Gender Mainstreaming in selected Nationally Determined Contribution Sectors in Bhutan: *Agriculture, Waste and Energy*

A Guideline

2022

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Foreword

The National Commission for Women and Children (NCWC) is an autonomous agency under the Royal Government of Bhutan, mandated to promote gender equality in the country through gender responsive interventions. Gender mainstreaming has become necessary to achieve inclusivity in all developmental policies, plans and programs. As such, the commission has rightfully initiated gender mainstreaming efforts in numerous sectors including justice, climate, disaster, among others.

The Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) reaffirms the commitment of the Royal Government of Bhutan in achieving the Sustainable Development Goals. In particular, the NCWC has commenced mainstreaming gender into climate change and its sectors, which directly contributes to the SDGs Goal 5: Gender Equality and Goal 13: Climate Actions, among others. Efforts have been made towards achieving carbon neutral, resilient and sustainable development through gender responsive interventions.

In 2019, the implementation of the "Gender responsive Nationally Determined Contributions" project was initiated to mainstream gender into climate related actions. The global temperature continues to change over time, posing serious climate related threats and impacts on the community. Research has shown that women and men contribute differently and tend to experience gender differentiated impacts of the changing climatic conditions and weathers. Therefore, a comprehensive study was conducted in three selected NDC sectors; Agriculture, Waste and Energy in Bhutan to understand key linkages between gender and climate change; *including adaptation capabilities, knowledge and vulnerability.*

This guideline is thereby designed and developed in line with recommendations from the study findings, mainly to guide and support stakeholders in integrating gender equality practically and concretely in climate change interventions in these three sectors. The guideline contains context on climate change and followed by guidance note/links to best practices and internationally recognised case studies, examples of other projects and references/documents to provide an overarching context and guidance on gender mainstreaming to our practitioners.

This document is finalised after numerous consultations with stakeholders from relevant sectors including the Ministry of Agriculture and Forest, Department of Renewable Energy and Waste Management Division, and National Environment Commission.

NCWC remains committed to taking forward gender mainstreaming initiatives with the support and collaboration of all stakeholders in the country.

(Dr.Tandi Dorji)

Chairperson

National Commission for Women Children

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The Women Division, NCWC would like to extend our appreciation to following officials for their contributions:

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2. *Tshering Wangchen, Department of Agriculture, Ministry of Agriculture and Forest*
3. *Dechen Pema Yangki, Department of Renewable Energy, Ministry of Economic Affairs*
4. *Rinchen Penjor, Waste Management Division, National Environment Commission*

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Acronyms

ADB	Asian Development Bank
CCAFS	The CGIAR Research Program on Climate Change, Agriculture and Food Security
CEDAW	Convention on the Elimination of all forms of Discrimination Against Women
COP	Conference of the Parties
CSA	Climate Smart Agriculture
EGI	Environment and Gender Information
ENERGIA	International network on gender and sustainable energy
ESMAP	Energy Sector Management Assistance Program
FAO	Food and Agriculture Organization of the United Nations
FYP	Five-year plan
GACSA	Global Alliance on Climate-Smart Agriculture
GGCA	Global Gender and Climate Alliance
GGG	Global Gender Gap Index
GHG	Green House Gas
GII	Gender Inequality Index
GNH	Gross National Happiness
IFPRI	The International Food Policy Research Institute
IPCC	International Panel on Climate Change
IRENA	International Renewable Energy Agency
IUCN	The International Union for Conservation of Nature
NCWC	National Commission for Women and Children
NDC	Nationally Determined Contribution
NEC	National Environment Commission
NKRA	National Key Result Areas
NPAGE	National Plan of Action for Gender Equality
RGoB	Royal Government of Bhutan
SDG	Sustainable Development Goal
SEARCA	The Southeast Asian Regional Centre for Graduate Study and Research in Agriculture
STEM	Science, technology, engineering and mathematics
SWM	Solid waste management
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
WEDC	The Water, Engineering and Development Centre
WIEGO	Women in Informal Employment: Globalizing and Organizing

INTRODUCTION

The global temperature is continuously changing over time, fluctuating regularly through cycles of hot and cold periods[1]. In the last century, there has been a sharp rise in global average temperatures, resulting from anthropogenic climate change. The average global warming "is likely to reach 1.5°C between 2030 and 2052" and "climate-related risks to health, livelihoods, food security, water supply, human security, and economic growth are projected to increase with global warming of 1.5°C and increase further with 2°C."[2] Despite the universal impact of climate change, these impacts are not evenly distributed. Economically and geographically, developing countries have been disproportionately affected due to their inherent vulnerability and difficulties in adapting to the effects of climate change. Furthermore, climate change poses differential effects on women in comparison to their male counterparts, posing a range of risks and vulnerabilities.

About this guideline

This guideline is designed to support policy makers in integrating gender equality practically and concretely, in climate change interventions in the Agriculture, Energy and Waste sectors. The guideline is aimed towards providing guidance to practitioners, and to enable them to identify issues and approaches for addressing them.

GENDER AND CLIMATE CHANGE

The United Nations Framework Convention on Climate Change (UNFCCC)[3] entered into force in 1994 and is the fundamental international agreement on climate change. Its goal is ambitious - to prevent human induced changes to the climate system. UNFCCC has set a principle of "common differentiated responsibilities" calling for a collective response to combat the changing climatic system. The GHG emission from the industrialised countries are relatively higher, adding to the existing historic emissions. Therefore, it requires global contributions to solve these climate change issues.

The Kyoto Protocol[4] was adopted in 1997, including its bindings. Yet, not enough targets were set for industrialized countries. In 2015, the Paris Agreement[5] was adopted. It builds upon the UNFCCC and involves all countries in a joint effort to keep the global temperature rise below 2 degrees Celsius above pre-industrial levels, and if possible, even further down to 1.5 degrees Celsius. It requires all countries to define Nationally Determined Contributions (NDCs), to strengthen their efforts in the following years, and report regularly on emissions and implementation actions, to achieve carbon neutrality by 2050. It also includes provisions to strengthen the ability of countries to adapt to the impacts of climate change, and seeks to ensure financial flows from industrialized to developing countries, particularly vulnerable countries.

Gender integration into climate actions became a standing item on the agenda in 2012 during the Conference of the Parties (COP), which is the governing body of the international climate negotiations process. A gender team was formed within the UNFCCC Secretariat, and parties were called on for the implementation of gender responsive climate actions. Since then, gender references have been increasingly made in decisions under the UNFCCC and in the negotiation process.

The preamble of the Paris Agreement calls upon all countries to respect, promote and consider, among others, human rights, gender equality, and empowerment of women for climate actions. While this introduction is not binding, it nevertheless plays a role for the interpretation of the agreement and provides a strong entry point for gender-responsive national policies. Other provisions on gender that have already

[1] https://www.ipcc.ch/

[2] https://www.ipcc.ch/sr15/download/

[3] https://unfccc.int/

[4] https://unfccc.int/kyoto_protocol; https://unfccc.int/documents/2409

[5] https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement

been put in place have been further strengthened. However, despite this progress, gender still needs to play a bigger role in these agreements, as its overall perspective remains gender blind. Both justice and gender concerns and solutions need to be better addressed.

In 2017, a Gender Action Plan (GAP)[6] under the UNFCCC was adopted at COP23 in Bonn (Germany). It aims to serve as a roadmap to mainstream gender into climate actions and debates at national and international levels.

Five priority areas were defined under the GAP:

1. Capacity building for developing gender-responsive policies, plans and programmes, knowledge sharing and communication;

2. Actions to enhance gender balance, participation and women's leadership;

3. Coherence in integrating gender considerations into the work of UNFCCC bodies and other United Nation entities and stakeholders;

4. Gender-responsive implementation of climate commitments; and

5. Monitoring and reporting.

For each of these priority areas, a number of key activities have been identified and defined, together with responsible actors, deadlines and results to be achieved. Parties emphasized on the need for supporting capacity building on gender-related issues, promoting the application of gender-mainstreaming approaches, and supporting the training of female delegates to play an active role in the negotiations.

See Women for Climate Justice's practical toolkit on entry points for gender in international climate policy (2009):

Gender into climate policy: toolkit for climate experts and decision makers

Gender and Climate Change in Bhutan

Bhutan is a net sink country of greenhouse gases (GHGs) with forest carbon sequestration capacity of 9.38miltons (MT) of CO2 against the total emission of 3.8 MT CO2e as of 2015. More than 70 percent of the country is covered by forest, and hydropower generates almost 100% of the country's electricity. However, GHG emissions are increasing, particularly in the industry, transport and waste sectors. Bhutan is already experiencing the effects of changing climatic conditions with melting glaciers, erratic rainfall, extreme weather events and rising temperatures. These have in turn resulted in flooding, glacial lake outburst floods (GLOFs), drought, landslides and wildfires[7], posing serious threat to human lives, biodiversity, settlements, infrastructure, food production and food security.

The Royal Government of Bhutan is committed to combating climate change, while promoting gender equality. Efforts have been made towards achieving carbon neutral, resilient and sustainable development through gender responsive interventions.

The *Gender Inequality Index* (GII)[8] reflects gender-based inequalities in three dimensions: reproductive health, empowerment, and economic activity. In 2019, Bhutan's GII was 0.436, ranking 99 out of 162 countries.

[6] https://unfccc.int/topics/gender/workstreams/the-gender-action-plan

[7] UNDP BHUTAN, to be published. Gender and Climate Change in Bhutan: with focus on the NDC priority areas Agriculture, Energy and Waste, NCWC 2020

[8] http://hdr.undp.org/en/content/gender-inequality-index-gii

The *Global Gender Gap Index* (GGG)[9], developed by the World Economic Forum, focuses on the gender gap in economic and political life. In 2020, Bhutan's GGG was 0.635, ranking 131 out of 153 countries, which was reflected in the areas of economic participation and opportunity, educational attainment, health and survival, and political empowerment. Gender parity is still not met in labour force participation, estimated income, literacy rate, leadership positions, membership in parliament and ministerial positions[10].

The Gross National Happiness (GNH) Survey[11] (2015) showed that 49 percent of men and 33 percent of women reported that they were happy. According to the survey, the largest gender gaps were in literacy, schooling, working hours, and political participation[12]. Other gender issues highlighted were land ownership, high percentage of female youth unemployment, violence acceptance against women, and gender disparity in the areas of Science, Technology, Engineering and Mathematics (STEM)[13]. Furthermore, it was evident that women do more unpaid care work, with higher representation in the informal sector and have a much lower labour force participation with more unemployment[14]. Another study showed that women spend 2.5 times more time (218 minutes) on unpaid work compared to men (87 Minutes).

The Royal Government of Bhutan adopted the Convention on the Elimination of all forms of Discrimination Against Women (CEDAW) in 1980 (ratified in 1981), the Beijing Platform for Action (1995) and Agenda 2030 with its Sustainable Development Goals (2015-2030).

Bhutan pledged to remain carbon neutral in 2009 at the COP15 of UNFCCC and re-affirmed the commitment in 2015 under its first Nationally Determined Contribution to the Paris Agreement. Several climate resilient, adaptation and mitigation projects have been implemented to address the impacts of climate change. Low emission strategies and long-term strategies are emphasized to achieve low carbon pathways, promoting carbon neutrality.

The Climate change policy of the Royal Government of Bhutan is responsive to gender considerations. The policy envisages to ensure that Bhutan remains carbon neutral and protects the well-being of its people by adapting to climate change in an efficient and effective manner, taking into account opportunities for synergies as well as cross-cutting issues, including gender equality considerations and disaster risk management. The Policy emphasizes that gender aspects be integrated across all climate change actions informed by situational analysis of gender gaps and the inter linkages with climate change in Bhutan.

For guidance for practitioners and stakeholders on integrating gender equality considerations in climate projects, see UN Women's guidebook (2016):

Leveraging Co-Benefits Between Gender Equality and Climate Action for Sustainable Development

[9] http://www3.weforum.org/docs/WEF_GGGR_2020.pdf

[10] http://www3.weforum.org/docs/WEF_GGGR_2020.pdf

[11] https://www.grossnationalhappiness.com/

[12] https://www.adb.org/documents/adb-annual-report-2014

[13] http://hdr.undp.org/en/2019-report

[14] http://www.nsb.gov.bt/publication/files/pub9hg6641iz.pdf

GENDER MAINSTREAMING AND INSTITUTIONAL FRAMEWORK

Gender mainstreaming is an approach to integrate gender equality and women's rights from the margins of development to the mainstream, as a complement to strategic projects for women and girls addressing specific gender gaps and promoting the rights of women and girls . Gender mainstreaming is therefore a means to achieving gender equality; an end and not an end in itself.

To achieve gender equality through gender mainstreaming, policies and programmes need to be informed by **gender analysis**. Gender analysis aims to identify gender gaps and their implications on specific development goals, with systemic integration of gender into regular policy and programme planning cycles. It is also important that design and delivery of services involve women, men, girls and boys.

Gender transformative interventions are those that seek to promote women's rights and greater equality in women and men's roles and responsibilities, status, and access to and control over resources, services and influence. These interventions will draw upon the analysis of unequal power relations between women and men.

For more on gender mainstreaming and climate change, see toolkit by GGCA and UNDP:

Overview of linkages between gender and climate change
Issue Brief (398.9 kB)
Training Module (1.3 MB)

Institutional Arrangements for Gender Mainstreaming

In order to integrate gender equality in policy and programming responses to climate change, it requires the Government to work across sectoral policy domains and adopt more integrated working modalities. At the same time, it presents an opportunity to acknowledge and build complementarities amongst diverse policies and programmes, to enhance synergies and promote efficiencies in results and process, and to support a whole-of-government approach.

Establishing institutional arrangements to ensure the full integration of gender equality perspectives at all levels and scopes of policy and programme development is necessary to achieve gender equality through institutional transformation.

"Gender mainstreaming" as a strategy to achieve gender equality and empowerment of women was internationally accredited at the UN Fourth World Conference on Women, held in Beijing in 1995. Institutional mechanisms for the advancement of women is one of the 12 areas of concern of the Beijing Platform for Action, unanimously adopted at the Conference. It covers three strategic objectives:

1. To create or strengthen national machineries and other governmental bodies;
2. To integrate gender perspectives in legislation, public policies, programmes and projects; and
3. To generate and disseminate gender-disaggregated data and information for planning and evaluation.

Institutionalization of efforts on gender equality is important to promote and sustain sufficient organisational commitment to ensure gender mainstreaming processes to take place effectively, systematically and sustainably. The National Commission on Women and Children (NCWC) was established in 2004 as the designated government agency for the promotion of gender equality efforts in the country. A network of inter-ministerial Gender Focal Points was established across the Government, non-government and private agencies. The role of the Gender Focal Points includes raising awareness on the benefits of gender mainstreaming amongst their respective ministries, advocating for gender mainstreaming in sectoral policies and programmes, and coordinating under the guidance of NCWC to ensure coherence in the Government's progress towards gender equality. In the anticipated strengthening of local governments, maintaining vertical coherence in the gender mainstreaming standard will have significant

importance. Gender Focal Points cannot be expected to have the full range of required knowledge and skills to lead gender mainstreaming in their respective ministries. However, they should be able to make significant contributions with the support and guidance from NCWC, including support to develop their gender equality competence.

The Gender Focal Points network serves as an ideal formal mechanism for coordination to steer gender equality integration in climate change responses. In addition to managing the Gender Focal Points network , there is a need for NCWC to be formally included in Bhutan's official institutional mechanism to lead and coordinate climate change responses, with clearly defined roles and responsibilities. In order to fulfil its required functions, NCWC should demonstrate reliable knowledge in climate change responses. It is also required for Bhutan's official institutional mechanism on climate change response to have gender equality objectives integrated in the national climate change response strategy. Articulation of such objectives in national planning documents will guide efficient and sustainable gender mainstreaming interventions, and help ensure appropriate allocation of budgets to finance those interventions. Further, a Gender Expert Group (GEG) was formed, composed of representatives from the Government, non-government and private sectors, to provide technical backstop to the initiatives of gender equality. The mainstreaming efforts are initiated through the formulation of the Gender Equality Strategy, National Plan of Action for Gender Equality (NPAGE) and standard operating procedures and guidelines.

Policy Screening & Quality Assurance

There is complementarity between gender mainstreaming and targeted support for women's organisations and projects for women and girls. Effective gender mainstreaming results in more, not less, resources for women's organisations and projects for women and girls. It also promotes attention to gender equality and women's rights in 'mainstream' policy and spending. Therefore, communication and complementary working relationships between women's rights and gender equality advocates inside policy-making institutions is required. Quality assurance entails vigorous screening, with documents lacking in gender sensitivity being sent back for revision.

Currently, the Gross National Happiness Commission (GNHC) is the responsible agency for screening policy and programme submissions. Their checklist includes reference to gender equality and women's empowerment. Screening is mandatory; however, demonstrating clear gender equality contribution is unclear. There is no mechanism in authorizing revision to the proposals even if gender equality contribution is not evident. Similarly, the budget circular has no binding power. The decision makers, planners and program implementers are not necessarily equipped with tools to scrutinise legislation, plans, programs or budgets from a gender equality perspective. The lack of capacity and accountability is leading to gender-blind policies and budgets. As such, it requires institutionalization of mechanisms to integrate gender considerations into the plans, policies and programs within agencies, and deliver gender equality results. The existing mechanisms such as GNHC's screening tool as well as the Gender Mainstreaming Reference Group serve as entry points through reinforcement to establish the desired mechanism.

Example of Gender Impact Assessment in the Republic of Korea

Launched in 2002, in accordance with Article 10 of the Basic Act on Women's Development, the Gender Impact Assessment (GIA) is a tool for systemic and comprehensive analysis and assessment of public policies, aiming for the systemic improvement of public policies in support of gender equality. Its scope and coverage have expanded over the years, with an increasing number of participating institutions and programmes. The establishment of the national machinery for gender equality and women's empowerment, and the legal basis of the GIA served as the starting point for the institutionalization of GIA. The national machinery (the Ministry of Women's Affairs à the Ministry of Gender Equality and Family) provides the authority, implementation, and technical knowledge. GIA has been used by the Ministry of Public Administration and Security when evaluating the performance of local governments, reflecting the commitment of the country to include gender equality as a performance benchmark for public organisations. The GIA has established criteria of gender impact assessment for local government, including the recommendation of a focal point in each institution to be in charge of the assessment. Reviews of the GIA

have identified tangible effects of GIA in transforming public policies, programmes and services to be more gender-responsive.

For another example, see UNDP overview of the origin, purpose and state of gender mainstreaming (Gender-based Analysis Plus or GBA+) in the Government of Canada:

Gender mainstreaming in federal public institutions in Canada

Budget Planning for Gender Mainstreaming

A sufficient flow of resources is needed for staff awareness raising, skills development, monitoring and accountability processes. The parliament and decision makers play a vital role in this, with gender responsive budgeting (GRB) being an option, as is the case in India and Indonesia.

See more on GRB in Indonesia in this presentation (2016):
Gender Responsive Planning and Budgeting: Indonesian Experience

Gender responsive budgeting (GRB) is a way for governments to promote equality between men and women through fiscal policy. GRB builds on principles of good governance related to transparency, efficiency and accountability. It recognizes that budgets are not neutral, and policies and policy funding have different impacts on women and men. GRB serves as a strategy to promote the goal of gender equality and gender mainstreaming by paying attention to revenue raising and spending of government finances.

See UNDP and GGCA toolkit on:
Gender and climate finance

Issue Brief (680.3 kB)
Training Module (724.2 kB)

This is done through an analysis of gender-differentiated impacts of the budget through a process of adjusting budgetary decision-making and priorities, in accordance with the differential needs of women and men. Thus, GRB incorporates gender analysis and concerns into all stages of the budget cycle. It promotes gender equality and gender mainstreaming by analysing how government revenue is raised and spent. For example, by analysing who has benefitted, taking the paid and unpaid economy into consideration. However, GRB does not mean a separate budget for women and men, and does not necessarily aim to increase the amount of money spent on women. Reducing gender inequalities require an analysis of how budget policy affects both men and women. It does not mean dividing public expenditure equally between women and men because that doesn't necessarily result in reducing gender inequalities. GRB is essentially both a political and technical undertaking, with the potential to be a powerful tool for social transformation and eliminating inequality.

See UN ESCAP toolkit on good practice on gender responsive budgeting from the region:

Gender-Responsive Budgeting in Asia and the Pacific: Key Concepts and Good Practices

Capacity Needs and Capacity Development Strategy

For any institutional framework to carry out its mandated functions to its full potential, there is a need to have a set of policy and guiding documents (PAPER), a system with dedicated financial resources (PROCESS), and the capacity and expertise in the available human resources (PEOPLE). For the objective of integrating a gender equality perspective in climate change intervention with specific reference to the three focus areas of NDC; Agriculture, Energy and Waste Management, the Government needs to strive for institutionalizing a mechanism as described in the previous sections of this document. There are number of planning and policy guiding documents with concrete commitments to deliver on gender equality results through:

1) embedding into broader, national level planning documents;

2) mainstreaming gender in sectoral policies and programmes; and

3) dedicated policies and programmes addressing gender equality and women's empowerment.

To institutionalize the integration of a gender equality perspective in climate change intervention with specific reference to the three focus areas of the NDCs - Agriculture, Energy and Waste Management - there is a need to embed gender expertise and insights in the formal mechanisms mandated to address these focus areas.

This can be achieved by formalizing the membership of the NCWC in the official structures accountable for leading and implementing the relevant agendas on gender. For example, if there is an institutional mechanism mandated by the Royal Government of Bhutan to address climate change interventions relating to the agriculture sector, its membership must include a position/person with official responsibilities to address gender inequality. The same goes for the other two sectors. It is also necessary that the member with gender expertise have credible capacity to be engaged in climate change related policy discourse to add value.

This calls for the strengthened capacity on the relevant sectors within the NCWC, or amongst its Gender Experts Group network, to represent gender equality perspectives in the discussions relating to climate change. The NCWC may also seek knowledge and insights from women's organisations across the country to supplement field-based perspectives.

While NCWC gains the required knowledge and skills to enable their meaningful engagement in climate change related policy dialogues and decision-making processes, the NCWC has the responsibility to build the knowledge and skills of their partners and stakeholders on the interconnectedness of gender equality and climate change interventions. The existing Gender Focal Points system in the Government can be leveraged for this purpose, provided that the capacity of the Gender Focal Points is adequate to take on the role of effectively facilitating gender mainstreaming within their respective institutions. It is necessary to institutionalize proper handing- taking of the gender initiatives during the transition of Gender Focal Points.

GENDER AND CLIMATE-SMART AGRICULTURE

Small holder farm households form a major section of the agriculture sector worldwide, and gender is a critical dimension with women's role at the centre-stage of this crucial farming segment. Climate-Smart Agriculture (CSA) is an approach to transform and reorient farming systems to support food security under the new realities of climate change that have comparatively far-reaching effects on small-holder farms. Appropriate strategies to produce more food, adapt to changing weather patterns, and prevent further damage to the climate need to be put in place, while assuring the same opportunities for men and women involved in food production.

"Climate-Smart Agriculture (CSA) seeks to support countries in securing the necessary policies, as well as the technical and financial conditions, to enable them to:

i) sustainably increase agricultural productivity and incomes;
ii) build both the resilience and the capacity of agricultural and food systems to adapt to climate change; and
iii) iii) seek opportunities to reduce and remove greenhouse gas (GHG) in order to meet their national food security and development goal"

See more in FAOs (2016) toolkit on Gender integration into climate-smart agriculture with tools for data collection and analysis for policy and research**.**

According to the FAO State of food and agriculture (2014),[15] family farms represent up to 80 percent of all farm holdings in developing countries. The Labour Force Survey 2020 of Bhutan estimates that more than 49.9 percent of the total employed population are engaged in the agriculture sector. The majority of the Bhutanese farming households are small holder farmers with an average land holding of 3.7 acres. Most of them rely primarily on family members for labour and management, and produce essentially for their own consumption, with some surplus for the market. Women make an important contribution to family-run farming activities and represent an average of 58.8 percent of the agricultural workforce (LFS 2020). Among farming communities, men and women have diverse and often complementary roles related to household food provision. Women play an essential role in food and nutrition security through their responsibilities in provision and preparation of food consumed at home.

Women also have an important role in conservation efforts, such as seed storing, growing and preserving under-utilized species. These species also have value as potential genetic resources, that help decrease their vulnerabilities to climate shocks and ultimately improve food security.

See FAO toolkit (2016) for guidance on identifying priority topics and producing, analysing and interpreting gender statistics for policymakers:

FAO Agri-Gender Statistics Toolkit

There are important untapped opportunities in the global phenomenon of the feminization of agriculture and Bhutan is no exception. Female farmers play important roles in maintaining knowledge about different plant varieties and deciding which crops to plant, particularly as men are engaged in off- farm activities. Their empowerment can significantly contribute to building household resilience to climate impacts.

Studies have shown that women's ownership of productive assets is positively linked to their uptake of climate-smart practices and soil conservation techniques. For instance, where women have secure land rights, greater yields and increased food security are also observed. Increasing women's awareness and access

[15] http://www.fao.org/3/a-i4040e.pdf (FAO, 2014)

to information and knowledge about climate-smart agriculture options will lead to greater uptake of these technologies and practices. This will enhance the resilience of entire households, communities, and food systems to climate-related shocks and changes.

Therefore, transformative changes in agriculture and food systems will not achieve the desired results without addressing gender issues.

This research monograph by IFPRI (2011) explores ways in which gender issues can be tackled in agriculture:

Engendering Agricultural Research, Development, and Extension: Priority setting, Research & Development, Extension Adoption & Evaluation

For more on integrating gender and agriculture in National Adaptation Plans, organizing workshops, planning, analysis, budgets, **see FAOs and UNDPs guide (2019):** Gender in adaptation planning for the agriculture sectors Guide for Trainers

For information on mainstreaming gender in agriculture projects, see Gender mainstreaming and social inclusion strategy, CARLEP (2017): http://www.carlep.gov.bt/wp-content/uploads/2016/11/GM-Strategy_Final.pdf

Environmental and social management framework (ESMF): http://www.doa.gov.bt/wp-content/uploads/2019/06/Final-ESMF-document.pdf

CCAFs extremely practical example on gender-sensitive approaches and tools:

Includes good practices for the application of these approaches and tools for understanding and assessing impacts, vulnerability and adaptation to climate change in Kenya. Climate Resilient Agriculture Module Climate smart agriculture in Bhutan: https://climateknowledgeportal.worldbank.org/sites/default/files/2019-06/CSA-in-Bhutan.pdf

http://bhutantrustfund.bt/wp-content/uploads/2020/01/CIF-Report1.pdf

Examples of Climate-Smart Agricultural Practices

These examples of Climate-Smart Agricultural practices come from case studies in East Africa, West Africa, and South Asia. Note that the practices are context specific—in other words, they will be applied differently in different environments. A practice may be climate smart in one context but not in another, depending on how, where, and why it is used. Practices also have different social dimensions depending on the area and culture in which they are implemented.

Improved land and water management practices

- Agroforestry is a land use management system in which trees (fruit, fodder or fuelwood) are planted together with crops on the farm. This practice can help reduce run-off or erosion, enhance soil fertility, and provide shade—functions that are important for adapting to climate change—in addition to sequestering carbon.
- Terraces and bunds are physical structures placed along contours to slow the run-off water, enhance water retention capacity and soil nutrient management. These are important measures for adapting to water scarcity arising from climate change.

- Water harvesting technologies (rainwater harvesting, reservoir tanks, etc.) are another important adaptation measure with food and nutrition security impacts. These technologies can be small or large, ranging from individual farms and plots to a much more considerable area.
- Improving agriculture water management through technologies such as drip, sprinkler, SMART irrigation system and climate proofing of irrigation structures.
- Improving soil fertility and crop management practices through composting and mulching to improve soil texture, prevent erosion, encourage water filtration, conserve soil moisture and reduce weed pressure.
- Conservation agriculture involves maintaining a permanent organic soil cover from cover crops, intercrops, minimizing soil disturbance through tillage, and diversifying crop rotations to enhance soil fertility and suppress pests.
- Efficient use of fertilizer to optimize the right amount and type of fertilizer (synthetic and organic). Examples of efficient fertilizer practices include using a mix of fertilizer components that reflect actual soil and crop needs; proper application of fertilizer; micro dosing; and changing from one fertilizer application at the beginning of the crop cycle to three (smaller) fertilizer applications throughout the crop cycle.
- Improving production through high-yielding crop varieties and livestock breeds.
- Adopting climate resilient crop varieties to adapt to climate extremes such as droughts, floods and pests.
- Alternate wetting and drying for rice management involves improved water management and reduces GHG emissions.
- Improving feed management entails storing animal feeds (stover, grass, grain, etc.), promoting Total Mixed Ration (TMR), promoting suitable grass varieties, and other practices such as fodder conservation and animal fattening.
- Switching to livestock species or breeds that are more adapted to water scarcity and resistant to diseases can include buying or breeding such animals or even changing the type or species of animals produced. For example, native breeds and small ruminants are more resilient.
- Pasture management, which includes rotational grazing and setting paddocks, improves risk management and reduces GHG emissions.
- Improving post-harvest technologies to reduce food losses, improve food safety, and reduce the workload of both men and women.
- Improving cooking stoves can reduce fuel wood consumption, improve health and reduce workload of both men and women

To develop advice and indicators that are gender inclusive and useful for both men and women farmers, see:
Checklist: Gender-inclusive actionable agro-advisories

Integrating Gender into CSA Initiatives

To succeed in integrating gender into the Climate-Smart Agricultural practices described above is dependent on institutional and behavioural change. This will be possible if social analysis (including gender analysis) that influences policies, projects, and other interventions aimed at achieving sustainable CSA is conducted.

Gender gaps in the adoption of CSA practices include the following:

- Land ownership, or long-term user rights;
- Access to agricultural credit;
- Access to productive farm inputs (including fertilizers, pesticides, and farming tools);
- Access to timely labor;

- Support from extension and other rural advisory services;
- Access to markets and market information;
- Access to productive land;
- Access to weather and climate information; and
- Access to capacity development programs

For country examples, see:

See Frontiers in Sustainable Food Systems (2019) policy and practice review article for Nepal as a country example:

Gender Integration in Climate Change and Agricultural Policies: The Case of Nepal

For country examples and in-depth reflection and information on gender dimensions of agriculture research and projects, see SEARCAs and CCFASs book (2019):

Gender dimension of climate change research in agriculture: Case studies in Southeast Asia

See GACSA, FAO, CGIAR & CCAFS brief (2016) for information on how to adopt a gender-responsive approach to CSA, challenges to adaptation, gender-sensitive indicators of CSA, in example projects:

A Gender-responsive Approach to Climate-Smart Agriculture: Evidence and guidance for practitioners

GENDER AND ENERGY

The advancement of technology has created a major shift in consumption patterns to transportation and overall approach towards life. The development of modern lives entailed the easing of some form of hardships. However, the advent of such technology has marked differentiated impacts on men and women. Women are still responsible for many aspects of household chores, such as collection of fuelwoods, especially in the rural areas where erratic electricity connectivity is still a major concern. It is evident that women and men play defined roles in energy production, distribution and utilization in households, communities and the market. Women are by and large susceptible to being time-poor, and disproportionately exposed to health risks associated with some forms of energy usage (e.g. poorly ventilated kitchens have indoor air pollution from burning biomass in traditional stoves). Climatic stress on forest resources at the same time are increasing the burden on many women, forcing them to travel even longer distances and spend more time in fetching fuel wood, water and fodder which triggers gender related issues and challenges. The lack of sufficient and consistent supply of energy puts the health and hygiene of the family at stake. Therefore, ensuring women's access to affordable, reliable and sustainable energy services is crucial for the enhancement of their livelihoods.

Bhutan's energy source is diverse with energy use in several sectors. The initiative to promote low carbon development through the promotion of renewable energy and energy efficiency began in 2012, towards fulfilling its pledge to remain carbon neutral at all times. Hence, the Royal Government of Bhutan encourages the development of hydropower and alternative renewable energy for energy diversification in order to strengthen the energy security and energy access. Hydropower is described as one of its "five jewels" and strives to achieve a minimum power generation of 5000 MW by 2030. Through its exports of hydroelectricity, Bhutan offsets 4.4 million tons of CO2e per year, and it has the potential to offset 22.4 million tons of CO2e by 2025. Transport stood for 18.64 percent of energy use in Bhutan as of 2015 and within the energy sector it is the most prominent GHG emitter (more than 60%). Emissions from the transport sector could triple by 2030. This also causes air pollution from particulate matter (PM) and

Nitrogen dioxide (NO2), which is much higher than permissible levels. Therefore, including the promotion of public transport forms an important area for Climate Change Mitigation and Climate Change Adaptation.

Hydropower also comes with social and ecological challenges, as existing experiences and literature has shown. Apart from hydropower, alternative renewable energy such as solar and wind energy is promoted to diversify the country's energy supply. Considerable progress has been made towards the goal of 'electricity for all'. Electricity access has moved from 30 percent in 2000, to 61 percent in 2006, and 99.9% at present. Almost all of Bhutan's electricity is generated through run-off on-grid hydropower. However, the reach of electrification in remote rural areas is promoted through off-grid renewable energy. The Government has provided around 1,500 rural households with solar-home lighting systems.

Due to economic growth, energy emissions increased from 0.27 million tons CO2 in 2000 to 0.79 million tons in 2013—an increase of 191.6 percent. During the period 2000-2013, emissions from the industrial sector increased from 0.24 to 0.6 million tons CO2 (Bhutan Energy Data Directory, 2015).

Biogas is an alternate renewable energy source being implemented by the government of Bhutan. Since the introduction of the Bhutan Biogas Project (BBP) in 2011, the BBP has immensely benefited rural men and women. In rural areas, firewood collection is one of the main concerns for farmers. As such, biogas introduction has played an important role in enhancing farmers' livelihood and their environment. Biogas technology has social benefits in terms of reducing drudgery as well as time and effort spent on fuelwood collection. It also prevents negative health impacts through reduction of hazardous indoor smoke. Similarly, improved cookstoves contribute to reduced indoor air pollution. As of march 2020, 7070 biogas plants were installed in all dzongkhags. In addition, more than 3793 users (sex-disaggregated), 629 masons and 308 supervisors have been trained, and 3926 people engaged in awareness programs.

Equitable access to technical, maintenance, and construction opportunities in renewable energy technologies is also an important aspect of women's livelihood enhancement. In STEM education, women are still the minority, although more and more women account for a growing proportion of graduates in fields relevant for the energy sector. Hydropower, which provides electricity in the country, has diverse impacts on the lives of women and men. In general, the hydropower sector forms a very male-dominated sector.

Electrification also had a direct impact on education outcomes as better lighting allows study in the evenings. It enabled girls to attend school as they were no longer needed to gather fuelwood and make dung cakes. However, intensification of economic activities had taken place as well, particularly for men, who got involved in project construction and maintenance work. This resulted in an increase in women's participation in agriculture, adding to their work burdens.

Other studies show that loss of land and livelihoods, and destruction of forests, agricultural and grass-lands, owing to the construction of hydropower plants can compel women to walk longer distances to collect natural resources. Hydroelectricity projects can also pollute the water source during construction, again adding to women's work burden in having to fetch clean water from further distances. New roads, businesses and communication systems, as well as the in-migration of a large number of men for jobs in the sector, can also disrupt women's security and enhance social conflicts.

For more on gender and energy linkage:

See Gender Equality Results: Case Studies Bhutan 2011

The case studies focus on gender mainstreaming into energy projects and plans. Women engagement in energy related projects and the benefit of women's participation in energy programs has impacts on women's economic participation.
https://www.adb.org/sites/default/files/publication/29138/powering-poor.pdf

https://www.adb.org/sites/default/files/publication/28287/gender-case-study-bhu.pdf

https://www.saarcenergy.org/wp-content/uploads/2016/07/Bhutan%20presentation.pdf

see technical report on ESMAP study (2018):

Getting to Gender Equality in Energy Infrastructure

Mainstreaming gender into energy projects and energy planning processes requires an appreciation of not only the different energy needs of women, but also women's contributions to climate change responses. This leads to high quality, effective, and gender-sensitive energy projects and planning processes. Women should be involved in the design and production of locally appropriate energy technologies.

For more on including gender in national energy policy, see toolkit by IUCN, USAID, ENERIA and EGI (2017):

Energizing Equality: The importance of integrating gender equality principles in national energy policies and frameworks

See roadmap on developing policy by The Clean Energy Solutions Center (2019):

Blueprint Guide for Creating Gender-sensitive Energy Policies

Relevant Policies

1. Economic Development Policy 2016

   Under the Human Resource Development & Employment, the Royal Government in collaboration with the private sector, shall identify critical skilled labour deficiency areas and support skills development to address the needs of the labour market, including addressing gender gaps in skills development, where necessary.

2. Climate Change Policy of the Kingdom of Bhutan 2020

   In order to ensure synergies and cross cutting issues, gender issues shall be integrated across all climate change actions. Such integration shall be informed by a situational analysis of gender gaps and issues, and the inter linkages with climate change in Bhutan. It will aim to advance the identified gender aspects that need to be addressed through gender responsive climate actions. (Responsibility: All agencies with support of NCWC)

3. Energy Efficiency Roadmap 2019

   While EE&C measures will significantly contribute to reducing energy intensity and enhancing energy security of the country, it is crucial to note the role of women in EE&C measures. It is mostly women who have to bear the brunt of household chores that includes the use of appliances for heating and cooking, fuelwood for the same purpose and also as retailers. Therefore, there is a strong need to include women in all aspects of EE&C measures included in the roadmap. It is

crucial to sensitize them o not limiting to the use of EE appliances, and encouraging them as E Suppliers. Capacity building of women entrepreneurs and engineers is also required.

4. Bhutan Sustainable Hydropower development policy 2020

   Priority on the supply of electricity: Compensation to private land by providing 10,000 Kwh per annum for 30 years or in cash as per the export rate; Provide the cost of rehabilitation and resettlement of the displaced persons from the project area and other local development activities; and Provide employment to one member of each of the Adversely Affected Family(s) as a result of acquisition of land for the project during the construction period of the project.

5. National Energy Efficiency & Conservation Policy, 2019

   Energy savings in any form will also enhance disposable income for households. This will in turn positively affect gender equity, as most households are operated by women. The increased disposable income will contribute to employment creation in energy and other sectors, making the EE&C measures an important contribution to the Government's green growth strategy.

6. Cottage Small Industry Policy 2019

   In nurturing Entrepreneurship Culture and Human Capital Development, it is crucial to promote women entrepreneurship in CSIs to maximize the economic contribution of both genders through the provision of preferential business development services.

7. National Surface Transport Policy (Draft Oct. 2020) aims to address gender disparity and promote social equity. National Surface Transport Policy highlights specific needs of inclusive surface transport systems in the country which includes gender friendly surface transport services. *Section 2 (f) of the draft surface transport policy mentions "**Inclusiveness:** Promoting inclusive society by providing surface transport and mobility access to all, with special attention to the needs of those in vulnerable situations such as, women, children, persons with disabilities and elderly citizens*." The guiding principles also provides for the needs for inclusive surface transport development and infrastructure in the country.

There are several technologies that can improve energy production. Enhanced, modern energy services can improve women's socio-economic status by reducing the time and effort involved in household chores and by alleviating the health risks associated with current energy practices. This will also bring training, employment and entrepreneurial opportunities for women and men. Empowering women and girls, and drawing on their needs and knowledge is necessary for energy development and security, and for reducing emissions. Incorporating gender perspectives into energy projects, policy and planning is essential in ensuring their effectiveness.

Examples below of policy recommendations and ways forward by UN Women and UNIDO (2013). See more in guidance note:

Sustainable Energy for All: the gender dimensions

Energy governance and policy making

- Ensure that gender issues are mainstreamed in governance and decision-making processes related to policy development, implementation and monitoring, service delivery and financing of sustainable energy.
- Promote increasing women's participation and leadership in energy sector and energy institutions at the local and national levels.

- Support gender-responsive budgeting (GRB) in government planning and programming. GRB ensures that general budgets are planned, approved, executive, monitored, and audited in a gender-sensitive manner. Mainstreaming gender into national budgeting processes is a long-term process that requires a committed effort from the government and senior managers.

Capacity development

- Build the capacity of both women and men to engage with gender issues in energy solutions. This involves training of female and male as energy practitioners, researchers and policymakers who need tools to engage effectively with gender.
- Increase women's educational opportunities and professional development in science, technology, engineering and mathematics (STEM) fields. This may be achieved through scholarships for university and technical education.
- Introducing technical job opportunities to female primary and secondary school students can also encourage women to enter the energy field.

Evaluation and data

- Support generation, collection and use of gender-disaggregated data on energy use, energy sector employment and impacts of energy development. This will serve as a baseline for evaluation purposes, and be instrumental in defining gender-sensitive targets and indicators. It will also facilitate understanding of gender-energy linkages. Both quantitative and qualitative data will be needed to capture all social, economic, and environmental aspects

Financing

- Ensure adequate financing for sustainable energy projects and programmes, as well as for training of women energy practitioners, researchers, policymakers and entrepreneurs.

List of resources on mainstreaming gender in energy projects

See IRENA (2019) report for solutions to improve gender balance in the energy sector:

- **Renewable Energy: A Gender Perspective**

See ENERGIA's handbook (2011) and ENERGIA's report (2016) for more guidance on how to conduct gender assessments and develop a concrete gender strategy or a Gender Action Plan:

- **Mainstreaming Gender in Energy Projects: A Practical Handbook**

- Mainstreaming gender in energy sector: practice and policy lessons from the ENERGIA International Network

For more toolkits and resource guides for project implementation and development practitioners:

- Energy and Gender for Sustainable Development: A Toolkit and Resource Guide (UNDP, 2015)
- Gender Mainstreaming - a key driver of development in environment & energy - Training manual(UNDP, 2015)
- Guide on gender mainstreaming energy and climate change projects (UNIDO, 2014)
- Gender Tool Kit: Energy Going Beyond the Meter (ABD, 2012)

Explore ESMAPs online resources for a multitude of practical tools on mainstreaming gender into energy sector activities.

These resources have been developed by a number of organisations including the World Bank, ADB, ENERGIA. Tools to download for free include sample questionnaires and checklists, examples of terms of references (TORs) and screening guidance.

Briefing note: Integrating Gender Considerations into Energy Operations

Gender and Energy Online Publications Library

Gender and Energy Online Toolkit for Practitioners

For key government sector action for gender-sensitive energy programming in toolkit by GGCA and UNDP:

Gender and sustainable energy
Issue Brief (408.4 kB)
Training Module (868.3 kB)

A case study on the Tala Hydropower Plant in Chhukha Dzongkhag showed that rural households appreciated the establishment of the dam as it brought access to electricity. It has improved the quality of life, through access to basic health services and roads. Wellbeing among women and girls was enhanced, in particular, by reducing the burden of domestic chores. Use of electric cookers and water boilers proved to be beneficial for women, as they reduced cooking time, and their exposure to hazardous smoke from fuelwood.

GENDER AND WASTE MANAGEMENT[16]

For a recent (2019) UNEP publication and study exploring waste and gender in Bhutan, see:

Gender and Waste Nexus: Experiences from Bhutan, Mongolia and Nepal

Policy Brief

The disposal and treatment of waste is an increasing contributor to GHG emissions in Bhutan. Possible causes of Bhutan's present and projected increase in emissions from waste could be the growing population, increased economic welfare, urbanization, change in consumption patterns among urban residents, lack of public awareness and advocacy, lack of coordination among institutions responsible for waste management, and lack of a strong legal framework and implementation mechanisms. The largest share of GHG is emitted, in the form of methane, from landfills and open dumps, in which waste water treatment and discharge are dumped together. Uncontrolled burning of waste is another significant source of GHG emission. However, waste collection practices have improved in Bhutan over the years. By maximizing resource recovery to create sustainable waste management systems, Bhutan intends to move towards zero waste and protect the country's unique natural ecology. The GHG emission can be reduced by prevention, reuse, recycling and recovery of waste, and introducing food waste composting at large scales, which will enable sustainable use of natural resources.

The country generates a total of 172.16 metric tons of solid waste a day as per the National Waste Inventory Survey 2019. The per capita solid waste generation was estimated at 0.23 kg a day. Of the total, more than 85 percent of the waste was from households and commercial units. Approximately, 46 percent of this waste comprises of wet (food) waste, which includes all waste generated from the kitchen, such as vegetables, fruits, food remains, etc. It is followed by plastics (17.1 percent) and paper and card boards (15.8 percent) (NEC/NSB, 2019).

See WEDC synthesis note on gender issues and lessons learned on SWM in urban contexts:

Recognizing Gender Issues in the Management of Urban Waste

The generation, treatment and disposal of waste is also a cross-cutting issue with numerous other environmental and social impacts, beyond climate change. Waste management is not gender neutral. An understanding of gender differences and inequalities is vital for improving the waste management system, with sensible waste management addressing both climate change and inequality.

Existing gender differences and inequalities in the society need to be considered when planning interventions on waste management. Gendered norms, stereotypes, roles and responsibilities, and expectations that come with them, dictate opportunities and behaviour for women and men. This leads to gendered division of labour and consumption patterns. These gendered patterns are embedded in almost every aspect of waste management, and how waste is situated in social and economic systems.

[16] Chapter based on:

UNEP-IETC and GRID-Arendal, 2019. *Gender and Waste Nexus: experiences from Bhutan, Mongolia and Nepal.* UNEP, Nairobi, p.74-75 ; UNDP BHUTAN, to be published . Gender and Climate Change in Bhutan: with emphasis on the NDC priority areas Agriculture, Energy and Waste.; https://www.oecd.org/dac/gender-development/1849277.pdf

Gender roles in Bhutan ultimately leads to gender gaps in the waste sector through marked division of labour, power structures, payment gap, unequal roles and opportunities, as well as unequal value placed on 'male' work or devaluation of 'female' work. Mirroring existing socioeconomic structures, these stereotypes can bind women to cleaning, cooking and caretaking roles, while men take up more leadership positions. The greatest gender difference in Bhutan's division of labour occurs in unpaid household work, with men spending significantly less time than women. As main caretakers of the household, women are often more engaged in informal, household and neighbourhood activities related to waste, which are typically voluntary, unpaid or minimally compensated. This can be yet another burden affecting the already limited free time of women, and thereby affecting their ability to accept income-generating opportunities. Women are also more likely than men to be employed in informal activities and blue-collar jobs in the waste sector.

Employment in the waste sector is largely segregated by gender. Waste management is governed by the public sector and implemented by the private sector in the capital city, Thimphu. In the private sector, men hold most upper-level administration roles, while women are employed in low-skilled, low-paid jobs. Women in waste management often work in the large informal sector of waste pickers - collecting, sorting, recycling and selling. Recycling of waste materials is seen as an activity for women, while men are work as truck drivers or supervisors. Waste pickers often live and work under dangerous and unhealthy conditions, receiving minimum wage. They suffer from poverty and low social status, with little security as there may be no formal contracts. The gender responsive approach to legal frameworks is limited. When planning climate action on waste management, the gender labour division needs to be considered. Since women are the primary members of household responsible for recycling activities, any information on recycling must reach them. Further, the designed interventions should ensure that such information does not increase the unpaid domestic burden on women, thereby reinforcing gendered stereotypes.

Similarly, lack of participation of men and boys in domestic and community waste management activities has significant social and economic costs, which will undermine any waste sector reforms, if left unaddressed. When moving towards a more technological and engineering-based waste sector, it is equally important to be aware of the gender labour division. More men enrol and complete studies within the fields of science, technology, engineering and maths (STEM) compared to women. Due to the informal role given to women, they often land up as waste pickers at landfills or as street sweepers. Formalization or professionalization, as well as privatisation of waste management, often benefit more men. More lucrative and safer jobs are availed by men, while excluding women from these jobs and depriving them of a stable and larger source of income. Gender roles and norms need to be addressed through a two-pronged approached - creating more more opportunities for women in STEM, while simultaneously valuing the contributions made by women in primary waste management.

For more on gender and waste linkage, and tools for gendered waste education:

Gender Mainstreaming in Waste Education Programs: A Conceptual Framework

A thorough understanding of gender dynamics and gendered division of labour is crucial in waste management. A gender analysis needs to be incorporated for effective waste management that meets the needs of both men and women. There is also a need to have equal participation of men and women at each level of policy, programme and project development and implementation, which can be reached through supporting leadership of women, gender-based quotas, affirmative action or training opportunities for capacity enhancement, and awareness campaigns.

See World Bank's (2010) checklist[17] for gender issues to consider in solid waste management:

For more country examples on gender considerations in the waste sector, see the report:

HYPERLINK "https://oceanconservancy.org/wp-content/uploads/2019/06/The-Role-of-Gender-in-Waste-Management.pdf" The Role of Gender in Waste Management: Gender Perspectives on Waste in India, Indonesia, the Philippines and Vietnam (2019, Ocean Conservatory, UNEP, GA Circular)

For specific project implementation toolkit and guidance, see:

HYPERLINK "https://www.undp.org/content/undp/en/home/librarypage/environment-energy/chemicals_management/GuidanceGender&Chemicals.html" Mainstreaming gender into UNDP GEF projects on chemicals and waste

Symptom	Symptom Diagnosis & Suggested Approach
Waste quantity estimates prove too low – there is more waste than predicted	• The activities of the informal sector may not have been reduced and changes may have disrupted their functioning. • Suggested approach is to use a broader definition of stakeholder and to solicit input from more parties, including women and men workers in the informal sector.
Waste quantity estimates prove too high – there is less waste than predicted	• Information may have been collected from one sex, probably men, when women have more accurate information.
Waste is improperly prepared	• Check the recipients of the information. It may be that one sex has received it but the other sex is expected to do the work.
Waste is set out at the wrong times	• First, check again on information delivery. Second, ask women and men about their schedules. It may be that the collection schedule conflicts with key personal or professional activities, preventing cooperation even when people want to comply.
Waste is set out in the wrong places	• The designated set-out sites may be culturally inappropriate in general, or inappropriate for the gender or class who set out the waste.
Source segregation protocols are not observed	• Those involved in handling waste at home – mainly women – may not have been consulted about their habits and preferences. More likely, they have been involved in the process of analysing how and at what point in the disposal process to introduce a separation step. • The suggested approach is to invite women in small groups to analyse the situation and suggest changes that come from them, not from outside.
Litter bins are not used and there is a concentration of litter.	• The community has perhaps not been consulted about their ideas for the kinds of litter Bins to use, where to place litter baskets, how to service them, and how to publicize them. • Consult groups of children, especially teenagers, women, and men about their ideas.

[17] World Banks checklist (Gender Considerations in Solid Waste Management) is based on based on: Urban Waste Extension Program (UNWEP). 1999. Gender and Water: Integrating Gender into Community Waste Management: Project Management Insights from an E-Mail Conference. 9-13 May 1998.

There is illegal dumping of a specific material or materials	• There may be no 'legal' or right option for dumping this material. Before introducing any kind of punitive approach, analyse the generation patterns for this material and identify the principal stakeholders who are responsible for generating and disposing of it. Then work with this group first to create a legal 'disposal opportunity' and/or 'recycling opportunity', combined with a gradual phase-in of strict enforcement and high fines.
There is illegal dumping of unspecified materials	• It is likely that the legal option is either too expensive, too inconvenient, inappropriate to the community, or otherwise indicative of something created without participation of the stakeholders. • Suggested approach, as above, is first to analyse the generation patterns and especially whether the waste is 'gendered' or linked to some particular social or ethnic group. Then work first to create a legal 'disposal opportunity' or 'recycling opportunity', combined with a gradual phase-in of strict enforcement and high fines.
There are low payment rates for waste services, combined with official or unofficial attempts to 'opt out' of the waste system	• Explore the dynamics of level of service, willingness to pay, and ability to pay to see if there is a gender problem with the decision-making process that produced the current system. If so, begin with single-sex groups to sort out service preferences and willingness to pay.
Low payment rates for waste services, combined with continued illegal disposal	• The information and education campaigns (IECs) in all probability do not address the priorities in waste management of the men and women residents. Suggested approach is to discuss residents' priorities in small neighborhood clusters and let these discussions determine the flow of these campaigns. • Mobilize influential women and men to organize waste management through the channels most likely to reach different groups of women, men, and children.

For more resources on gender and waste, see the resource list of toolkits compiled by WIEGO (2015):

From Theory to Action: Gender and Waste Recycling A Toolkit for Teachers, Researchers and Practitioners

ANNEX: LIST OF MENTIONED GUIDES

Guide on Gender and Climate Smart Agriculture:

Tools for data collection and analysis, for policy and research

- Gender integration into climate-smart agriculture
- Gender Integration in Climate Change and Agricultural Policies: The Case of Nepal
- FAO Agri-Gender Statistics Toolkit
- Engendering Agricultural Research, Development, and Extension
- Gender dimension of climate change research in agriculture: Case studies in Southeast Asia

Capacity building toolkits and tools for projects

- Gender in adaptation planning for the agriculture sectors: Guide for trainers
- Climate Resilient Agriculture Module
- A Gender-responsive Approach to Climate-Smart Agriculture: Evidence and guidance for practitioners
- Checklist: Gender-inclusive actionable agro-advisories

Guide on Gender and Energy:

Tools for policy

- Sustainable Energy for All: the gender dimensions
- Getting to Gender Equality in Energy Infrastructure
- MAINSTREAMING GENDER IN ENERGY SECTOR: PRACTICE AND POLICY LESSONS FROM THE ENERGIA INTERNATIONAL NETWORK
- Blueprint Guide for Creating Gender-sensitive Energy Policies
- Energizing Equality: The importance of integrating gender equality principles in national energy policies and frameworks

Gender mainstreaming on project development, planning and implementation:

- Gender Mainstreaming - a Key Driver of Development in Environment & Energy – Training Manual
- Gender Tool Kit: Energy Going Beyond the Meter (ADB)
- Energy and Gender for Sustainable Development: A Toolkit and Resource Guide (UNDP)
- Toolkit to Mainstream Gender into Energy, & Climate Change Community Based Adaptation Projects in the Pacific
- Training ManualGender Mainstreaming in Energy Projectsin the Pacific
- Integrating Gender Considerations into Energy Operations
- Gender and Energy Online Toolkit for Practitioners
- GUIDE ON GENDER MAINSTREAMING ENERGY AND CLIMATE CHANGE PROJECTS
- Renewable Energy: A Gender Perspective
- Mainstreaming Gender in Energy Projects: A Practical Handbook

Guides on Gender and Waste Management:

Gender mainstreaming in development projects

- MAINSTREAMING GENDER INTO UNDP GEF PROJECTS ON CHEMICALS AND WASTE
- Gender Mainstreaming in Waste Education Programs: A Conceptual Framework
- From Theory to Action: Gender and Waste Recycling A Toolkit for Teachers, Researchers and Practitioners

Capacity building (of practitioners)

- The Role of Gender in Waste Management: Gender Perspectives on Waste in India, Indonesia, the Philippines and Vietnam
- Recognizing Gender Issues in the Management of Urban Waste
- Chapter 8. Gender Considerations in Solid Waste Management

Other toolkits/guides and examples:
For policy makers:

- Gender mainstreaming in federal public institutions in Canada
- Gender into climate policy: tool kit for climate experts and decision makers
- Leveraging Co-Benefits Between Gender Equality and Climate Action for Sustainable Development

Gender responsive budgeting:

- Gender-Responsive Budgeting in Asia and the Pacific: Key Concepts and Good Practices
- Gender Responsive Planning and Budgeting: Indonesian Experience

UNDP Gender and **climate change** Training Modules (Each module approximately 3 hours)

Modules provide information for training and use case studies, global and country-specific examples and other learning tools, including group activities and videos.
Overview of linkages between gender and climate change

Issue Brief (398.9 kB)
Training Module (1.3 MB)

Gender, adaptation and disaster risk reduction
Issue Brief (456.8 kB)
Training Module (770.0 kB)

Gender, climate change and food security
Issue Brief (542.0 kB)
Training Module (2.5 MB)

Gender and sustainable energy
Issue Brief (408.4 kB)
Training Module (868.3 kB)

Gender and climate finance
Issue Brief (680.3 kB)
Training Module (724.2 kB)

Gender and REDD+
Issue Brief (650.4 kB)
Training Module (932.6 kB)

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