Sector	Ministry of Agriculture, Forestry and Fisheries	2016-2020	Gender responsive The document covers gender in objectives and strategies, action plans, implementation, funding support and monitoring and evaluation.
2015	Gender Mainstreaming Policy and Strategic Framework in Agriculture	Ministry of Agriculture, Forestry and Fisheries	2016-2020	Gender responsive The document provides key strategic objectives and implementation plans along with gender assessment and strong gender references in its overall goals.
2019	Agriculture Strategic Development Plan (ASDP)	Ministry of Agriculture, Forestry and Fisheries	2019-2023	Gender responsive The document addresses gender in the strategic framework and mainstreaming within the agriculture sector in line with the five proposed priority strategies and secure funding support.
2020	The Agricultural Sector Master Plan 2030	Ministry of Agriculture, Forestry and Fisheries	2030	Gender aware The gender aspect is integrated into sub-strategic action 2 by establishing a gender work system towards increasing awareness about gender and ensuring the recognition of gender at all levels.

4.2.2 Drivers and pressures

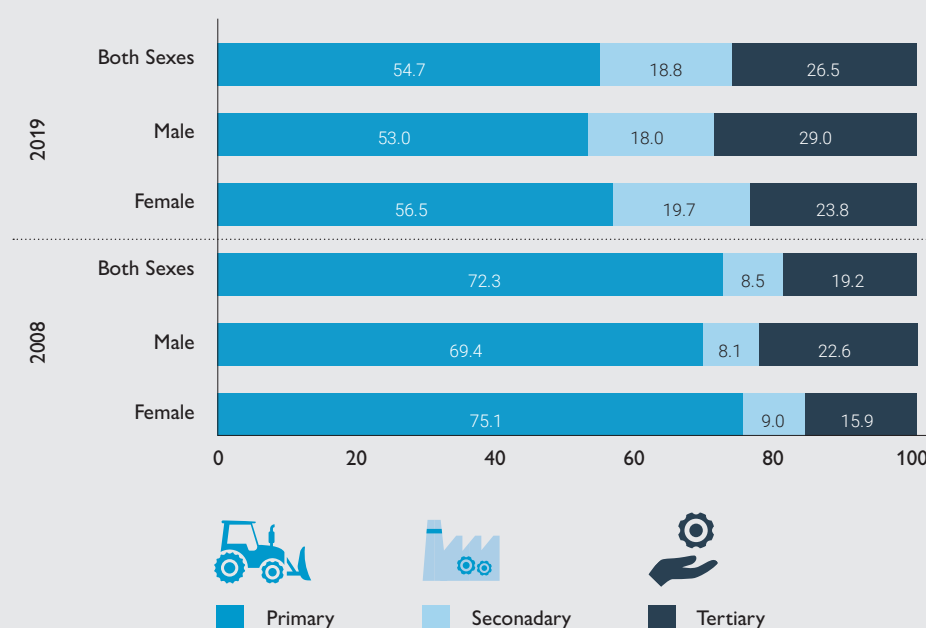
The driving forces of climate change in agriculture consist of the shift in the labour force, disaster-induced migration, agricultural land-use change and the frequent occurrence of disasters and climate events.

Agriculture still plays a crucial role in Cambodia's economy and contributed, on average, 29.7 per cent from 2010 to 2019 (despite a slight drop from 33.8 per cent over the last two decades) to the total GDP. It also absorbs more than 4.5 million workers within its labour force each year¹⁷². In 2017, there were approximately 3,438,000 households in Cambodia, of whom 50 per cent were involved in agriculture production, 88 per cent in cropping activities, 75 per cent in raising livestock and 7 per cent in fishing jobs¹⁷³. The GPCC 2019 shows that, in total, 4,224,172 women aged 5 and over were considered as the employed population, of whom 2,386,657 (56.5 per cent) were in the agriculture, forestry and fishing sectors, while 19.7 per cent were in mining, manufacturing, electricity and construction, and 23.8 per cent in providing services (Figure 4-5).

Women are also better represented in the active agriculture population at 53 per cent,

Figure 4-5

Employed population aged 5 and over, by sex from 2008 and 2019, in per cent



50.3 per cent, 51.4 per cent and 52.2 per cent which is higher than men at 47.0 per cent, 49.7 per cent, 48.6 per cent and 47.8 per cent in 2008, 2011, 2014 and 2019, respectively (Table 4-2). Unpaid family work, which involves 68.4 per cent of rural women, is greatly higher than it is for rural men (28.4 per cent) although these figures are less distinct in urban areas¹⁷⁵.

Table 4-4 Active agriculture population in Cambodia, by sex and by zone, in 2008, 2011, 2014 and 2109/2020 (in per cent)

Zone	2008		2011		2014		2019/20	
	Women	Men	Women	Men	Women	Men	Women	Men
Cambodia	53.0	47.0	50.3	49.7	51.4	48.6	52.2	47.8
Plain	53.6	46.4	50.6	49.4	51.6	48.4	53.2	46.8
Tonle Sap	52.2	47.8	50.7	49.3	51.8	48.2	52.7	47.3
Coast	55.0	45.0	43.2	46.8	51.4	48.6	51.5	48.5
Plateau/Mountain	51.9	48.1	47.5	52.5	50.2	49.8	50.8	49.2

The general population report 2019 shows that more women (35.7 per cent) than men (32.4 per cent) migrate from rural to urban areas. Almost half of the migrants were between 20 and 39 years of age - both males and females - and 90 per cent were aged 15-64. As indicated in the 2019 Census, most people migrated during their prime working age.

Rural-urban migration is larger than urban-urban migration (30.8 per cent), rural-rural (27.1 per cent) or urban-rural (6.3 per cent) migration. The reasons for migration among women include: moving with their families (44.9 per cent); search for employment (19.4 per cent); marriage (14.9 per cent); transfer of workplace (9.1 per cent); education (2.3 per cent); and other reasons such as lost land/home, natural disasters, being orphaned and insecurity. Women migrants to urban areas most often seek employment in the wholesale and retail trade, repair shops for motor vehicles and motorcycles (28.1 per cent) and manufacturing sector (26.9 per cent), while only 2.4 per cent of them left their hometown for educational purposes.

However, in-depth analysis of the root causes of migration and its gendered impacts remains unclear. The gender analysis assessment report of the ADB in 2018 shows that falling into debt is one of the major causes behind the migration of both male and female remote villagers who seek jobs in the urban areas. The reasons behind the bad debts may have strong links to unproductive crops destroyed by disasters or related events. The report adds that the huge extent of migration mobilisation has placed more burdens on older mothers or grandmothers to look after children and grandchildren and to take care of both unproductive and productive work¹⁷⁶. It is hard to conclude to what extent climate change has had a direct impact on migration given that, for this report, climate perception and migration need to be measured only in the context of Cambodia. Goh (2012) indicated that migration was one of the climate-induced impacts in developing countries¹⁷⁸. Parsons and Nielsen (2020) found a strong relationship between climate change perception and the prevalence of migrants from remote households in nine villages located in the Tonle Sap plain and the flood and drought prone areas of the Mekong plain¹⁷⁹. Similarly, Nong (2021) found locals in Battambang province usually migrated to work in other cities and across the Cambodia-Thai border during the occurrence of extreme drought and flood events¹⁸⁰.

¹⁷⁶ FAO. 2010. "National Gender Profile of Agriculture Households 2010."

¹⁷⁷ Green Climate Fund. 2018. "Gender Assessment Report for Proposed Loan and Administration of Loan and Grant."

¹⁷⁸ Goh, A.H.X. 2012. "A Literature Review of the Gender-Differentiated Impacts of Climate Change on Women's and Men's Assets and Well-Being in Development Countries."

¹⁷⁹ Parsons, L. and J.Ø. Nielsen. 2020. "The Subjective Climate Migrant: Climate Perceptions, Their Determinants, and Relationship to Migration in Cambodia."

¹⁸⁰ Nong, M. 2021. "The Impacts of Climate Change on Agriculture and Water Resources in Cambodia: From Local Communities' Perspectives."

Table 4-5 Agricultural lands owned by households, by sex of household head and zone, in 2019 (in thousands of hectares and per cent)

Zone	Women		Men		Both sexes
	Ha	%	Ha	%	Ha
Cambodia	448.0	11.7	3,371.0	88.3	3,819.0
Phnom Penh	5.0	17.2	24.0	82.8	29.0
Plain	170.0	14.8	982.0	85.2	1,152.0
Tonle Sap	185.0	12.1	1,343.0	87.9	1,528.0
Coast	19.0	11.0	153.0	89.0	172.0
Plateau/Mountain	69.0	7.4	869.0	92.6	938.0

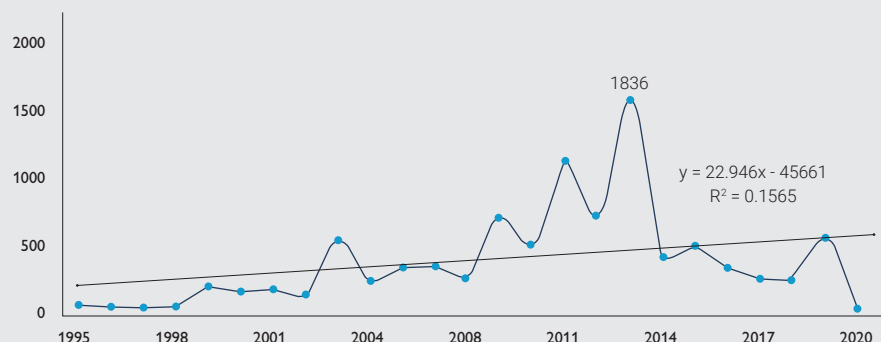
Agriculture is highly vulnerable to drought and other climate hazards such as floods and windstorms, but the adaptive capacity of the local farmers is relatively low due to poverty, poor infrastructure, the weak support from social safety nets, and low understanding of the causes of climate change and its effects¹⁸¹. Based on the NCDM's analysis, the disaster rate has increased gradually from 1995 to 2019, including a notable spike in the number of disasters in 2013 reaching 1,836 cases that year (Figure 4-6).

Local women coping with climate risks mainly focus on their level of reliance on autonomous strategies (traditional ad hoc i.e., unplanned adaptation actions) rather than on planned adaptation¹⁸². Local farmers in the northern mountainous region often undertake paid jobs, selling their labour, and collect wood and grass flowers for sale to recover their earnings as a result of the impact of weather hazards. Moreover, access to weather and climatic information among local communities remains low, and a few have talked about, and shared, the issues or impacts of climate change¹⁸³.

Figure 4-6

Records of disasters during 1995-2019, number of cases per year

Source: Authors' calculations based on NCDM (2020) data



¹⁸¹ Nong, M. 2021. "The Impacts of Climate Change on Agriculture and Water Resources in Cambodia: From Local Communities' Perspectives."

¹⁸² Nong, M. et al. 2018. "Women's Adaptive Capacity in Climate in Cambodia's Four Agroecological Zones."

¹⁸³ Nong, M. 2021. "The Impacts of Climate Change on Agriculture and Water Resources in Cambodia: From Local Communities' Perspectives."

4.2.3 Impacts and effects

4.2.3.1 Climate-related impact on crops and agricultural productivity

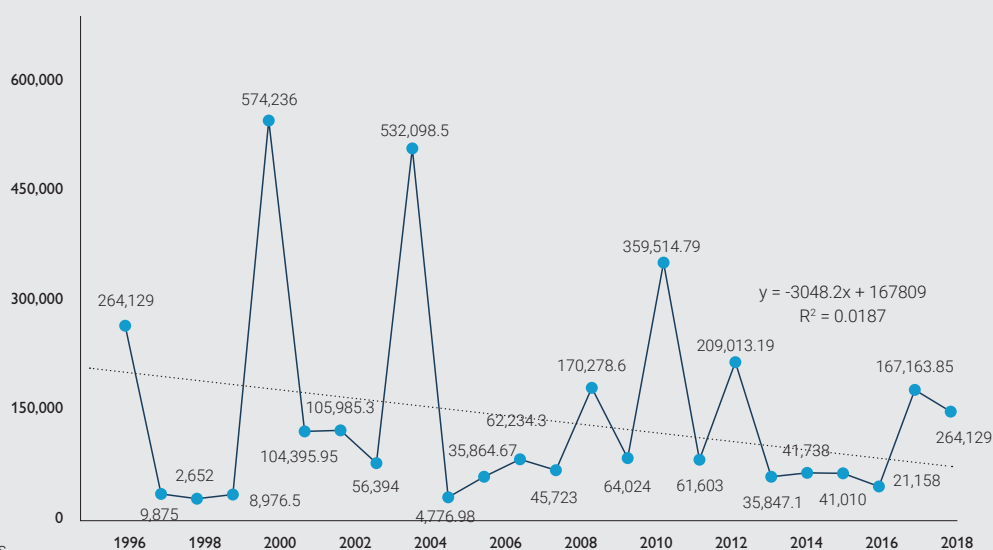
The agriculture sector comprises five sub-sectors, namely agro-industry and crop production, rubber, livestock, forestry, and fisheries. Considered to be the most vulnerable sector, agriculture is adversely affected by flood and drought-induced climate variability (MAFF 2013).

Addressed in the sectoral CCAP 2014-2018, the impacts of climate change on agriculture include an increase in pests and diseases, fertilisation leading to increased CO₂, increased water demand, increased incidence of extreme events, sea-level rise and saline water intrusion, change in rainfall patterns and increases in flood and drought (MAFF 2013; 2014).

The agriculture sector is sensitive to climate change because of the large number of rain-fed crops¹⁸⁴: only 20 per cent of farmland (both dry and wet season rice) is fully irrigated and up to 87 per cent of rainy season rice is rain-fed¹⁸⁵. The country is exposed to climate variabilities such as more frequent flooding, irregular rainfall, extreme drought, windstorms and sea-level rise (MAFF 2014). The NCDM data analysis shows that disasters destroyed planted crops covering more than 3 million hectares between 1996 and 2019, equivalent to almost an average of 130 thousand hectares damaged annually (Figure 4-7).

Figure 4-7

Crop damage
from 1996-2020
(in hectares)



¹⁸⁴ MAFF. 2013. "Climate Change Strategic Plan for Agriculture Agri-Industry Animal Production Fisheries and Forestry 2013-2018."

¹⁸⁵ Authors' calculation based on the Commune Database 2017

The impacts of climate change on agriculture include an increase in pests and diseases, the effects of fertilisation in terms of higher levels of CO₂ (a greenhouse gas), greater demand for water, an upsurge in the incidence of extreme events, sea-level rise and saline water intrusion, changes in rainfall patterns, and more floods and droughts¹⁸⁶. The rising temperatures can reduce productivity in agriculture, fisheries and forests and the incomes from the sector could decrease by up to 17 per cent. With a 1°C increase in temperature, the loss of the annual crop would be 10 per cent per year because the heat will cause water to evaporate more quickly leading to a higher demand in agricultural water consumption. The higher temperatures cause low crop productivity which reduces family income. Although the traditional rice varieties tend to be more resilient to weather variability, it is notable that low yields are very low and harvesting is time-consuming. Sea-level rise causes salt-water intrusion into farmland along the coastal zones that heavily affects dry season rice. Recent participatory research by UN Women and BBC Media Action (2020) shows that the rice fields of the local community in Kampot were at high risk of saltwater intrusion gradually affecting soil fertility and decreasing the rice yield¹⁸⁷.

The agricultural output rate declined slightly to -3.4 per cent from -0.9 per cent over the last decade. The drop may result from climate variability as extreme changes vary from one year to another; for instance, in 2000, 2002 and 2004 Cambodia was confronted with disasters such as floods, drought, windstorms and insect outbreaks¹⁸⁸. In 2020, 284,961 ha of rainy season rice were destroyed by floods and rainstorms throughout the entire country¹⁸⁹.

4.2.3.2 The gendered impacts of climate change on agriculture

An intensive literature review by Goh (2012) indicated that climate change in developing countries affected men and women differently in terms of assets and well-being. Agricultural production was one of the six areas – food security, health, water and energy resources, climate-induced migration and conflict, and climate-related natural disasters – significantly affected by climate change.

Increased climate variability lowers agricultural production, with different impacts on women's and men's natural, physical, social, and financial capital¹⁹⁰.

Climate modelling predicts that, in Cambodia, temperatures will continue to rise in the future (by between 1.35°C and 2.5°C by 2100) and, in addition to the increased frequency of severe floods experienced over the last decade, by 2050 rainfall patterns will become even more unpredictable¹⁹¹. We can infer, therefore, that this will become more harmful to all farmers, including women.

¹⁸⁶ MAFF. 2013. "Climate Change Strategic Plan for Agriculture Agri-Industry Animal Production Fisheries and Forestry 2013-2018."

¹⁸⁷ BBC Media Action. 2020. "Participatory Research on Gender-Based Vulnerability to Climate Change in Cambodia."

¹⁸⁸ MOE et al. 2021. "Second Forest Reference Level for Cambodia under the UNFCCC Framework."

¹⁸⁹ NCDM. 2020. "Data on Impact and Damage by Floods 2020."

¹⁹⁰ Goh, A.H.X. 2012. "A Literature Review of the Gender-Differentiated Impacts of Climate Change on Women's and Men's Assets and Well-Being in Development Countries." 5.

¹⁹¹ Watt, B. et al. 2012. "The State of Climate Change in Cambodia."

Drought has occurred more frequently in last decade and has become a sensitive issue for agricultural production. In 2012, 7.45 per cent of the rice cultivation was affected and this increased to 11.46 per cent in 2015. As a result, about 2.5 million people were reported to have suffered a food shortfall¹⁹². It is known that women represent more than half of the total population and thus the impacts of droughts, floods and weather variations affect women disproportionately in terms of livelihood threats and increased family care burdens¹⁹³.

The study by the NGO Forum on Cambodia in 2012 found that the livelihoods of local farmers were adversely affected by climate change due to the damage caused to rice production. This was harmful for people's lives and also resulted in losses of cattle and horses, as well as damaging farming ecosystems and reducing socio-economic opportunities. The study further maintained that climate change affected women differently because of their social roles and status in being responsible for both productive and domestic work¹⁹⁴.

Climate change affects precipitation patterns in Cambodia with less rainfall in the wet season and more rain in the dry season as well as unpredicted droughts and an increasing number of extreme weather events¹⁹⁵. A study by UN Women and BBC Media Action in 2020 noted that both female and male farmers in Pursat province experienced extreme weather, such as drought, high temperatures, storms and water shortage, which affected their living. Drought was the major climate hazard, which local farmers rated as posing a high risk of water shortage¹⁹⁶. Furthermore, both male and female farmers in local communities in eight studied communes in Battambang, Preah Vihear and Prey Veng provinces were at high risk during the 2018 and 2019 droughts resulting in a lack of water for both farming and household consumption¹⁹⁷.

Despite that, there has been no extensive analysis of the gendered impacts of climate change on agriculture. It is notable the women constitute a huge labour force in both the agriculture and manufacturing sectors but struggle with a large income disparity as described in the profile section of the report¹⁹⁸. The overall gendered impacts of climate change on local farmers include the gap between men and women in the adoption of new technologies in agriculture: a decline in rice yields due to the impacts of flooding, droughts and insect outbreaks and losses of investment in agriculture are faced by female-headed households. It is believed that women are limited in their ability to access financial resources, information, and economic opportunities to mediate these losses.

¹⁹² Catitas Cambodia. 2016."Cambodia: Drought Emergency Appeal 2016."

¹⁹³ MAFF. 2013."Climate Change Strategic Plan for Agriculture Agri-Industry Animal Production Fisheries and Forestry 2013-2018."

¹⁹⁴ Chou, P. and M. Neang. 2012."The Impact of Climate Change on Rice Production in Cambodia."

¹⁹⁵ MOWRAM. 2012."Climate Change Strategic Plan for Water Resources and Meteorology 2013-2017."

¹⁹⁶ BBC Media Action. 2020."Participatory Research on Gender-Based Vulnerability to Climate Change in Cambodia."

¹⁹⁷ Nong, M. 2021."The Impacts of Climate Change on Agriculture and Water Resources in Cambodia: From Local Communities' Perspectives."

¹⁹⁸ MEF and GSSD. 2018."Addressing Climate Change Impacts on Economic Growth in Cambodia."



4.2.4 Responses

4.2.4.1 The policy response to climate change in agriculture

MAFF takes part in climate change adaptation actions by providing better quality services to strengthen adaptive capacity in the areas of agricultural development and natural resource management, forestry, biodiversity and fisheries.

The RGC implemented the Strategic Plan for Agriculture 2009-2014, which was aligned with the National Strategic Development Plan 2009-2013 by focusing on continuously developing agriculture, agro-industry, rubber, livestock, forestry and fisheries to improve people's livelihoods, food safety and security, economic growth and environmental sustainability. This includes climate-smart agriculture measures aimed to introduce more developed and greener solutions for rural communities and vulnerable groups¹⁹⁹. The RGC recognises that:

The rural poor of Cambodia, the majority of whom are women, are most vulnerable to climate change impacts because of their high dependence on agriculture and natural resources... Therefore, there is a need to mainstream gender into climate change response measures, such as into existing policies and laws, SCCSPs, for this cross-cutting issue to be supported by all government agencies especially at national and sub-national levels, development partners, NGOs, CSOs, research and academia, and the private sector²⁰⁰.

¹⁹⁹ MAFF. 2013. "Climate Change Strategic Plan for Agriculture Agri-Industry Animal Production Fisheries and Forestry 2013-2018."

²⁰⁰ NCSD-MOE. 2013. "Cambodia Climate Change Strategic Plan 2014-2023." 12.

The Technical Working Group on Climate Change for Agriculture, Forestry and Fisheries (TWG-CCAFF) was established in 2011 as part of MAFF. The role of the TWG-CCAFF is to produce research-based evidence to support policies, to formulate regulations, strategies and legal instruments, and to plan programs and projects on climate change including emission reduction in the agriculture, forestry and fisheries sectors. Moreover, the objective is to work together and collaborate with relevant stakeholders to ensure the effective operationalisation of the policies, strategies, regulations, plans, programs and projects on climate change towards an increase in crop production.

The strategy on climate change recognises the crucial role of women in environmental conservation and production processes in agriculture, forestry and fisheries in the context of climate change. As indicated clearly in the prioritised strategy of the Climate Change Action Plan in Agriculture, Forestry and Fisheries, women's participation in climate change adaptation and mitigation is comprehensively considered. Promoting an understanding about climate change adaptation and disaster risk reduction among male and female citizens is one of the core objectives of the strategic plan²⁰¹.

4.2.4.2 The policy response to gender equality and climate change in agriculture

The impacts of climate-related droughts, flooding and climate variability make women more vulnerable in terms of livelihood threats and increased burdens in caring for their families. The current agriculture policies and strategies include provisions for mainstreaming gender concerns into the climate change adaptation programs in agriculture by synergising the national policy frameworks on gender and climate change with international commitments. The Gender and Climate Change Committee (GCCC) of the MoWA, under funding support from the Strategic Program for Climate Resilience (SPCR), developed a guidance manual for policymakers and practitioners to mainstream gender concerns into climate change adaptation investment programs for agriculture²⁰². The manual stressed the need for support from government sector ministries, development partners, civil society organisations and private sector enterprises for developing and improving the gender-responsive policies and strategies/programs into climate change adaptation investments.

Gender balance is important for agricultural policy consideration relating to climate change adaptation. With the submission of priority actions for agriculture in the updated NDC targets, MAFF has set targets for women's participation, ranging from 20 per cent to 75 per cent at both national and sub-national levels by 2030. Furthermore, youth engagement in climate action is estimated to contribute to achieving goals within some of the priority sub-sectors such as crop production, livestock and fisheries²⁰³. Table 4-6 shows the extent of women's representation at both national and sub-national levels.

²⁰¹ MAFF. 2013. "Climate Change Strategic Plan for Agriculture Agri-Industry Animal Production Fisheries and Forestry 2013-2018."

²⁰² MoWA and MAFF. 2018. "Mainstreaming Gender into Agriculture CCA Investment: Guidance Manual for Policy Makers and Practitioners."

²⁰³ GSSD-MoE. 2020. "Cambodia's Updated Nationally Determined Contribution."

Table 4-6 Women's representation in agriculture at both national and sub-national levels (in per cent)

Women's representation	percentage
Agricultural labour force	51.0
Women participate in agriculture, forestry and fisheries	70.0
Household agricultural holding managers	24.0
Agricultural cooperative members	60.0
Agricultural cooperative boards of directors	34.0
All enterprise owners (mostly micro-enterprises)	65.0
All fruit and vegetable processing enterprises	37.6
All wholesale agricultural raw materials enterprises	46.5
MAFF staff at the national level	27.6
MAFF staff at the provincial level	18.0
Agricultural extension officers	12.0
Agricultural extension service beneficiaries	10.0

Source: Green Climate Fund (2018)²⁰⁴

Although MoWA has developed a Gender and Climate Change Action Plan (2014-2018) and the second phase for 2019-2023, gender-specific action plans have been slowly progressing in the process of implementing the CCCSP/CCAPs, largely because of the budget shortfall and lack of human resources. Gender mainstreaming indicators and the gender-based Vulnerability Reduction Assessment (VRA) tool used to measure climate-induced, gender-specific vulnerabilities are not user-friendly enough for sector ministries including MAFF²⁰⁵.

The engagement of women in climate change actions still depends on the decisions and requirements of donors through the agencies they fund. The strategic plan does not have a gender analysis section but the gender dimension of climate change is still considered. Consequently, it does not identify the differential impacts of climate change on women and men in terms of the needs, priorities, capacities and the critical roles of women as agents of lasting change²⁰⁶.

²⁰⁴ Green Climate Fund. 2018. "Gender Assessment Report for Proposed Loan and Administration of Loan and Grant."

²⁰⁵ Garcia, J. et al. 2019. "Mid Term Review of Cambodia Climate Change Strategic Plan 2014 - 2023."

²⁰⁶ Garcia, J. et al. 2019.



MAFF's representative pointed out in the consultation meeting that the ministry does not have the budget solely to implement gender work but mostly focuses on the production aspects of the agriculture sector, such as improving farmers' productivity by using smart farming techniques and tools, and so on. Nevertheless, in the implementation process, MAFF always considers the mainstreaming of gender equality and the climate change response: for instance, one of the projects encourages rural women to use biomass for cooking instead of firewood.

According to the same officer, not having conducted any research about the impact of climate change related to gender, the roles of the ministry are to support collaboration programs and research projects such as ASPIRE (Agriculture Services Program for Innovation, Resilience and Extension), Rice Boosting project, and so on, to conduct a gender impact assessment in terms of women's roles, needs and concerns and responsibilities in agriculture in general. Although the policy on climate change for agriculture, forestry and fisheries has not yet included gender-responsive measures, the ministry is updating the upcoming policy 2021-2025 by including information about gender-based solutions, differentiating between specific gender roles in the program implementation.

4.3 Rural development

4.3.1 The current state of gender in rural development

Rural road improvement, irrigation rehabilitation, and water well construction contribute significantly to rural development, along with sanitation and hygiene, community development and capacity building, micro-credit provision, gender equality and the protection of the indigenous population.

Gender integration is one of the key aspects of the work of the MRD which is committed to the enhancement of gender equality and women's empowerment. Since 2012, the MRD has been implementing its Gender Mainstreaming Action Plan and is carrying out a subsequent phase of the gender mainstreaming strategic plan 2019-2023. The policy on rural development supports gender concerns by integrating gender issues within the action plan 2012-2016 and the rolling plan 2016-2018²⁰⁷.

The current climate change-related policies in rural development are composed of Policy Strategy Action Plans, Climate Change Strategic Plans and Action Plans in Rural Infrastructure, and the Gender Mainstreaming Strategic Plan. The policies and strategies emphasise plans, positions, and guidelines relating to development projects and programs involved in research and analysis, and consultation and synthesis of information and identification of problems. The policies aim to achieve an increase in family savings and food security during periods of natural disasters through rural micro-credit schemes for the opening of rural off-farm and on-farm business opportunities. Improving rural irrigation infrastructure policy and combating social conflicts of interest, and boosting social and political benefits, rural social equity and gender involvement, will enable the MRD to achieve its goals towards rural socio-economic and sustainable development and contribute to national climate change responses.

Every person in a rural community will have sustained access to a safe water supply and sanitation services and will live in a hygienic environment by 2025²⁰⁸.

The Policy Strategy Action Plan (PSAP) 2019-2023 puts the MRD in a better position to provide rural communities with a high quality of life which includes climate resilience and gender balance²⁰⁹. The Rural Development Strategy Action Plan (RDSAP) 2019-2023 recognises gender roles in rural economic development and the response to climate change, and seeks to address the unequal participation of women in decision-making processes²¹⁰.

The CCCSP for 2014-2023 focuses on the impacts and adaptation priorities – policy and regulation development, rural business creation, rural infrastructure improvement and capacity development - relating to climate change adaptation²¹¹.

²⁰⁷ MRD. 2019."Gender Mainstreaming Strategic Plan in the Ministry of Rural Development Undate 2019-2023."

²⁰⁸ MRD. 2013."Climate Change Strategic Plan for Rural Infrastructure."22.

²⁰⁹ MRD. 2018."Rural Development Policy 2019-2023."

²¹⁰ MRD. 2018."Rural Development Strategic, Action Plan 2019-2023."

²¹¹ MRD. 2013."Climate Change Strategic Plan for Rural Infrastructure."

Table 4-7 List of key policy documents relating to gender and climate change in rural development

Year	Name of document	Governing bodies	Implementing duration	Level of gender mainstreaming
				• No gender references • Gender aware • Gender responsive
2012	The National Strategy for the Rural Water Supply and Sanitation	Ministry of Rural Development (MRD)	2011-2025	Gender aware Strategic objective 4, addresses a reduction of the impact of disasters and the risk of climate change. Also, gender and disability considerations have been integrated into strategic objective 2.
2013	Climate Change Strategic Plan for Rural Infrastructure	Ministry of Rural Development (MRD)	2014-2023	Gender aware The strategy acknowledges the different roles of women and men in rural socio-economic and community development in the context of climate change.
2014	Climate Change Action Plan for the Rural Development Sector	Ministry of Rural Development (MRD)	2014-2018	Gender aware The action plan considers men's/women's roles, social vulnerability and labour standards.
2018	MRD Policy Strategy Action Plan	The document was prepared together with the 2018-2020 Budget Strategy	2019-2023	Gender aware The policy expresses gender equality in the objectives of the policy and subsequent strategies.
2018	Rural Development Strategy Action Plan	Document executing the policy and strategy for rural development in Cambodia by the MRD	2019-2023	Gender aware At the implementation level, the gender aspect is listed in the key objectives and cross-cutting issues. However, the process of implementing gender and funding support is still limited within the national budget.
2019	Gender Mainstreaming Strategic Plan in the Ministry of Rural Development	Gender Mainstreaming Action Group, MRD	2019-2023	Gender responsive The strategy acknowledges the different roles of women and men in rural socio-economic and community development in the context of climate change.

Source: Authors' compilation

4.3.2 Drivers and pressures

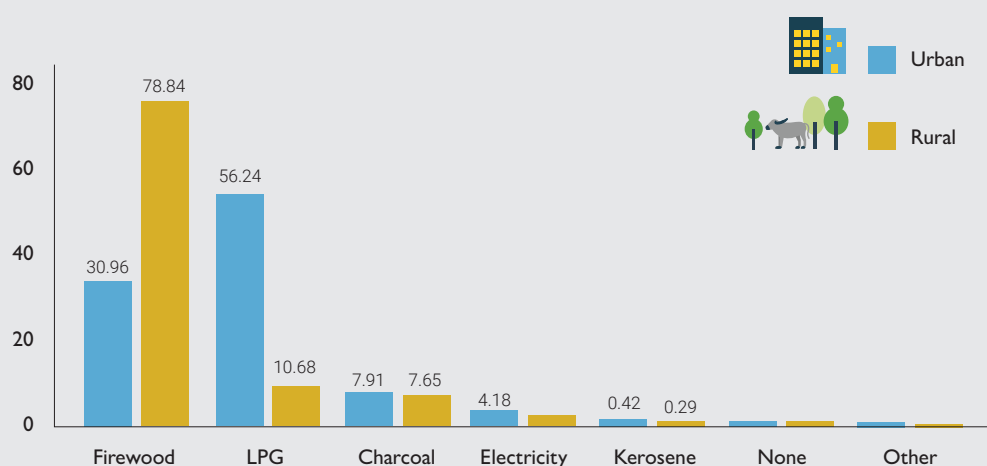
In 2017, the MoE predicted an increased amount of rainfall during the wet season in Cambodia by 2050. Provinces located in the eastern part would receive more than an additional 10 per cent of rainfall (MoE 2017 cited in MRD 2018). Flash flooding and rain flood have had adverse impacts on rural infrastructure, the water supply, sanitation and hygiene, access to rural public services, and family and household economics. The roles of rural women and men are different, and the gendered impact of climate change, too, is not the same. A better gender-responsive policy and action plan is needed to respond to climate change implications in boosting rural resilience²¹².

A rapid change in growing urban-from-rural area migration has both a positive and negative impact on rural livelihoods given the limited access to basic physical, social, economic and environmental resources. Figure 4-8 shows that the majority of rural families (78.84 per cent) use firewood as their main source of fuel, while other families (10.68 per cent) rely on LPG, charcoal (7.65 per cent), electricity (2.32 per cent) and other energy sources (0.5 per cent).

Figure 4-8

Sources of fuel by urban and rural use (in per cent)

Source: Authors' calculation based on the General Population Census Cambodia 2019



In 2019, a total of 910,309 (25.62 per cent) households in Cambodia were headed by women. The majority of female-headed households (82.12 per cent) in rural areas depend on firewood as the main source of energy mainly for cooking, while a few households (8.81 per cent) rely on LPG, charcoal (6.57 per cent), electricity (2.01 per cent) and other sources (0.07 per cent) (Table 4-8). This implies that rural women are more likely to experience health problem than those in urban areas as a consequence of using more firewood for daily cooking. The GPCC 2019 shows more female-headed households (55.65 per cent) in urban than in rural (8.81 per cent) areas accessed LPG as a source of fuel. However, access to electricity as the source of fuel for cooking among both urban and rural female heads shows little difference, accounting for 0.12 per cent and 0.07 per cent, respectively (Table 4-8). As discussed in the energy section, the electricity tariff in Cambodia is relatively higher than that of other nations in the region, and is one of the barriers that dissuade people from using electricity for cooking.

²¹² MRD. 2018. "Rural Development Policy 2019-2023."

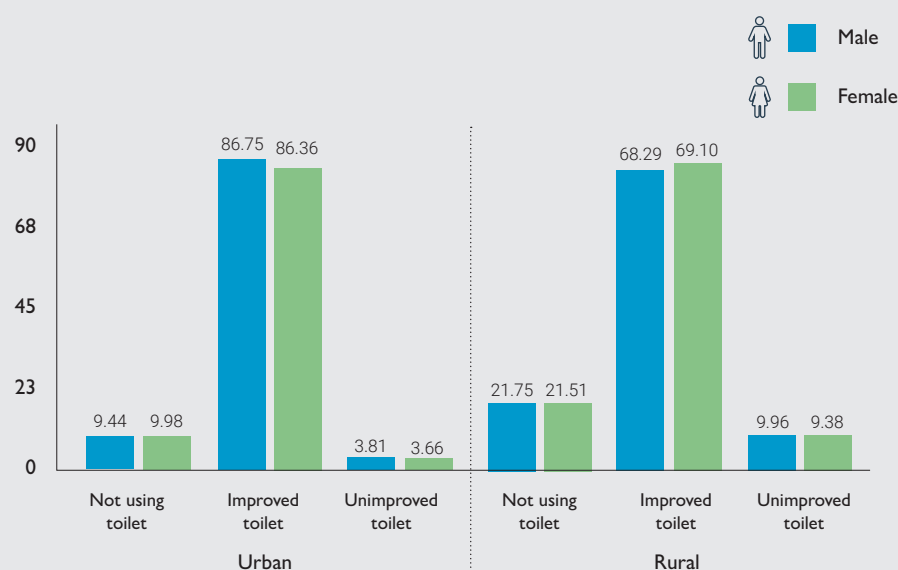
Table 4-8 Source of fuel of the household head according to urban and rural areas (in per cent)

Source of fuel/ Household head	Urban		Rural	
	Male	Female	Male	Female
Firewood	30.45	32.39	77.73	82.12
Charcoal	8.07	7.46	8.02	6.57
Kerosene	0.42	0.40	0.29	0.29
Liquefied petroleum gas	56.44	55.65	11.32	8.81
Electricity	4.30	3.81	2.42	2.01
None	0.15	0.16	0.14	0.13
Others	0.16	0.12	0.07	0.07

In rural areas, 21.51 per cent of the households headed by women do not have access to any type of water and sanitation infrastructure. In total, 69.10 per cent of female-headed households do have access to hygienic latrines - pour flush (or flush) connected to sewerage (18.58 per cent), pour-flush (or flush) with a septic tank or pit (40.83 per cent) and pour-flush (or flush) to elsewhere (9.69 per cent). The rest of the households (9.38 per cent) are considered to be using unhygienic latrines (Figure 4-9). Rural families who have no access to latrines, account for 21.69 per cent, while 12.78 per cent use piped water and 32.69 per cent and 13.71 per cent acquire water from a tube well and surface water, respectively (Figure 4-9).

Figure 4-9

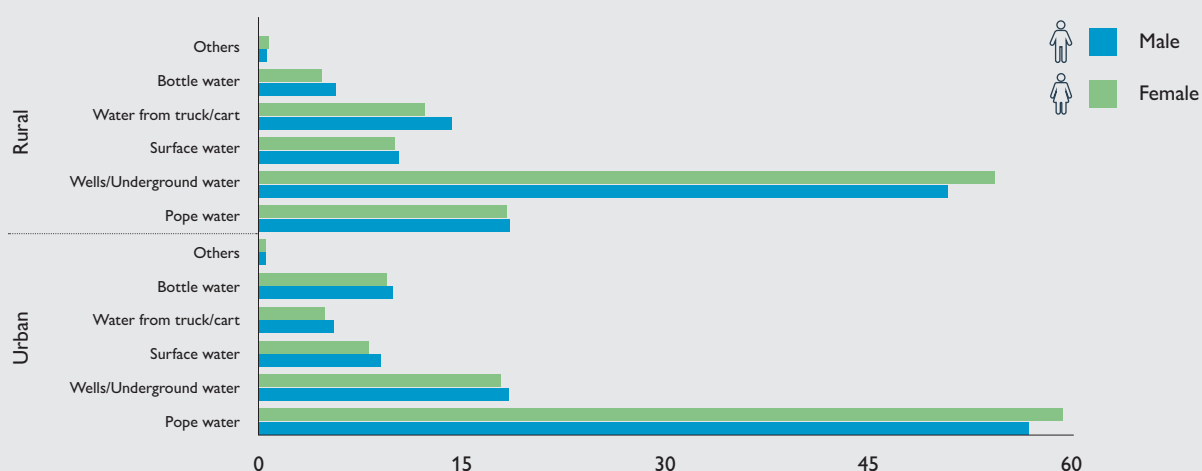
Type of toilet facilities
in urban and rural areas
according to household
head (in per cent)



Source: Authors' calculation based on the General Population Census

The majority of rural female-headed households (36.15 per cent) have access to tube wells or borehole wells for domestic use, while piped water accounted for 18.23 per cent in 2019. The rural households (12.23 per cent) still depend on surface water from rivers or lakes and 8.69 per cent access unprotected wells and springs. Some 14.69 per cent of female-headed households use bottled water, which they buy from tanker-trucks or carts with small tanks (Figure 4-10).

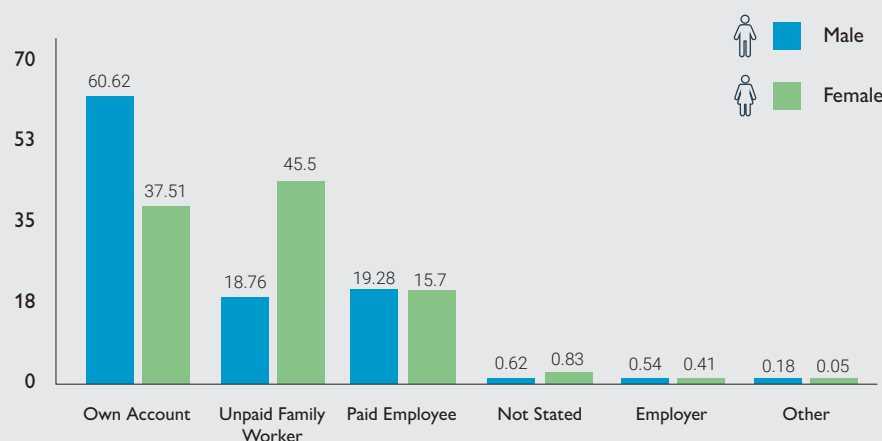
Figure 4-10 Sources of drinking water in urban and rural areas by headed households (in per cent)



Source: Authors' calculations based on the General Population Census Cambodia 2019

According to the GPCC of 2019, the rural population accounted for 60.65 per cent, while 39.45 per cent were urban. The rural female population aged 18 and over has a share of 52.98 per cent. Twenty-two per cent of rural women aged 18 years are illiterate, compared with 13.82 per cent of men. The data shows that 23.26 per cent of rural women versus 14.87 per cent of men never attended school. Figure 4-11 describes the rural employment status of Cambodians aged 18 and over by gender. Compared with men (60.62 per cent), women who have their own businesses constitute a lower percentage - 37.51 - while rural work as an unpaid family labourer - accounting for 45.5 per cent - is much higher among women than it is for men at 18.76 per cent. The proportion of men with paid jobs is higher at 19.28 per cent compared with 15.7 per cent of women.

Figure 4-11
Rural employment status aged over 18 by gender (in per cent)



Source: Authors' calculations based on the General Population Census Cambodia 2019

As indicated in the 2014 ADB report, more women (70 per cent) than men (59 per cent) were self-employed or unpaid family workers, and are considered to be in vulnerable employment. This suggests that women face a significant gap in the quality of the work they are engaged in. In 2011, 91 per cent of economically disadvantaged households were located in rural areas²¹³, where women spent much of their day engaged in subsistence farming and unpaid farm work^{214 215}. The incidence of rural poverty is greatest in female-headed households²¹⁶, which are economically less viable, more vulnerable to risk and landlessness and often excluded from microcredit and agricultural extension programs²¹⁷. Female household heads usually have a low level of education and limited opportunities for off-farm employment, which can trap them in a cycle of poverty²¹⁸.

Cultural practices and gender norms continue to contribute to gender inequality in the division of labour at the household level. Besides productive activities such as farming and generating income, women and girls are also primarily responsible for home and family tasks. Much of their time is devoted to household chores, childcare, cooking, cleaning, fetching water, and so on²¹⁹. Indigenous women carry a particularly heavy burden in terms of household chores, including housework, farming, raising animals, weaving bags and mats, and collecting forest foods especially in times of food shortage²²⁰.

Cultural practices and gender norms view these essential and often unpaid tasks that contribute to the wellbeing of households and communities as a female prerogative. But the nature of these tasks limits the time and energy women have to become involved in community affairs and in activities to generate income.



²¹³ ADB. 2014."Cambodia Country Poverty Analysis 2014."

²¹⁴ Resurrección, B.P. et al. 2019."Gender-Transformative Climate Change Adaptation: Advance Social Equity."

²¹⁵ Ibid.

²¹⁶ Ibid.

²¹⁷ Galabru, K. 2004."The Situation of Women in Cambodia."

²¹⁸ Ibid.

²¹⁹ Sam, S. et al. 2016."Gender in EIA and Public Participation."

²²⁰ AIPP. 2013."Research on the Roles and Contributions of Indigenous Women in Sustainable Forest Management in Mekong Countries/Asia."

4.3.3 Impacts and effects

4.3.3.1 Impact of climate change on rural infrastructure and rural development

According to National Committee for Disaster Management records, 1,000 to 2,000 houses are destroyed by climate-related disasters annually. Over the past 20 years, natural disasters destroyed nearly 20,000 residential houses, 26 km of urban and rural roads and 1,853 ha of crops. The records mention that 2,507 people were killed. Major floods occurred in 2011 and 2013, and 350,000 households were affected and 267,000 ha of transplanted rice was damaged. At the same time, several rural roads and bridges were destroyed at an estimated loss of US\$630 million. The 2013 flood affected 377,345 households, and 31,314 households were urged to escape to safe places²²¹.

MRD-CCAP 2014-2018 highlighted the impacts of climate change on rural water supplies, small-scale irrigation – farming, cropping and wells – daily use and drinking, groundwater resources, underground water, the rural road sector in terms of the damage to roads, segments of the road, and embankment erosion, and the rural socio-economic and health sector. For example, in 2011, farming systems and homesteads costing US\$500 million were damaged, many ecosystems were disrupted, and the biological health of plants and animals was affected. Moreover, temperature increase associated with climate change means dwindling reservoir resources, and the depletion of groundwater tables resulting in insufficient potable water for humans and animals. Climate change leads to an increasing geographic range of vector-borne diseases like malaria, dengue fever, cholera and diarrhea²²². Here, again, an in-depth analysis of gender-differentiation - men, women, boys and girls - is missing.

4.3.3.2 Gendered impacts of climate change in rural development

The existing rural roads are susceptible to extreme events such as heavy rains, floods and drought, and climate change is the key threat to rural infrastructure and people's livelihood in the rural areas. Women and men have different roles inside and outside the household. Men's roles are focused more on productive work including income-earning – growing food, trading or selling their labour - while women's responsibilities are considered to be reproductive duties such as cooking, collecting water, wood or fuel for families. Consequently, women in the rural communities are more vulnerable to disasters than men. This is indicated in a comprehensive review by Goh (2012) who highlighted the fact that the issues of women, gender and climate change are associated with unequal access to public and private services – financial resources, health and rights, natural resource, limited access to education and economic opportunities, and participation in decision-making processes.

Climate change affects the human capital of women and men differently in the form of mortality and in terms of their physical and psychological health, some of which is indirectly related to food insecurity²²³.

The study by UN Women and BBC Media Action found that more females in rural locations were concerned about the long-term impacts on their family members' health, while men were worried about the livelihoods of their families, even though women and men were both exposed to climate variability in the same way²²⁴. The representative from the MoE was concerned about the use of charcoal by households as a fuel for cooking, especially in rural areas, as it is very harmful not only to the health of female family members but also contributes emissions to the atmosphere.

²²¹ A Leng, H.A. 2014."Country Report of Cambodia's Disaster Management."

²²² MRD. 2013."Climate Change Strategic Plan for Rural Infrastructure."

²²³ Goh, A.H.X. 2012."A Literature Review of the Gender-Differentiated Impacts of Climate Change on Women's and Men's Assets And Well-Being in Development Countries."pp.10.

The low adaptive capacity of local women can be attributed to high risks associated with climate change²²⁵ and consequently low climate resilience. In 2019, ActionAid Cambodia found that women had a lower resilience index of 0.56 compared with 0.59 of their male counterparts. This was the result of low accessibility to structural projections for protection from extreme weather, safe places, early warning systems, and resilient housing, although they exhibited a moderate ability to acquire energy for household consumption and had limited access to safe water and sanitation²²⁶.

It is notable that climate change has a negative impact on the water, sanitation and hygiene sector and leads to gender bias in the roles and norms of local women in terms of domestic water consumption, health effects, well-being and livelihoods²²⁷. The increased weather variability, such as floods, destroys the water supply infrastructure, causing a loss of water resources and changes in water quality²²⁸, while droughts, which induce higher temperatures, affect fresh water security²²⁹. The climate change strategic plan of the MRD 2014-2023 also emphasises the adverse impacts on small-scale irrigation, wells – as a source of water – the rural economic and health sector²³⁰ and reports that local women suffered more than men due to their different roles and responsibilities, inside and outside the household²³¹. In Cambodia, rural women commonly rely on natural resources - like rivers, lakes, rainfall and forests - but have fewer physical resources and assets and are limited in accessing credit to generate income and to run their own businesses. Furthermore, women have less power to voice their opinions, and to influence decision-making processes in both their families and in society as a whole²³².

According to the interview with officials from the MRD, there is no sex-disaggregated data for women and men in climate change action plans: only a few projects promoting water, sanitation and hygiene and reducing discrimination against, and the violation of indigenous women, implemented by the MRD in partnership with the MoWA, included gender concerns in the project implementation plans. Coverage of the gender differentiated impacts of climate change in the rural development sector is still missing. The officials interviewed suggested digging out the gendered impact of climate vulnerability in specific communes and villages, using the vulnerability mapping process produced by the MoE.

²²⁵ Nong, M. et al. 2018."Women's Adaptive Capacity in Climate in Cambodia's Four Agroecological Zones."

²²⁶ Actionaid Cambodia. 2019."Cambodia Women's Resilience Index."

²²⁷ Nong, M. et al. 2018."Women's Adaptive Capacity in Climate in Cambodia's Four Agroecological Zones."

²²⁸ Howard, G. et al. 2016."Climate Change and Water and Sanitation: Likely Impacts and Emerging Trends for Action."

²²⁹ Hadwen, W.L. et al. 2015."Putting WASH in the Water Cycle: Climate Change, Water Resources and the Future of Water, Sanitation and Hygiene Challenges in Pacific Island Countries."

²³⁰ MRD. 2013."Climate Change Strategic Plan for Rural Infrastructure."

²³¹ MRD. 2014."Climate Change Action Plan for Rural Development Sector 2014-2018."

²³² Ibid.



4.3.4 Responses

4.3.4.1 The policy response to climate change in rural development

The MRD has, to a remarkable extent, integrated climate change responses into implementation processes, ranging from policy and strategy, to programs. Under the technical and financial support of the CCCA program, the MRD developed the Climate Change Strategic Plan for Rural Infrastructure 2014-2023 and operationalised the Climate Change Action Plan for the Rural Development Sector 2014-2018 in 2012 and 2013, respectively. Later, in 2018, national climate change responses in rural development were entirely integrated within the Policy Strategy Action Plan and Rural Development Strategy Action Plan 2019-2023. These were fully funded by the national budget as laid out in the 2018-2020 Budget Strategic Plan of the MRD. Understanding the importance of gender roles in the rural development sector, the MRD strictly follows the guidelines of the RGC to promote the participation of women, at all levels, in positions and decision-making processes by maintaining a rate of women representatives of between 40 and 60 per cent. In 2019, the MRD approved the Gender Mainstreaming Strategic Plan of the Ministry of Rural Development and has made efforts to integrate gender equality into laws, policies, strategies and programs in the rural development sector and to seek collaborating partners for additional funding support. Table 4-9 shows the level of women's representation and the key gender balance in rural development.

Table 4-9 Women's representation in rural development from 2018 to 2023 (in per cent)

Women's representation	percentage	
	2018 - baseline	2023
MRD staff at national level	25	30
MRD staff at director general level	4	40
MRD staff at the department level	13	40
MRD staff at the provincial department level	6	40
Participation rate in training, workshops and study tours	19	40
Participation rate in village development committees	40	45
Participation rate in water and sanitation user groups	40	50
Participation rate in education and training related to clean water in rural areas	53	60
Participation rate in education and training related to sanitation in rural areas	36	50
Participation rate in infrastructure, construction and maintenance	40	45
Rate of women accessing credit services	83	>=60
Participation rate on ethnic minority committees	36	40
The participation rate of female trainees at basic skills training centres	21-62	>=45

In 2018, the MRD approved the policy strategy and action plan for execution from 2019 to 2023. The documents include the integration of gender into the existing programs and sub-programs. Moreover, the ministry is committed to achieving gender equality in its staff employment with target rate of 50 per cent of women representatives by 2023, although the rate of gender balance is quite challenging for the MRD at both national and sub-national levels²³⁴. The Mainstreaming Gender Strategic Plan in Rural Development 2019-2025 sets out strategies and action plans, and commitments are in place for all departments under the ministries to fulfil.

²³³ MRD. 2019."Gender Mainstreaming Strategic Plan in the Ministry of Rural Development Undate 2019-2023."

²³⁴ Ibid, pp.39.

4.3.4.2 The policy response to gender equality and climate change in rural development

Working together with the GSSD of the MoE, the MRD developed a Climate Change Strategic Plan for Rural Infrastructure 2014-2023, which is the key policy document for climate change actions in the rural development sector. The five-year action plan for climate change 2014-2018 was approved as a response to climate issues under the funding support of the CCCA. The policy addresses gender considerations in rural development, health, infrastructure, agriculture and water resources. To enable this to come to fruition, several meetings/consultations with the top management of the ministries were conducted to assemble a gender mainstreaming knowledge product for their respective gender-responsive policies, programs and projects. Both the climate change strategy and action plan address the important roles of gender responsiveness in the processes.

Led by the MoWA, the MRD co-developed the master plan and policy of the government, for instance, the master plan addressing gender and climate change 2018-2030, which aims to address the gender impacts of climate change and to strengthen women's resilience in Cambodia. As one of the key objectives, the master plan contributes to assisting line ministries, NGOs and private sector agencies in mainstreaming gender responsiveness in their program implementation relating to climate change adaptation measures, mitigation and risk reduction²³⁵.

Box 4-1

Strategic priorities for rural infrastructure

1. Developing policies and studies to make rural infrastructure (roads, irrigation schemes, wells, ponds and bridges) resilient to climate change
2. Strengthening the quality of rural infrastructure to be resilient to floods and droughts
3. Creating local business opportunities that focus on micro-credit provision for socio-economic development, because the increase in families' incomes from local businesses will lead to preparedness to compensate for the loss of income during flood and drought periods
4. Increasing rural awareness about climate change and response options.

Furthermore, under the support of UN-Habitat, MoWA produced a guidance manual for policymakers and practitioners linked to water, sanitation and hygiene (WASH) for the MRD in 2018. The manual is aligned with the MoWA policy document Neary Rattanak-IV 2014-2018, and the CCCSP 2014-2023. The manual identifies 5 Steps for mainstreaming gender into WASH CCA Investment - Analysis of Gender Mainstreaming and associated Recommendations; Institutional Recognition and Endorsement; Developing the Gender Mainstreaming Framework; Resource Considerations; and Reviewing and Improving the Processes²³⁶.

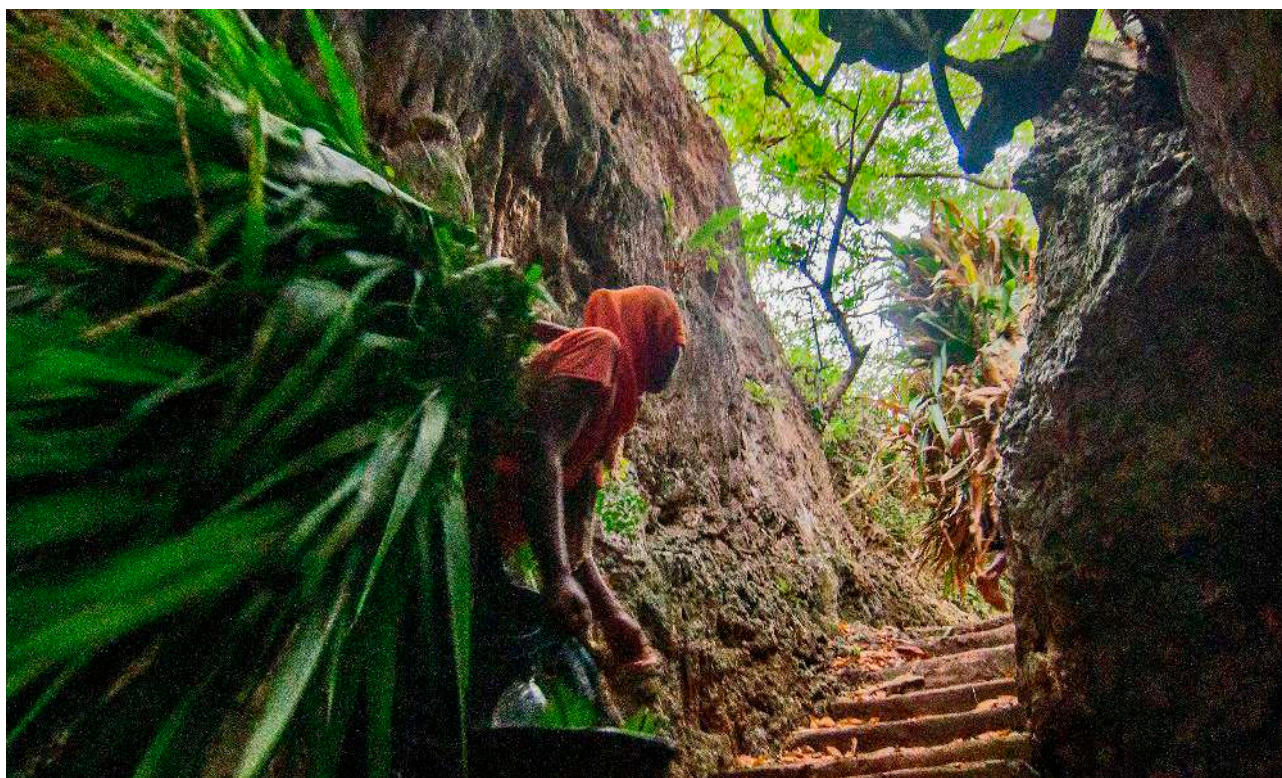
²³⁵ MoWA and MRD. 2018. "Mainstreaming Gender into WASH (MRD) CCA Investment."

²³⁶ Ibid

The MRD has been implementing several projects: to construct climate-resilient roads on five islands along the Mekong River in Kampong Cham and Tbong Khmum provinces; the water sanitation and hygiene program; and other infrastructure projects relating to road building and the installation of a concrete road that is resistant to climate change around the provinces along the Tonle Sap. Other projects include the Water Supply and Health program that includes tube-well construction, and the women's empowerment program through economics, whereby the ministry provides participants with training, funding support and other contributions that lead to the creation of women's savings groups. For instance, in the field of rural WASH, climate change adaptation and gender were considered as gender-inclusive - i.e., more than 30 per cent of total beneficiaries are women involved in rural livelihood improvement in terms of the rural water and health sectors.

Also, in 2014-2015, the ministry developed the first guidelines to focus on floods and droughts under the technical and financial support of UN-Habitat. They also have guidelines focusing on clean water and sanitation that explain how to use water and to flush the toilet. The climate change adaptation in rural areas also includes awareness about climate-related issues, which are associated with primary community health care, hygiene, research results relating to rural energy consumption, and the best climate-smart agricultural practices.

Notably, the MRD Policy Strategy Action Plan has integrated gender equality within the objectives of policy and subsequent strategies. In the Rural Development Strategy Action Plan 2019-2023 document, at the implementation level, the gender aspect is explicit in the key objectives and cross-cutting issues. However, the process of implementing gender and funding support is still hampered by limited national funding sources.



4.4 Forestry

4.4.1 The current state of gender in the forestry sector

In 2016, Cambodia had 9 million ha of forest covering 47 per cent of the total land area. This is divided between forest reserves, conversion forests, flooded forests and mangrove areas under the Forestry Administration and the Fisheries Administration of MAFF, and protected areas (the Tonle Sap Biosphere Reserve and biodiversity conservation corridors) under the MoE²³⁷.

Forests contribute to poverty alleviation, livelihoods and the economy as they produce food, fuelwood, small-scale timber resources, poles for harvesting, resin for tapping, fodder, and traditional medicines. They also serve spiritual purposes. The government of Cambodia recognises that the role of forests is crucial to rural livelihoods in Cambodia since more than 80 per cent of rural people depend on fuelwood and about 8 per cent on charcoal for cooking²³⁸. It has been estimated that 4 million locals reside within 5 km of the forest, from which 10-20 per cent consume and generate incomes through harvesting resin and collecting non-timber forest products²³⁹.

It has been observed that there is no mention of gender in the Law on Forestry 2002, while in some policy documents, gender has been acknowledged. For instance, the National Forest Program 2010-2029 encourages women's participation in the management of the institutional structures and management of the Forestry Administration to make the forestry sector more efficient and effective.

The national forest monitoring system of Cambodia promotes the capacity development of young officials, both men and women. The National REDD+ Strategy highlighted specific gender roles in the REDD+ Taskforce (RTF), and the technical team, consultation group and gender group participated actively to implement the REDD+ program (Table 4-10)

The National Forest Program 2010-2029 pays attention to the promotion of women's participation in forest management at the national and local levels in order to improve the institutional structure of the Forestry Administration²⁴⁰.

The gender group was established by the RTF to build awareness about gender issues among members of the RTF, consultation group and technical team, and to review and provide gender-specific inputs to the National REDD+ Strategy. The four members of the gender group are affiliated with the FA and the FiA of MAFF, the MoE, and the Ministry of Women's Affairs (MoWA)²⁴¹.

The Gender Mainstreaming Policy and Strategy in Agriculture 2016-2020 highlighted the important role of Cambodian women in forest-related activities, but, currently, women's access to and control over forest resources is limited and economic opportunities for women are scarce²⁴².

The action plan for implementing gender equality in fisheries 2016-2020 was approved by the Fishery Administration to support the implementation of the gender mainstreaming policy of the ministry²⁴³. Gender mainstreaming in the forestry sector by the Forestry Administration and under the support of the MoE and MoWA is currently under review and expected to be ready for publication in mid-2021.

²³⁷ MoE and MAFF. 2017."National REDD+ Strategy (NRS) 2017- 2021."

²³⁸ NIS. 2020."General Population Census Cambodia 2019."

²³⁹ MAFF. 2014."Climate Change Priorities Action Plan for Agriculture, Forestry and Fisheries Sector 2014-2018."

²⁴⁰ RGC. 2010."National Forest Program 2010-2029."

²⁴¹ MoE and MAFF. 2017."National REDD+ Strategy (NRS) 2017- 2021."pp.29.

²⁴² MAFF. 2015."Cambodia Gender Mainstreaming Policy and Strategy in Agriculture 2016-2020."

In terms of gender inclusion in forestry policies, the existing institutional arrangement for REDD+ includes the consultation group and gender group together with the RTF and technical team to continue implementing the National REDD+ Strategy during the period 2017-2021²⁴⁴.

The M&E framework of the National REDD+ Strategy also takes gender considerations into account by prioritising the collection of sex-disaggregated data to keep track of the delivery of the results and benefits to vulnerable communities, indigenous peoples and women²⁴⁵.

Table 4-10 List of key policy documents relating to gender and climate change in forestry

Year	Name of document	Governing bodies	Implementing duration	Level of gender mainstreaming
				• No gender references • Gender aware • Gender responsive
2002	Law on Forestry	Royal Decree	2002	No gender references
2003	Sub-decree on Community Forestry Management	Royal Government of Cambodia	2003	No gender references
2006	Prakas (Proclamation) on a guideline for Community Forestry	Sub Decree	2006	No gender references
2010	National Forest Program	Royal Government of Cambodia aimed to develop and implement a National Forest Program based on the National Forest Policy Statement, 2002	2010-2029	Gender aware The policy encourages women's participation in management at the national and local levels, to ensure that women are involved more effectively in the forestry sector. But there are no gender indicators in the set indicators.
2013	Cambodia Climate Change Strategic Plan	Ministry of Agriculture, Forestry and Fisheries	2014-2023	Gender aware The strategic plan recognises the gender knowledge gap affected by climate change and the increased vulnerability of men and women in the sector.
2014	Climate change action plan for agriculture, agri-industry, animal production, fisheries and forestry	Technical Working Group for Policy and Strategy to Respond to Climate Change, Ministry of Agriculture, Forestry and Fisheries	2014-2018	Gender aware Promoting marginalised groups and women's participation in climate change issues.

²⁴³ MAFF. 2015. "Action Plan for the Promotion of Gender Equality and the Elimination of Child Labour in the Fisheries Sector."

²⁴⁴ MoE and MAFF. 2017. "National REDD+ Strategy (NRS) 2017- 2021."

²⁴⁵ Ibid.

Table 4-10 List of key policy documents relating to gender and climate change in forestry (continued)

Year	Name of document	Governing bodies	Implementing duration	Level of gender mainstreaming • No gender references • Gender aware • Gender responsive
2015	Gender mainstreaming policy and strategy in agriculture	Ministry of Agriculture, Forestry and Fisheries	2016-2020	Gender responsive The strategic plan achieves gender equality and women's empowerment in the agriculture sector including in the forestry strategic development plan.
2016	The National Forest Monitoring System of Cambodia	Three government agencies are responsible for the management of forests – the Forestry Administration and the Fisheries Administration of the Ministry of Agriculture, Forestry and Fisheries (MAFF), and the General Department of Administration of Nature Conservation and Protection (GDANCP) of the Ministry of Environment	2016	Gender aware Roles of gender in Cambodia REDD+ taskforce, technical team, consultation group and gender group.
2017	National REDD+ Strategy (NRS)	Supports the Ministry of Agriculture, Forestry and Fisheries, the Ministry of Environment, and relevant stakeholders, including local communities and indigenous peoples	2017-2026	Gender aware Integrates gender considerations through the gender groups of the FA and FiA of MAFF, MoE, and the Ministry of Women's Affairs (MoWA). The strategy addresses gender issues among members of the RTF, consultation group and technical team and reviews and provides gender-specific inputs to the NRS.
2018	Cambodia Forest Cover 2016	General Directorate of Administration for Nature Conservation and Protection	2016	No gender references
2019	Cambodia National Community Forest Statistics 2018	Community Forestry, MAFF	2018	No gender references

4.4.2 Drivers and pressures

The driving forces of climate change in forestry include the change in forest cover, increasing forest conversion and land-use change, and the impact of climate change on the forestry community.

During the period 1965-2014, Cambodia's forest cover declined from 73.04 per cent to 49.48 per cent (Figure 4-12). Traditionally, forest resources – in particular non-timber forest products – have provided important safety nets for rural people in times of crisis.

Figure 4-12

Rate of forest cover change from 1965 to 2016



There are many reasons why forest cover has declined over the decades. Among them is the rapid expansion of agriculture into forest lands, large-scale agro-industrial economic land concessions, and the distribution of land titles under social land concessions between 1996 and 2012. Unauthorised logging, unsustainable harvesting of forest trees and the collection of non-timber forest products, along with the population increases and demand for agricultural land, rural poverty and the lack of alternative livelihoods, have also been particularly influential in reducing forest cover in Cambodia. Other causes include civil war, illegal logging, shifting agriculture practices, forest land encroachment and conversion to other land uses.

The first BUR of Cambodia (2020) presented forestry among agriculture, other land uses, energy (industry, transport and residential), waste and IPPU as the main sectors that emit GHGs²⁴⁶. To contribute to climate mitigation, the government has released policies and action plans to maintain forest cover up to 60 per cent of the total territory by 2030. For instance, the National Forest Program 2010-2029 aims to allocate 2 million hectares to community management towards recovering forest and land resources. Priority action plans include promoting sustainable forest management, reforestation and afforestation to increase carbon stock, development, research and awareness-raising on REDD+, and developing and implementing regulations and mechanisms on REDD+²⁴⁸.

²⁴⁶ MoE. 2018."Cambodia Forest Cover 2016."

²⁴⁷ GSSD-MOE. 2020."First Biennial Update Report of the Kingdom."

²⁴⁸ RGC. 2010."National Forest Program 2010-2029."

The major drivers affecting forest cover include climate change, sectoral land planning, illegal activities, weak collaboration and forest conflict. Climate change-induced sea-level rise affects mangrove forests, agricultural and fishery productivity, grassland and ecosystems. Forest land is used for sectoral land planning for agriculture, economic land concessions, mining concessions and infrastructure development. Illegal activities and weak collaboration lead to land conflicts, illegal logging and encroachment/land grabbing, unsustainable shifting cultivation, and forest land conversion.

As of 2016, 580 forestry communities were covering 470,970 hectares located in 1,044 villages (within 286 communes of 100 districts) with 142,941 households. The forestry communities have key roles to protect the forest and enhance their productivity, support rural livelihoods and sales for forest carbon credit²⁴⁹. The GPCC 2019 recorded that 10,990 men (58.6 per cent) and women (41.4 per cent) were undertaking forestry jobs – hunting and logging services, gathering non-timber forest products and supporting other forestry-related services. Collecting non-timber forest products accounted for 65.1 per cent (males 54.3 per cent compared with females 45.7 per cent) (Table 4-11).

It is believed that women's involvement contributes to sustainable forest management in terms of the most effective use of forest functions. However, women's participation in important meetings and decision-making processes is very limited. Research suggests that the better inclusion of women and gender-inclusive processes would more successfully address concerns relating to sustainable forestry and environmental management²⁵⁰.

Table 4-11 Distribution of employed population aged 5 and over in forestry services by sex

Type of employment	Male	Female	Total
Hunting, trapping and related services	110	50	160
Silviculture and other forestry activities	726	503	1,229
Logging	1,430	563	1,993
Gathering of non-timber forest products	3,881	3,269	7,150
Support services to forestry	293	165	458
Total	6,440	4,550	10,990

²⁴⁹ Forestry Administration. 2017. "Community Forestry Statistic in Cambodia 2017."

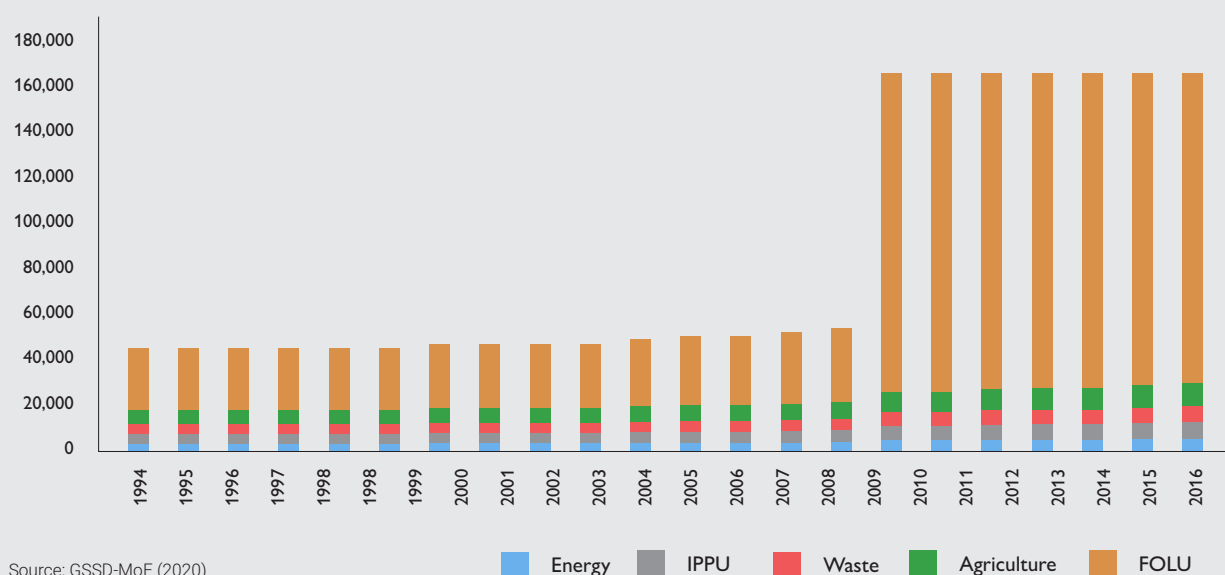
²⁵⁰ Nhem, S. and Y.J. Lee. 2019. "Women's Participation and the Gender Perspective in Sustainable Forestry in Cambodia: Local Perceptions and the Context of Forestry Research."

4.4.3 Impacts and effects

4.4.3.1 The impact of climate change on the forestry sector

The primary estimation, calculated between 1994 and 2016, suggests that Food and Land Use (FOLU) has been the biggest source of GHG emissions in Cambodia since 1994, and its contribution has drastically increased since 2010. GSSD-MoE (2020) suggests that GHG emissions increased radically between 2010 and 2016²⁵¹ primarily due to the significant loss of forest. In 2016, FOLU contributed 80.1 per cent and the energy sector 5.9 per cent to total GHG emissions (GSSD-MOE 2020b, 34). The rate of forest loss between 2010 and 2016 was 3.5 times higher than it was in 2000–2010.

Figure 4-13 Greenhouse gas emissions by sector, during 1994–2016 (in Gg.CO₂-eq)



4.4.3.2 Gendered impact of climate change in the forestry sector

Women and men are often confronted differently by the effects of climate change and forest-related activities. And their responses and corresponding interventions and implementation practices are also different²⁵². Based on the Commune Database 2019 it is estimated that a total of 229,094 families participate in Community Forestry and that the total number of female members is 521,859. They are involved in collecting forestry products and hunting for their livelihoods.

The Gender Mainstreaming and Strategic Framework in Agriculture 2016–2020 highlighted the fact that women are more directly involved in the natural environment than men. However, women have fewer opportunities than men²⁵³ to participate in capacity building and they have less access to information and education. Thus, the impacts of deforestation and forest degradation on women and men are distinct, given that women spend more time collecting firewood or forest produce once the forest is destroyed²⁵⁴. The KAP Study 2 by the MoE in 2016 indicated that slightly fewer female respondents (73.3 per cent) versus male respondents (82.4 per cent) believed that deforestation in Cambodia was the major cause of climate change²⁵⁵.

²⁵² Gurung, D.D. 2019. "Mainstreaming Gender into Cambodia's REDD+ Action and Investment Plan."

²⁵³ MAFF. 2015. "Cambodia Gender Mainstreaming Policy and Strategy in Agriculture 2016–2020."

²⁵⁴ Amanda, B. et al. 2013. "Gender and REDD+: An Assessment in the Oddar Meanchey Community Forestry REDD+ Site, Cambodia."

²⁵⁵ MoE. 2016. "A Second Study on Understanding of Public Perception of Climate Change in Cambodia: Knowledge, Attitudes and Practices."

4.4.4 Responses

4.4.4.1 The policy response to climate change in the forestry sector

The current national policy commitment under the National Forest Program is to increase the country's forest cover to 60 per cent by 2030^{256 257}. The goals of forest management are to improve livelihoods, employment and the economy, the rights of indigenous people and local communities. The overall National Forest Program objective is that:

The forest resources provide an optimum contribution to equitable macro-economic growth and poverty alleviation, particularly in rural areas, through conservation and sustainable forest management, with the active participation of all stakeholders²⁵⁸.

To sustainably manage forest resources with the active participation of local communities, the RGC endorsed several policies - the Law on Forestry in 2002, the sub-decree on the Management of Community Forestry in 2003, the Prakas (proclamation) on Guidelines for Community Forestry in 2006, and the National Forest Program 2010-2029. That latter policy was approved by the government with the aim to maintain the forest cover and it needs collaboration from other relevant stakeholders. The vision is that:

The Royal Government of Cambodia considers the ecologically, socially and economically viable conservation and management of forest resources as a major pillar of public welfare directly contributing to environmental protection, poverty reduction and socio-economic development²⁵⁹.

It is observed that there is no reference to gender in some key forestry policy documents and legislation such as the Law, Sub-decrees, Prakas (proclamation) and National Forest Statistics. Some key policies and strategies – The National Forest Monitoring System of Cambodia 2016, National REDD+ Strategy 2017-2026 and the Second Forest Reference Level for Cambodia under the UNFCCC Framework - have taken gender concerns into consideration in their respective objectives and acknowledge the important roles of women in forestry and natural resource management. However, specific action plans and budget allocations to achieve target policies and set objectives are missing. The Forestry Administration regularly records and updates the statistics relating to Community Forestry in Cambodia annually with support from development partners and local NGOs. However, there is no sex-disaggregated data, namely no division is made to indicate male- or female-headed households or male and female members. Thus, the work on mainstreaming gender into the forestry sector is slow.

Gender concerns have been taken into consideration in forest projects/programs, but the implementation seems to appear in donor-funded support, for instance, the REDD+ programs. Women have partly participated in REDD+ activities to raise awareness, have attended the related workshops, and have been involved in compiling the forest inventory, while men fully attended all activities²⁶⁰.

²⁵⁶ RGC. 2015."Cambodia's Intended Nationally Determined Contribution."

²⁵⁷ GSSD-MoE. 2020."Cambodia's Updated Nationally Determined Contribution."

²⁵⁸ RGC. 2010."National Forest Program 2010-2029."15.

²⁵⁹ Ibid pp.5.

²⁶⁰ Gurung, D.D. 2019."Mainstreaming Gender into Cambodia's REDD+ Action and Investment Plan."

The functioning and implementation of policies remains challenging. The updated NDC sets a target of a 50 per cent reduction of historical emissions by 2030 in the FOLU sector by improving the management and monitoring of forest resources and forest land use, strengthening the implementation of sustainable forest management, and by integrating approaches to reduce deforestation, build capacity, and engage stakeholders. Still, the gendered differences in the emissions profile in climate change mitigation actions remain absent²⁶¹.

The Forest Administration makes efforts to incorporate and mainstream gender concerns within the forestry sector. Improving local people's livelihoods is the top priority action of the Administration to reduce deforestation and forest degradation. The gender impact assessment is centrally conducted by MAFF and this does not provide the Forestry Administration with definite data on the impacts of climate change on gender. The Forestry Administration expects other development partners and research institutes, who have strong technical skills and sound financial resources, to conduct research and study on the impacts of climate change on gender, while the ministry and the FA have limited budget resources to research this field, according to the interview with Forestry Administration's official in January 2021.

4.4.4.2 Policy on gender equality and climate change in the forestry sector

Climate change response in the forestry sector was integrated into the Climate Change Strategic Plan for Agriculture, Agri-Industry, Animal Production, Fisheries and Forestry 2013-2018, and the Climate Change Priorities Action Plan in the Agriculture, Forestry and Fisheries Sector 2014-2018. The plans addressed gender-responsiveness in the policy, strategies, key activities, management and financial management, and monitoring and evaluation framework. However, a specific strategy and action plan relating to climate change with explicit gender equality in forestry need to be developed and implemented with sound technical and financial support.

Thanks are due to the government for promoting gender considerations into policy, strategy, planning and programs in the forestry and natural resource management sector. However, mainstreaming climate change and gender in the sector seems relatively challenging because, so far, there are three different government bodies implementing the programs i.e., the Forestry Administration and the Fisheries Administration of the MAFF are responsible for the management of forests, while the General Department of Administration of Nature Conservation and Protection (GDANCP) of the MoE takes care of forest in protected areas.

Mainstreaming gender into the REDD+ project implementation remains a challenge, particularly relating to the collaboration among relevant institutions. The DCC is responsible for coordinating and undertaking technical activities for implementing the UNFCCC, liaison with other agencies and enhancing cooperation to promote the implementation of climate change policies, advising the government in the field of climate change, as well as other tasks such as public awareness, data management, and promoting research and capacity building. However, relevant ministries, e.g., the MEE, the Ministry of Public Work and Transport, and the MAFF, are responsible for developing their policies and for implementation. Collaboration among different relevant institutions remains one of the key challenges in ministerial actions.

²⁶¹ Gurung, D.D. 2019.



5. Good practices, experience and lessons

5.1 Cases involving energy

Two cases studies describe the benefits women are gaining from project implementation focusing on renewable energy and biodigesters.

Box 5-1

Case 1: Empowering women's entrepreneurship and livelihood generation through renewable energy



The EmPower project in Cambodia is jointly implemented by the UN Environment Programme (UNEP) and UN Women, funded by the Government of Sweden. One specific component led by UNEP is supporting women's entrepreneurship and livelihood generation through renewable energy. The National Committee for Sub-National Democratic Development (NCDD) and Nexus Development are the key national partners. The project indicated that the Scoping and Pre-Feasibility studies are important steps to include gender dimensions into project implementation, especially working closely not only with women community leaders, but also with the sub-national government level, local NGOs, financing institutions and other stakeholders towards scoping and laying the foundations for jointly-designed interventions. It is more advantageous to scale both the integration of renewable energy technologies into the current livelihoods of women, and to support capacity building and knowledge development for the greater dissemination of clean energy solutions. Furthermore, in the process, a series of meetings and discussions with key renewable energy actors in the rural areas of Cambodia were held during the Scoping Studies. Possible technology providers, programs active in the sector, and other organisations with relevant experience shared the past lessons they have learned and the current status of activities. Potential women business owners, customers, individual women and some local authority representatives have also been surveyed.

In total, 189 household interviews took place, eight focus groups were staged with villagers, and four key community representative discussions were performed for the studies. The Scoping Studies, which serve as a baseline, provided valuable information to describe the characteristics of women's current livelihoods, with key learning points on seasonality, climate change impacts and the economic profiles of livelihood activities. In parallel, focus group discussions with local stakeholders refined the outcomes of this study and helped to map the first picture of potential local partners. An analysis has been performed on the baseline study to design alternative or improved livelihood options for the targeted women. These have been prioritised according to their forecasted impact (in size and depth), contribution to women's climate change resilience, and probable economic sustainability (See Annex 1 List of prioritised improved livelihood options).

At least 30 per cent of the women are expected to increase their access to clean water and 30 per cent their access to off-grid renewable energy technology and inputs and scaled-up climate-resilient agricultural production. They will achieve this through increased access to solar irrigation systems and other climate-resilient practices. These will promote inclusiveness, gender equality, and accountability by engaging more women in institutional arrangements for climate change and reducing GHG emissions through the off-grid street lightening of the rural municipality.

Box 5-2

Case 2: Promoting green and cleaner energy for rural Cambodian women through a biodigester



The other case study focuses on the biodigester project implemented in rural Cambodia. It is known that rural women are involved in cooking activities and almost 80 per cent of households use firewood as the main source of energy for cooking. This has adverse effects on health, compelling women to spend more time collecting wood and sometimes exposing them to physical violence during collection. By replacing a traditional way of cooking using firewood with a biodigester, poor and rural households can use available resources from waste materials (e.g., animal and human waste). This is time-saving for women and girls, offers socio-economic, health, and environmental benefits, and contributes to a reduction in GHG emissions.

As a new, innovative technology providing not only high-quality gas for cooking but also electricity for lighting the home at night, the biodigester seems to improve gender equality in households given that men are willing to share in labour supporting the process. This ranges from construction, to operation and maintenance. This is unlike the previous pattern when traditional fuelwood was used: men perceive this kind of job to be a female domain, and collecting wood and cooking has for a long time been considered to be an easy job for women and girls. The biodigester contributes to reducing GHG emissions by preventing deforestation and reducing smoke discharge, and this improves indoor air quality.

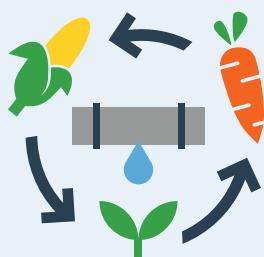
By 2017, 26,293 biodigesters had been installed in 13 provinces along the Tonle Sap and Mekong floodplains and Kampot province in the coastal areas. The project is not yet completed, and the RGC intends to increase the number of biodigesters by 1,500 annually at all scales in the current provinces and expand to other provinces located in the mountainous and plateau regions. According to the Cambodia National Biodigester Programme, nearly 30,000 biodigesters were installed between 2006 and 2019 providing local people, especially rural women, with huge advantages including livelihood and health improvements, employment creation, and environmental benefits (See in Annex 2).

5.2 A case involving agriculture

Promoting an up-scaling, climate-smart farming system that is resilient to climate change is given consideration in the Agriculture Strategic Development Plan 2019-2023 and the associated adaptation action for agriculture in the updated NDC 2020. Climate-smart agriculture (CSA), together with various agricultural technologies and innovations, has been applied to increase agricultural productivity, improve safety, harvesting and post-harvesting techniques, and to enhance agri-business. Women's economic empowerment and participation in the decision-making process are taken into account to ensure their full participation and equal opportunities for capacity development.

Box 5-3

Case of climate smart agriculture



A best practice example of climate-resilient agriculture, implemented by the MoE and FAO to increase the resilience of the agricultural systems in Cambodia, provides key lessons in cost-effective interventions to build a more resilient agricultural system in Cambodia. The project aimed to improve the adaptive capacity of rural communities to deal with the adverse impacts of climate change and to strengthen ecosystem services to support agriculture and achieve food security. The project has also contributed to capacity building for ministries and institutions working on climate change adaptation policies, agriculture, and food security. Implemented in the Saang district of Kandal, the Steung Trang district of Kampong Cham, and the Rolea B'ier district in Kampong Chhnang, the project involved multi-stakeholders ranging from government officials, university students and local farmers. Training courses on the participatory modelling and simulation of climate vulnerabilities and the design of CSA strategies were organised for 100 staff from MAFF and 21 students from the Royal University of Agriculture.

The project's direct beneficiaries included 750 farmers who learned how to increase their resilience to the changing climate and climate shocks and stresses. Key major achievements included crop rotation plantations using a drip system, and agro-clinics, and garlic leaf plantations with drip systems were installed in Kandal province. In Kampong Cham province, the project diversified crop plantations with the installation of integrated rain harvesting/storing, crop rotation plantation with a drip system, and agro-clinics. In Kampong Chhnang province, chicken raising activities, two agro-clinics and eight crop rotation plantations were established. The project offered various training courses, coaching, outreach materials and farmer field trips. It is notable that 254 farmers (90 women) attended the farmer field days (See Annex 3).

In the case of agriculture, gender considerations were not included in the process although the record highlighted the number of women who attended the farmer field trips.

5.3 A case involving rural development

This case examines the project Rural Road Improvement Phase II (SPCR), conducted with funding support from the ADB. The main activity was to build Mekong Island Connectivity through rural concrete roads on five selected islands in Kampong Cham province and a part of Tboung Khmum province. The main activities included: i) Diversifying sources of income for climate resilience; ii) Improving water access and reducing the vulnerability of agriculture to climate change; iii) Generating income through renewable energy; iv) Improving health and safety during climate extremes; and v) Developing a microfinance scheme. There were 29,868 beneficiaries (15,240 females) from 6,950 households.

Box 5-4

Climate-resilient rural roads benefiting rural women, the poor and vulnerable groups



Implemented by the Ministry of Rural Development, improvements were made to rural roads, irrigation systems were rehabilitated, and water wells were constructed which have contributed much to rural development, along with sanitation and hygiene improvements, community development and capacity building, and micro-credit provision. These measures go a long way towards promoting gender equality and climate change resilience. Climate change adaptation and gender aim to boost women's resilience and to create more opportunities for them to participate in community decision-making. The project began with integrating gender considerations within the project design, namely Rural Road Improvement Phase II (SPCR), in line with the planned activities/expected outputs and gender-inclusive key indicators. This was done by determining the number of women participating, and ensuring that projects were gender-sensitive, and related to diversified sources of income for climate resilience and improved water access. They were designed to reduce vulnerability and to boost income generation through renewable energy, as well as improving health and safety during climate extremes and providing a microfinance scheme. The project showed how to transform policy into gender-responsive investment in climate change adaptation towards increasing women's resilience to extreme weather and climate variability.

The project achieved the following outputs:

1. Civil work: a concrete paved road covering 50 km and 11 jetties were constructed on the five Mekong islands. Maintenance is on-going.
2. Construction: 450 elevated latrines, one health post, solar street lights, 15 biogas digesters, and improvements to 15 existing ponds were completed
3. Solar Pumps: 40 solar pumps were installed to bring water from the river to all 15 improved ponds and pumps for irrigation
4. Installation: 20 Drip and Spray Systems and two signs to slow traffic down were installed.

The project set key indicators for gender inclusion relating to: job creation and diversification (farm and off-farm rural jobs became more accessible) for male and female labourers; improved access to clean water and sanitation by male and female-headed households; and better access to healthcare centres, pagodas and schools for male and female villagers/children.

Box 5-4**Climate-resilient rural roads benefiting rural women, the poor and vulnerable groups (continued)**

The gender assessment using participatory research by the CDRI team called “the impacts of climate change programs on poverty reduction, gender, and vulnerability” in 2019 and 2020 showed that the programs had increased the availability of local livelihoods, particularly supporting diversified sources of income for villagers and improving their well-being in travelling and transporting products. Employment in the villages had been boosted thanks, in particular, to the concrete roads: both male and female beneficiaries perceived that their livelihoods had improved through greater access to jobs after the project was completed. About 70 per cent of the female and poor households surveyed reported a livelihood improvement, compared with the 65 per cent and 35 per cent, reported in 2019, when the road did not exist. The concrete roads also increased the number of tourists coming to visit the islands, which is leading to further opportunities for local employment and businesses. Other benefits from the concrete roads for women, children and vulnerable groups included better access to public services – medical facilities, pagodas, schools and local markets. Using panel data from 2019 and 2020, both female-headed and general households seem to have benefitted from the concrete roads project in terms of both agriculture and non-agriculture incomes. Poor households tended to gain an advantage from the project for non-agricultural incomes. The figures (see Annex 4) show that incomes from agriculture and the collection of forest products by female-headed households was 35.4 thousand riels in 2019 and 43.1 thousand riels in 2020, which represented an increase of 21.7 per cent. The incomes from non-agricultural activities conducted by female-headed household were 119.2 thousand riels in 2019 and 167.9 thousand riels in 2020, an increase of 40.8 per cent.

5.4 A case involving forestry

With the support of development partners, REDD+ projects, including pilot activities, have been implemented by different government institutions to include natural resource planning in REDD+. Three pilot REDD+ projects have taken place: one in Koulen national park covering an area of 37,375 ha; the Samroung project is located in Pursat province and covers an area of 5,414 ha; and the third – the Sor Sor Sdam project in Sor Sdam commune, Pouk district - is located in the Tonle Sap floodplain of Siem Reap province covering an area of 40 ha. Other REDD+ projects being implemented include Southern Cardamom REDD+, Reduced Emissions from Deforestation and Degradation in Keo Seima Wildlife Sanctuary, Tumring REDD+, and REDD in Community Forests – Oddar Meanchey²⁶².

²⁶² GSSD-MOE. 2020. “First Biennial Update Report of the Kingdom.”

Box 5-5

REDD+ integrating
gender aspects into
project implementation

The project set a quota for women's participation of 50 per cent. For instance, out of four FA Cantonments, comprising 4,728 members, 2,360 (50 per cent) are women. In the process, the four key steps of integrating gender into REDD+ readiness efforts included:

- Understanding gender-differentiated roles and needs in REDD+ through gender mainstreaming – forestry management planning: women applied the methods and tools for gender mainstreaming
- Equal representation and meaningful participation of women through their engagement and participation in the processes and in understanding of the gender concept. CF gender focal persons played important roles in the facilitation and dissemination of CF information to other CF members
- Secured and equal access to, and control over resources: gender mainstreaming and the local needs, knowledge and practices of indigenous communities were taken into consideration in CF management planning and CFMC institutional strengthening.
- Equitable benefit-sharing mechanisms through the link to the commune development and commune investment plans.

Female members of Community Forestry initiatives gained knowledge about gender awareness, gender analysis, gender mainstreaming, and monitoring and evaluation with a gender perspective, in the management of the Community Forestry initiative from the training-of-trainers (ToTs) conducted by the project. Local target community members actively engaged with a gender gap assessment in Community Forestry development and voted for the selection of gender focal persons in each Community Forestry initiative. The target women community members joined a series of training courses with support from core ToTs. To mainstream gender into Community Forestry management planning, coordination between gender focal point persons and commune council members was established. Reflection workshops were regularly conducted on the implementation of the gender mainstreaming action plan²⁶³. However, it seems that gender promotion in the REDD+ sector in the context of climate change remains scant. Notably, the sectors do not explicitly disaggregate the stakeholders by gender, social inclusion and vulnerability perspectives. Only the specific programs and projects integrate gender concerns into the process of implementation.

²⁶³ Gurung, D.D. 2019. "Mainstreaming Gender into Cambodia's REDD+ Action and Investment Plan."



6. Conclusion and recommendations

The RGC is moving forward in its efforts to integrate gender equality into climate change responses in the most prioritised adaptation and mitigation sectors. The strategic development plans highlight gender considerations in climate actions, which are the core components in the strategic framework for sectoral planning. This report highlights the current state of climate change and gender equality in key sectors, namely, energy, agriculture, rural development and forestry. The four sectors selected are among those prioritised by the government for adaptation and mitigation actions to combat the effects of climate change indicated in Cambodia's Updated NDC 2020. The master plan on agriculture sets out to modernise the agricultural sector to become the most competitive, inclusive and resilient to climate change, and with environmental sustainability. A gender work system is established in all aspects of work. Likewise, gender action plans in the rural development strategic plan have been officially approved, and gender mainstreaming within the strategic development plans of the forestry and energy sectors are under development.

Cambodia is committed to combating the impacts of global climate change and has been fulfilling its responsibilities under the United Nations Framework Convention on Climate Change (UNFCCC), into which gender concerns have now been well integrated. Importantly, the First Biennial Updated Report acknowledges the roles of MoWA in strengthening gender capacities in respect of climate change, and in piloting gender-based climate change adaptation and mitigation measures. Cambodia's Updated NDC 2020 acknowledges the important role of gender in cross-cutting areas, and proposes six gender actions for CCA implementation. Gender is integrated within the online NDC tracking system and each proposed priority action for NDC is conducted with an eye to the gender impact assessment.

Through current gender mainstreaming coordination and mechanisms, integrating gender into climate change adaptation investments is one of the ways to reduce the differentiated impacts of climate change on women. More work is required to strengthen the institutional capacity of MoWA to integrate gender actions on climate change mitigation into policies, strategies and the programs of key sector ministries.

Despite the recognition and acknowledgment of gender in climate change adaptation, the major challenge remains at the implementation stage due to the absence of specialised and tailored supporting activities, indicators and resources for translating the gender policy objectives into practical actions. In addition, there are few indicators or milestones relating to gender (the updated NDC being an important new exception to this), and hence any gender-related outcomes are not captured by monitoring and evaluation (M&E) frameworks. The understanding, knowledge and skills for gender analysis to achieve systematic and comprehensive integration are still limited.

Although the key policy and strategy of gender and climate change of the selected sectors (energy, agriculture, rural development and forestry) exist, the implementation of gender-specific action plans has stagnated largely because of the budget shortfall and the lack of human resources. The M&E framework of the current CCCSP, developed to monitor climate-related gender-specific vulnerabilities, is not sufficiently user-friendly for line ministries and sub-national agencies.



Photo: UN Women/Sakari Mounier

Energy

Gender-responsive policy in the energy sector could contribute towards the achievement of more efficiency and effectiveness in ensuring equal access among male and female users. Although all villages and households are expected to enjoy access to electricity throughout the country by the government's target of 2023, equal access to energy is not guaranteed among the poor and rich, women, men, and other vulnerable groups. Notably, only a small proportion of the electrified households have access to reliable, good quality, affordable and safe and healthy electricity supplies, especially for those in urban areas. Women gain less advantage from the energy sector because their access to on-grid electricity is limited and the supply is poor because of frequent power shortages, and appliance damage resulting from voltage fluctuation. Access to renewable energy could contribute to the promotion of gender equality, as indicated in the literature review. To date, there is no specific guidance about whether the government has set a target for renewable energy usage that allows the private sector to invest in it and contribute to the security of the national energy supply. More importantly, mainstreaming the gender aspect into energy transition efforts needs enacting to align the policies relating to climate change mitigation and to green growth. With the existing gender mainstreaming mechanisms at the MME level, efforts relating to gender work progress slowly as there is a lack of sufficient human and financial support, and the Covid-19 pandemic has caused significant disruption. Only a few highlights regarding gender integration appear in the renewable energy projects that have been implemented and funded by development partners, NGOs, and a private company, while major concerns about women, girls, and other vulnerable groups have not been given any consideration.

Agriculture

Agriculture remains a key contributor to Cambodia's economy and absorbs more than half of the total female labour force. Climate change poses a threat to agricultural production and has a critically adverse, but different, impact on men and women in terms of a shift in employment, migration induced by natural disasters, control over resources and assets, persistent social norms and gender stereotypes, socio-economic opportunities, and the adoption of new technologies. Key agricultural policy and strategy document the important roles of gender in agriculture and provide explicit gender equality measures in detailed action plans for implementation with planned budget allocations. However, this is insufficient to promote gender equality and climate change adaptation in agriculture as gender-specific action needs strengthening for the better implementation of CCCSP/CCAPs supported by adequate financial and human resources. The strategic plan relating to agriculture does not have a gender analysis section and consequently does not identify the differential impacts of climate change on women and men in terms of their needs, priorities and capacities, as well as the critical roles of women as agents of lasting change. The crucial role of women in environmental conservation and production processes in agriculture, forestry and fisheries in response to climate change must be reflected in gender-sensitive and responsive manners, accepted and carried out by policymakers and practitioners.





Rural development

Increased climate variability has had an adverse impact on rural infrastructure, water supply, sanitation and hygiene, access to rural public services, and family and household economies. A distinct difference in the roles of women and men involves access to basic physical, social, economic and environmental resources. Greater burdens are placed on rural women in conducting their reproductive and productive work as a result of increased climate variability. Women in the rural community are more vulnerable to disasters compared with men in terms of physical and mental impacts. The threats are associated with unequal access to public and private services – financial resources, health and rights, natural resources, limited access to education and economic opportunities, and participation in decision-making processes. The sex-disaggregated data differentiating women's and men's roles in climate change action plans add significant value to the current gender mainstreaming policy, strategy and action plans to tackle the gendered impacts of climate change on rural development.

Forestry

The mainstreaming of gender into forestry and forest-related environmental policies remains scant, while the impacts of climate change on women in the sector are more severe. Women are more directly involved in the natural environment but have fewer opportunities to participate in capacity building and lack access to information and education. Considering more gender-responsiveness in the respective objectives, and acknowledging the important roles of women in forestry and natural resource management, mean promoting gender inclusion within policy, strategy, planning and programs with specific action plans in line with sound gender indicators, sex-disaggregated data and budget allocation to achieve target policies and set objectives. Strengthening coordination can minimise the challenges of the mismatch and overlapping roles and responsibilities among the three national governing bodies (the Forestry Administration and the Fisheries Administration of the MAFF, and the General Department of Administration of Nature Conservation and Protection (GDANCP) of the Ministry of Environment).



6.2 Recommendations

Overall recommendations

To implement gender-responsive activities and mainstream climate change and gender considerations along with the allocation of sufficient domestic and international resources in both the adaptation and mitigation sectors, overall recommendations could be drawn as follows:

Enhancing coordination and facilitation

- Enhance the coordination mechanisms between the Ministry of Women's Affairs (MoWA) and the MoE to improve mainstreamed capacity relating to gender and climate change policies, sectoral planning and programs;
- Integrate gender sensitivity in all levels of consultation and decision-making processes for a more effective adaptation and mitigation response to climate change;
- Improve institutional capacity for national women's machineries to ensure gender equality is fully included in climate change planning, budgeting, implementing, monitoring and evaluation, supported by sound coordination among donors and other funding agencies, to provide both technical and financial support.

Research and capacity development

- Increase gender-focused research on climate change mitigation and adaptation and expand the use of existing gender-responsive research findings, lessons learned and best practices conducted and compiled by research institutes, academia, CSOs and CBOs;
- Promote gender parity and increase the number of women experts and researchers equipped with capacity and skill development in the areas of agronomy, climate change economics and mitigation;
- Acquire a deeper understanding of how to integrate gender equality considerations within climate change investment and finance, including mainstreaming gender into the roles and responsibilities of officials at national and sub-national levels.
- Sex-disaggregated data on climate change
- Strengthen the coordination among key government institutions, such as the Ministry of Women's Affairs (MoWA), the Ministry of Mines and Energy (MME), the Forestry Administration, the Ministry of Economy and Finance (MEF) and the Ministry of Planning (MoP) towards producing and using sex-disaggregated data and gender statistics in all sectoral ministries;
- Improve existing national information and datasets by inserting sex-disaggregated information into existing climate change adaptation and disaster risk reduction platforms; i.e., the vulnerability assessment tools and indicators of the National Council for Sustainable Development of the MoE, and the Cambodia Disaster Damage and Loss Information System (CamDi) of the National Committee for Disaster Management (NCDM).

M&E framework

- Mainstream gender into sectoral climate change policies and strategies in line with a sound M&E framework on gender equality through integrated indicators and data collection methods;
- Strengthen the gender and climate change planning and M&E framework by revising and updating indicators and data collection methods to ensure consistency within the national gender indicators so that data and values of indicators are reliable and more gender statistics and data are used to support policymaking.

Policy recommendations by sector:

Energy

- Support more clean energy solutions such as biogases, medium-scale biodigester plants, and improved cooking stoves that address women's reproductive roles and reduce their time burden and create more economic and business opportunities for local women;
- Strengthen coordination and collaboration with department partners, NGOs and the private sector in supporting the implementation of renewable energy projects that take gender equality into account;
- Establish gender mainstreaming within energy policy, strategic plans and programs and climate change action plans for the energy sector, including renewable energy, to ensure that gender responsiveness is aligned with the specific action plans and available budget allocations for policies supporting climate change mitigation and green growth.

Agriculture

- MAFF should produce a gender-responsive climate change action plan and integrate it within the current gender mainstreaming policy and strategy by ensuring sufficient budget allocation for implementation and capacity development for target government officials;
- Simplify the process and integrate gender-based indicators into the Vulnerability Reduction Assessment (VRA) tool for better in-depth gendered impact assessments of climate change on men and women in the agriculture sector; and
- Gender and climate change analysis should be integrated specifically within key policy, strategy and action plans to recognise the differential impacts of climate change on women and men in terms of the needs, priorities, capacities and the critical roles of women as agents of lasting change.

Rural Development

- In common with the energy sector, the MRD should work with the MME to support more clean energy solutions such as biogases, medium-scale biodigester plants, and improved cooking stoves that address women's reproductive roles and reduce their time burden, and that also create more jobs, and economic and business opportunities to support diversified income generation for local women;
- Improve local women's adaptive capacity to cope with the high risk of climate change. This can be done through more accessible weather broadcasting, early warning systems and physical infrastructure such as resilient housing, safe places, access to energy for household consumption, safer water and better sanitation; and
- The MRD should establish a data platform demonstrating gender disaggregation in current key policies, strategies and programs relating to climate change for in-depth analysis of the gender-differentiated impacts of climate change.

Forestry

- Gender equality should be enhanced, especially in law and policy-related forestry and natural resource and environmental management, and specific action plans and budget allocation to achieve target policies and set objectives should be prioritised;
- The Forestry Administration should build gender data into the current statistics of Community Forestry, to be able to conduct gendered impact assessments and analysis;
- The Forestry Administration should specify strategy and action plans relating to climate change with explicit gender equality in forestry, developed and implemented with sound technical and financial support by upgrading the current Climate Change Strategic Plan and Climate Change Priorities Action Plan in the Agriculture, Forestry and Fisheries Sector;
- Enhance the coordination and facilitation of the three national governing bodies (the Forestry Administration (FA) and the Fisheries Administration (FiA) of the MAFF, and the General Department of Administration of Nature Conservation and Protection (GDANCP) of the Ministry of Environment) towards linking to promote gender considerations within policies, strategies, planning and programs in the forestry and natural resource management sector.



List of annexes

List of annexes

Annex 1: List of prioritised and improved livelihood options

So far, the project has completed the Scoping Studies on “Women’s Entrepreneurship and Livelihood Generation through Renewable Energy” and the Pre-Feasibility Studies of Empower’s possible interventions for project sites. The geographical focus of the Scoping Studies and Pre-Feasibility Studies were eight specific villages in Pursat and Takeo provinces. The two provinces were selected because they serve as good examples of the Cambodian rural context: Takeo for its proximity to the capital city and the fact that it has benefitted from long-standing governmental and international development programs; Pursat because it has the opposite profile.

The Scoping Studies identified eight livelihood options that have great potential for the two selected provinces. The livelihood options proposed incorporate renewable energy technology in an attempt to help women to better adapt to climate change while at the same time contributing to climate change mitigation through the reduction of GHGs emissions and promoting the use of clean energy. The Table below shows the proposed livelihood options and the renewable technologies involved. More importantly, the Pre-Feasibility Studies further explored how these livelihood options could be implemented at the village level and updated the prioritisation according to the additional field learning and analysis. The Studies chose the seven priority actions for livelihood options for women groups (see the Table below). These livelihood options contribute to strengthening the flood resiliency capacity of communities around the Tonle Sap lake (through access to clean water, use of off-grid renewable energy and waste management) and leverage the decentralisation process to strengthen financial and institutional processes for local adaptation.

List of prioritised options for improved livelihoods

Proposed livelihood option	Renewable energy (RE)/energy efficiency (EE) technology
1. Rice drying	Solar rice dryer
2. Fish production	Solar fish dryer
3. Agricultural irrigation	Solar water pump
4. Vegetable preservation	Solar cooling system
5. Chicken and duck production	Solar chick incubator
6. Garment sewing	Solar panels for electricity generation
7. Grocery management	Solar panels for electricity generation
8. Retail of RE and EE technologies	Improved cooking stoves, solar devices, and other renewable energy products

Annex 2: Cleaner energy for rural women using biodigesters

The Cambodian National Biodigester Program was originally set up in 2006 by the Cambodian Ministry of Agriculture, Forestry and Fisheries (MAFF) and SNV Netherlands Development Organisation. In the period March 2006 to December 2019 nearly 28,000 biodigesters were constructed through 118 micro-enterprises in 15 provinces. The program was one of the first large-scale biogas projects certified to Gold Standard with support from Hivos. Since 2017, MAFF has been using money generated from the sale of carbon credits to continue running and expanding this programme.

Project impacts and benefits:

Livelihood and health improvement:

- 27,980 biodigesters constructed from March 2006 to December 2019 with 78,853 direct beneficiaries
- 64.4 per cent of constructed biodigesters still operational; i.e. 18,020 smoke-free kitchens (December 2019)
- Biogas kitchen air pollution reduced by 88 per cent (Particulate Matter 2.5)
- US\$143 saving in expenditure on cooking fuels per household per year

Employment creation:

- 118 private enterprises established of which 53 are active
- 810 trained masons
- 154 trained supervisors

Environmental benefits:

- On average 3.52 tCO₂ reduced per digester in 2019
- 821,440 tCO₂ reduced between May 2009 and December 2019
- 276,300 tonnes of wood saved

Source: <https://marketplace.goldstandard.org/products/cambodia-national-biodigester-programme>

Annex 3: Best practice on advancing climate-smart agriculture in rural areas in Cambodia

Project title: Climate-smart agriculture

Location:

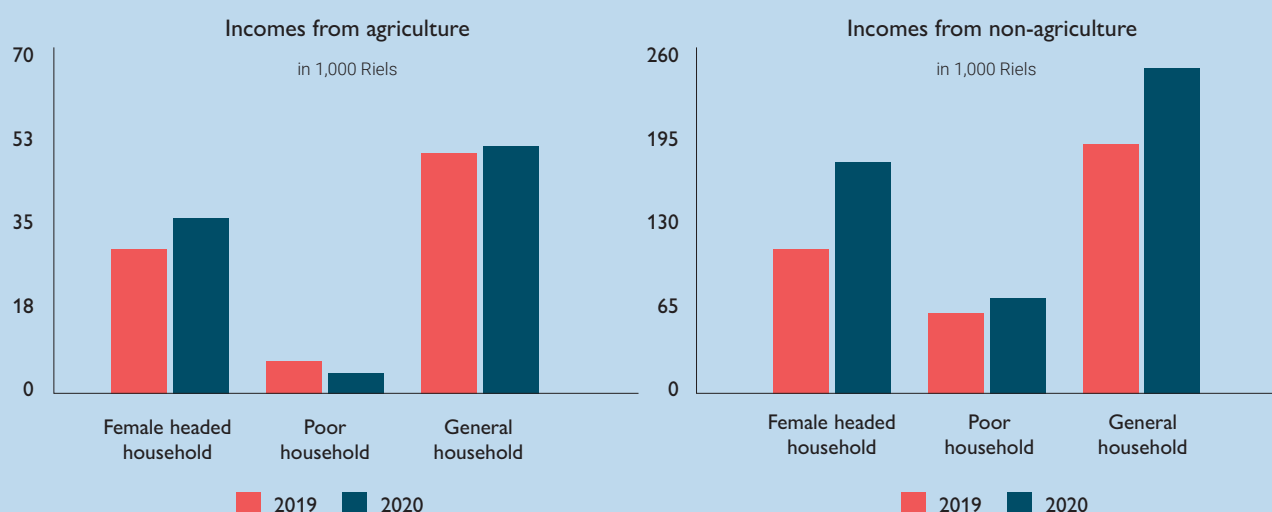
- 100 staff from MAFF and 21 Royal University of Agriculture (RUA) students trained in the participatory modelling and simulation of climate vulnerabilities, and the design of CSA strategies
- 750 farmers have increased their resilience to the changing climate and climate shocks and stresses. The project has shared the lessons learned with development practitioners through the dissemination of the participatory climate vulnerabilities modelling and simulation toolbox, and the best practices sourcebook, to development practitioners and students who majored in agriculture.

Major achievements

- 10 crop rotation plantations with drip systems, two agro-clinics and seven garlic leaf plantations with drip systems were placed in Kandal province
- 10 diversifying crop plantations with installations of integrated rain harvesting/storing, and 10 crop rotation plantations with drip systems and two agro-clinics were developed in Kampong Chhnang province
- Eight chicken-raising activities, two agro-clinics and eight crop rotation plantations were implemented in Kampong Chhnang province
- 11 training courses and coaching on various topics including cultivation techniques for vegetable crop production and rotation crop planting methods, and the management of pests and diseases using Trichoderma on garlic were provided by PDAFF (the Provincial Department of Agriculture, Forestry and Fisheries) for the beneficiary households
- Additional types of books/resource documents and leaflets were collected to put in each agro-clinic
- Farmer field days were conducted with 254 farmers (90 women).

Source: <https://ncsd.moe.gov.kh/dcc/project/increasing-resilience-climate-change-farmers-rural-cambodia-through-climate-smart-agriculture-practices-ir-csa>

Annex 4: Incomes from agriculture and the collection of forest products by female-headed households



Source: Authors' calculations based on survey data 2019 and 2020

Annex 5: List of stakeholders in consultation meetings

Inception meeting

No.	Institution	Name of Attendee	Sex	Role/Position
1	Ministry of Mines and Energy (MME)	Tey Dany	Female	Deputy Director
2	Ministry of Rural Development (MRD)	Touch Siphath	Male	Director of Training and Research Department, MRD
3	Ministry of Health (MoH)	Ea Sokoeu	Male	Head of Office
4	National Committee for Sub-national Democratic Development (NCDD), Ministry of Interior (MOI)	Sorn Sunsopheak	Male	Deputy Head of NCDD Secretariat
5	Ministry of Environment (MoE)	Dr. Heng Chanthoeun	Male	Deputy Director of the Department of Climate Change (DCC), MoE
6	Cambodia Climate Change Alliance (CCCCA), UNDP	Sey Pov	Male	Staff
7	Ministry of Water Resources and Meteorology (MoWRAM)	Kert Putheavann	Male	Deputy Director of Department, MoWRAM
8	Ministry of Rural Development (MRD)	Chhem Leapheng	Male	Director of Department, MRD
9	UN-Women	Lim Sereyroth	Female	Officer
10	ActionAid Cambodia	Hong Reaksmeay	Male	Country Director
11	Ministry of Women's Affairs (MoWA)	Chhan Ratha	Female	Deputy Director Department, and Deputy Team leader in the Climate Change Unit under the Gender and Climate Change Committee of MoWA
12	Forestry Administration, Ministry of Agriculture, Forestry and Fisheries (MAFF)	Vong Sopanha	Female	Deputy Director and Gender Team Leader, Forestry Administration
13	National Committee for Sub-national Democratic Development (NCDD), Ministry of Interior (MOI)	Piseth Sela	Male	Officer
14	Cambodia Development Resource Institute (CDRI)	Eng Netra	Female	Research Director
		Pech Sokhem	Male	Executive Director
		Nhong Sodavy	Female	Research Assistant

First consultation meeting

No.	Institution	Name of Interviewee	Sex	Role/Position
1	Ministry of Women's Affairs (MoWA)	Chhan Ratha	Female	Deputy Director Department, and Deputy Team leader in the Climate Change Unit under the Gender and Climate Change Committee of MoWA
2	Ministry of Environment (MoE)	Khlok Vichet Ratha	Female	Deputy Director, Department of Climate Change, GSSD/MoE
3	ActionAid Cambodia	Ven Saroeut	Male	Program Quality Officer

Second consultation meeting for preliminary findings of the report

No.	Institution	Name of Interviewee	Sex	Role/Position
1	BBC Media Action	Hor Otdam	Male	Senior Research Officer
2	Royal University of Phnom Penh (RUPP)	Dr. Kok Sothea	Male	Department Head, Department of Environmental Science, RUPP
3	Forestry Administration, Ministry of Agriculture, Forestry and Fisheries (MAFF)	Vong Sopanha	Female	Deputy Director and Gender Team Leader, Forestry Administration
4	Ministry of Rural Development (MRD)	H.E. Lay Viraboth	Female	Under Secretary of State, and Vice Chair of the Gender Working Group of MRD
5	Ministry of Mines and Energy (MME)	Touch Sophal	Male	Director of the Department of Rural Economic Development, and Member of the Gender Working Group of the MRD
6	NGO Forum on Cambodia	Sam Sophy	Female	Deputy Director, Department of Rural Health Care, and Member of the Gender Working Group of MRD
7	Oxfam in Cambodia	H.E. Nhek Someth	Male	Under Secretary of State, MME

Third virtual consultation meeting to validate findings with key ministries

No.	Institution	Name of Interviewee	Sex	Role/Position
1	Ministry of Mines and Energy (MME)	H.E. Pen Chhorda	Female	Secretary of State, MME
		H.E. Nhek Someth	Male	Under Secretary of State, MME
		Him Somarong	Female	Deputy Director, Department of Renewable Energy, MME
		Sok Chandareth	Male	Deputy Director, Department of Renewable Energy, MME
2	Ministry of Agriculture, Forestry and Fisheries (MAFF)	Stong Kia	Male	Planning and Statistics at MAFF
3	Forestry Administration, Ministry of Agriculture, Forestry and Fisheries (MAFF)	Vong Sopanha	Female	Deputy director
		Khiev Sokleap	Female	Vice Chief of Forest Carbon Credit and Climate Change Office
4	Ministry of Environment (MoE)	Khlok Vichet Ratha	Female	Deputy Director of the Department of Climate Change, GSSD/MoE
5	Ministry of Women's Affairs (MoWA)	Chhan Ratha	Female	Deputy Director Department, and Deputy Team Leader in the Climate Change Unit under the Gender and Climate Change Committee of MoWA
6	Ministry of Rural Development (MRD)	Touch Siphat	Male	Director of the Training and Research Department, MRD
		Yem Sophal	Male	Office Head, Office of Training and Research, MRD

In total, 42 participants were consulted, of whom 24 were male and 18 were female.

Annex 6: List of key policy documents reviewed by year and type

No.	Year	Name of document	Type of document	Level of gender assessment	Gender assessment
1	1994	National Energy Policy	Policy	No gender references	No gender references
2	2000	Cambodia Millennium Development Goals (CMDGs) 2000-2015	Policy	Gender responsive	In Goal 3: Promote gender equality and empower women: • Reduce significantly gender disparities in upper secondary and tertiary education • Eliminate gender disparities in wage employment in all economic sectors • Eliminate gender disparities in public institutions • Reduce significantly all forms of violence against women and children
3	2002	Cambodia's Initial National Communication	Law	No gender references	No gender references
4	2002	Cambodia's Initial National Communication	Policy	No gender references	No gender references
5	2003	Sub-decree on Community Forestry Management	Law	No gender references	In Article 18, it states that the Community Forestry Management Committee's members shall be made up of an odd number from five (05) to eleven (11) consistent with the advice of the Forestry Administration and shall encourage the participation of women in the Community Forestry Management Committee.
6	2005	Law on the Prevention of Domestic Violence and the Protection of Victims	Law	Gender aware	Aims to eliminate gender-based violence in education, and to promote dissemination of relevant information and training, and the protection of victims.
7	2006	National Adaptation Program of Action to Climate Change (NAPA)	Plan and program	No gender references	No gender references
8	2006	Prakas (Proclamation) on a guideline for Community Forestry	Law	No gender references	No gender references

Annex 6: List of key policy documents reviewed by year and type (continued)

No.	Year	Name of document	Type of document	Level of gender assessment	Gender assessment
9	2000	Master Plan Study on Rural Electrification by Renewable Energy in the Kingdom of Cambodia	Policy	No gender references	No gender references
10	2002	Gender Mainstreaming Policy and Strategy in Agriculture	Policy	Gender responsive	The document states clearly the need for gender mainstreaming in the policy, strategic plan, and implementation process with guidance relating to budget allocation.
11	2002	Strategic National Action Plan for Disaster Risk Reduction in Cambodia 2008-2013 (SNAP-DRR)	Strategy	Gender aware	Promotes gender and cultural sensitivity training as integral elements of DRR in component 4: Use knowledge, innovation and education to build a culture of safety and resilience.
12	2003	The National Green Growth Roadmap	Strategy	Gender aware	Integrates gender equality into green growth - the development and implementation of the role of gender in green growth.
13	2005	National Strategic Development Plan (NSDP) 2019-2023	Strategy	Gender responsive	Stresses the need to strengthen gender mainstreaming mechanisms in sectoral and national programs, including climate change.
14	2006	National Forest Program 2010-2029	Plan and program	Gender aware	The policy encourages women's participation in management at the national and local levels, to ensure that women are involved more effectively in the forestry sector. But there is no gender indicator in the set indicators.
15	2006	Cambodia Rural Electrification Strategy and Implementation Plan	Strategy	No gender references	No gender references
16	2012	Climate Change Strategic Plan for Mines, Industry and Energy 2014-2023	Strategy	Gender aware	Gender is set in the strategic objectives and cross-cutting issues section. The strategy considers the need for gender mainstreaming into action plans and programs.
17	2013	Cambodia Climate Change Strategic Plan 2014-2023	Strategy	Gender aware	In Strategic Objective 2: Reduce sectoral, regional, gender vulnerability and health risks relating to climate change impact; but there is no instruction in terms of budget allocation and this results in a big gap in budget implementation.

Annex 6: List of key policy documents reviewed by year and type (continued)

No.	Year	Name of document	Type of document	Level of gender assessment	Gender assessment
18	2013	National Strategic Plan on Green Growth 2013-2030	Strategy	Gender aware	Emphasises the promotion of a green social safety system: development and implementation of gender roles in green growth by MoWA. Broadly indicates that financing support comes from the national budget and other sources. No mention about how much budget is needed.
19	2013	Gender and Climate Change Strategic Plan (GCCSP) 2013-2023	Strategy	Gender responsive	Emphasises gender in climate strategic framework, goals and objectives, and financing strategy and mechanism.
20	2013	Climate Change Strategic Plan for Agriculture, Agri-industry, Animal Production, Fisheries, and Forestry 2013-2018	Strategy	Gender aware	The strategy addresses gender responsiveness in the policy, strategies, key activities, management and financial management, and the monitoring and evaluation framework.
21	2012	The National Strategy for Rural Water Supply and Sanitation 2011-2025	Strategy	Gender aware	Gender and disability considerations are integrated within Strategic Objective 2 of the document.
22	2013	Climate Change Strategic Plan for Rural Infrastructure	Strategy	Gender aware	The strategy acknowledges the different roles of women and men in rural socio-economic and community development in the context of climate change.
23	2013	National Policy, Strategy and Action Plan on Energy Efficiency in Cambodia	Policy	No gender references	No gender references
24	2013	National Action Plan for Disaster Risk Reduction (NAP-DRR) 2014-2018	Plan and program	Gender aware	Under Strategic Component 5 a comprehensive post-disaster damage and needs assessment is in practice with gender disaggregated information.
25	2014	Neary Rattanak IV (2014-2018)	Strategy	Gender responsive	Contributes to gender-responsive laws, policies and programs at national and sub national levels; supports the promotion of women's economic empowerment, including in relating to climate change and environmental management.

Annex 6: List of key policy documents reviewed by year and type (continued)

No.	Year	Name of document	Type of document	Level of gender assessment	Gender assessment
26	2014	Gender and Climate Change Action Plan (GCCAP) 2014-2018	Plan and program	Gender aware	Emphasises gender in the climate strategic framework, goals and objectives, financing strategy and mechanisms and legal requirements.
27	2014	National Action Plan on Violence Against Women (NAPVAW) 2014-2018	Plan and program	Gender responsive	Policies, strategies, action plans, financing and M&E, but no reference to climate change.
28	2014	Census of Agriculture in Cambodia 2013	Plan and program	Gender aware	The report recognises the gender role by including sex-disaggregated data in some agricultural statistics. But there is no in-depth gender analysis.
29	2014	Climate Change Priorities Action Plan in the Agriculture, Forestry, and Fisheries Sector 2014-2018	Plan and program	Gender aware	To support the strategic plan 2014-2023, the action plan explicates gender responsiveness in the policy, strategies, key activities, management and financial management, and in the monitoring and evaluation framework.
30	2014	Climate Change Action Plan for the Rural Development Sector 2014-2018	Plan and program	Gender aware	The action plan considers men and women's roles, social vulnerability and labour standards.
31	2015	Climate Change Financing Framework	Policy	No gender references	No gender references
32	2015	Intended Nationally Determined Contributions of Cambodia	Policy	Gender aware	The important role of gender is acknowledged in the document namely in reducing sectoral, regional, gender vulnerability and health risks relating to the impacts of climate change.
33	2015	Cambodia's Second National Communication	Plan and program	Gender aware	Aware of the gendered impact of climate change and promotes women's capacity in adaptation programs, activities and targets.
34	2015	Action Plan for Gender Equality Promotion and Child Labour Elimination in the Fisheries Sector 2016-2020	Plan and program	Gender responsive	The document explicates gender in its objectives and strategies, action plans, implementation, funding support and monitoring and evaluation. Climate change is integrated into the cross-cutting issues.

Annex 6: List of key policy documents reviewed by year and type (continued)

No.	Year	Name of document	Type of document	Level of gender assessment	Gender assessment
35	2015	Gender Mainstreaming Policy and Strategic Framework in Agriculture 2016–2020	Policy	Gender responsive	The document provides key strategic objectives and implementation plans along with a gender assessment and strong gender references in overall goals. And it is aware of the difference in the impact of climate change on men and on women.
36	2015	Climate Change Action Plan for the Mines and Energy Sector 2015–2018	Plan and program	Gender aware	One of the action plans is to reduce sectoral, regional gender vulnerability and health risks relating to the impacts of climate change.
37	2016	Climate Change Action Plans (CCAPs) 2016–2018	Plan and program	Gender aware	Reduce sectoral, regional, gender vulnerability and health risks relating to the impacts of climate change, but no budget allocation has been identified.
38	2016	The National Forest Monitoring System of Cambodia	Plan and program	Gender aware	Aware of the roles of gender in Cambodia REDD+ Taskforce, technical team, consultation group and gender group.
39	2016	Cambodia National Energy Statistics	Plan and program	No gender references	No gender references
40	2017	National Environment Strategy and Action Plan (NESAP) 2016–2023	Strategy	Gender aware	The strategy acknowledges the important roles of gender and the impact of environmental changes on women, and the need for awareness and understanding. It promotes gender mainstreaming, and the need to work toward achieving a reflection of the inclusive and growth priorities in the national budget allocation and development framework.
41	2017	National REDD+ Strategy (NRS) 2017–2026	Strategy	Gender aware	Integrated through the gender groups of the FA and FiA of MAFF, MoE, and the Ministry of Women's Affairs (MoWA), the strategy addresses gender issues among members of the RTF, consultation group and technical teams, and reviews and provides gender-specific inputs to the NRS.

Annex 6: List of key policy documents reviewed by year and type (continued)

No.	Year	Name of document	Type of document	Level of gender assessment	Gender assessment
42	2017	National Protected Area Strategic Management Plan 2017-2031	Strategy	Gender aware	Gender mainstreaming in the strategic management plan through incorporation of strategies and actions to ensure that women and the most vulnerable groups are empowered to participate in the planning, management and decision-making processes related to protected areas, and equitable share in the benefits from the provision of livelihood opportunities.
43	2017	Cambodia National Adaptation Plan Financing Framework and Implementation Plan	Plan and program	Gender responsive	Proposes an implementation plan and budget allocation to address the vulnerabilities of women and other vulnerable groups such as children and the elderly through specific actions for capacity development for women in policy discussions, leadership, livelihoods, green growth and community resilience. MoVWA has one funded action and one partially funded project.
44	2017	National Adaptation Plan Process in Cambodia	Plan and program	Gender aware	Supports the implementation of the NAP financing framework.
45	2018	National Strategy for Development Statistics 2019-2023	Strategy	Gender aware	Roles of MoVWA in gender statistics, data analysis (SPSS and STATA), the Gender Reproductive Project, and management
46	2018	Cambodia Forest Cover 2016	Other	No gender references	No gender references
47	2018	Cambodia Sustainable Development Goals Framework 2016-2030	Policy	Gender responsive	In CMDG 5: Achieve gender equality and empower all women and girls. Sets seven objectives.
48	2018	Rectangular Strategy for Growth, Employment, Equity and Efficiency Phase IV	Strategy	Gender aware	In Rectangle 1 - Human resource development: i) Improving the quality of education, science and
49	2018	Phnom Penh Waste Management Strategy and Action Plan 2018-2030	Strategy	No gender references	technology; ii) Vocational training; iii) Improving public healthcare and nutrition; and iv) Strengthening gender equality and social protection.

Annex 6: List of key policy documents reviewed by year and type (continued)

No.	Year	Name of document	Type of document	Level of gender assessment	Gender assessment
50	2018	Master Plan on Gender and Climate Change 2018-2030	Plan and program	Gender responsive	Gender mainstreaming into climate change investment projects in the short- (2018-2019), medium- (2019-2023) and long-term (2023-2030).
51	2018	Mainstreaming Gender into Agriculture CCA Investments: Guidance Manual for Policy Makers and Practitioners	Plan and program	Gender responsive	Gender mainstreaming guidance is explicated in three levels of implementation. The document analyses gender gaps and needs at the policy level, identifies gender responsiveness and gender balance at the program level and verifies gender indicators at the beneficiaries' level.
52	2018	Rural Development Strategy, Action Plan 2019-2023	Policy	Gender aware	At the implementation level, gender aspects are explicated in the key objectives and cross-cutting issues. However, details about the process of implementing gender and funding support from the national budget are still limited.
53	2018	Rural Development Policy 2019-2023	Policy	Gender aware	The policy addresses gender equality in the objectives of the policy and subsequent strategies.
54	2018	Mainstreaming Gender into WASH (MRD) CCA Investments: Guidance Manual for Policy Makers and Practitioners	Plan and program	Gender responsive	The manual identifies 5 Steps for mainstreaming gender into WASH CCA Investment: analysis of gender mainstreaming and its recommendations; institutional recognition and endorsement; developing the gender mainstreaming framework; resource considerations; and reviewing and improving the processes.
55	2019	Climate Public Expenditure Review 2017	Plan and program	No gender references	In 2017, only 10 per cent of external climate change expenditure was tagged as being gender-sensitive, which was only marginally better than overall ODA to Cambodia, and still very low.
56	2019	NDC Roadmap and Stakeholder Engagement plan 2019-2030	Plan and program	Gender aware	Rectangle I - Human resource development consists of: i) Improving the quality of education, science and technology; ii) Vocational training; iii) Improving public healthcare and nutrition; and iv) Strengthening gender equality and social protection.

Annex 6: List of key policy documents reviewed by year and type (continued)

No.	Year	Name of document	Type of document	Level of gender assessment	Gender assessment
57	2019	Neary Rattanak V (2019-2023)	Strategy	Gender responsive	Emphasises gender in Strategy 6: Gender in Climate Change; the five-year implementation plan; financial resources; and monitoring and evaluation.
58	2019	National Energy Efficiency Policy 2018-2035	Policy	No gender references	No gender references
59	2019	Agriculture Strategic Development Plan (ASDP) 2019-2023	Strategy	Gender aware	The document addresses gender in the strategic framework and mainstreams it into the agriculture sector in line with the proposed five priority strategies and secure funding support.
60	2019	Gender Mainstreaming Strategic Plan from the Ministry of Rural Development	Strategy	Gender responsive	Includes efforts to integrate gender equality into laws, policies, strategies and programs, seeking collaborating partners for funding support. However, the link between gender and climate change is minimal.
61	2019	Cambodia National Community Forest Statistics 2018	Plan and program	No gender references	No gender references
62	2019	Cambodia Basic Energy Plan	Plan and program	No gender references	No gender references
63	2020	First Biennial Updated Report of the Kingdom of Cambodia	Plan and program	Gender aware	The document acknowledges the roles of MoWA in strengthening gender climate change capacities, piloting gender-based climate change adaptation/mitigation.
64	2020	Gender and Climate Change Action Plan (GCCAP) 2019-2023	Plan and program	Gender aware	Emphasises four sector priorities with a clear action plan and timeframe but no clear sources of funding support.
65	2020	Cambodia's Updated Nationally Determined Contribution	Policy	Gender responsive	Acknowledges the important role of gender in cross-cutting areas and proposes six gender actions for CCA implementation. Gender is integrated into the online NDC tracking system and each proposed priority action for NDC is conducted with a gender impact assessment.

Annex 6: List of key policy documents reviewed by year and type (continued)

No.	Year	Name of document	Type of document	Level of gender assessment	Gender assessment
66	2020	National Action Plan to Prevent Violence Against Women 2019-2023	Plan and program	Gender responsive	Highlights the priority issues, includes insightful strategies and action plans, details of financial support and sound monitoring and evaluation tools.
67	2020	Review of public investment in the agriculture sector in Cambodia	Plan and program	No gender references	No gender references
68	2020	The Agricultural Sector Master Plan 2030	Policy	Gender aware	The gender aspect is integrated into sub-strategic action 2 by establishing a gender work system towards increasing awareness about gender and ensuring the participation of females at all levels.
69	2020	Climate Change Action Plan for the Energy Sector 2021-2023	Plan and program	Gender aware	Gender and climate change is incorporated into Strategic Objective 2: Reduce sectoral, regional, gender vulnerability and health risks relating to the impacts of climate change. The action plan mentions the significant contribution of renewable energy and energy efficiency to the future decarbonised emissions. However, there is no gendered analytical section, assessing whether or not women will benefit from those provisions. Gender promotion or gender indicators should be evident in those policies.
70	2021	Second Forest Reference Level for Cambodia under the UNFCCC Framework	Strategy	Gender aware	The document acknowledges the roles of women in Community Forestry and in forest management: women play an especially important role, engaging in a variety of activities such as patrolling, conducting the forest inventory and collecting NTFPs.

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