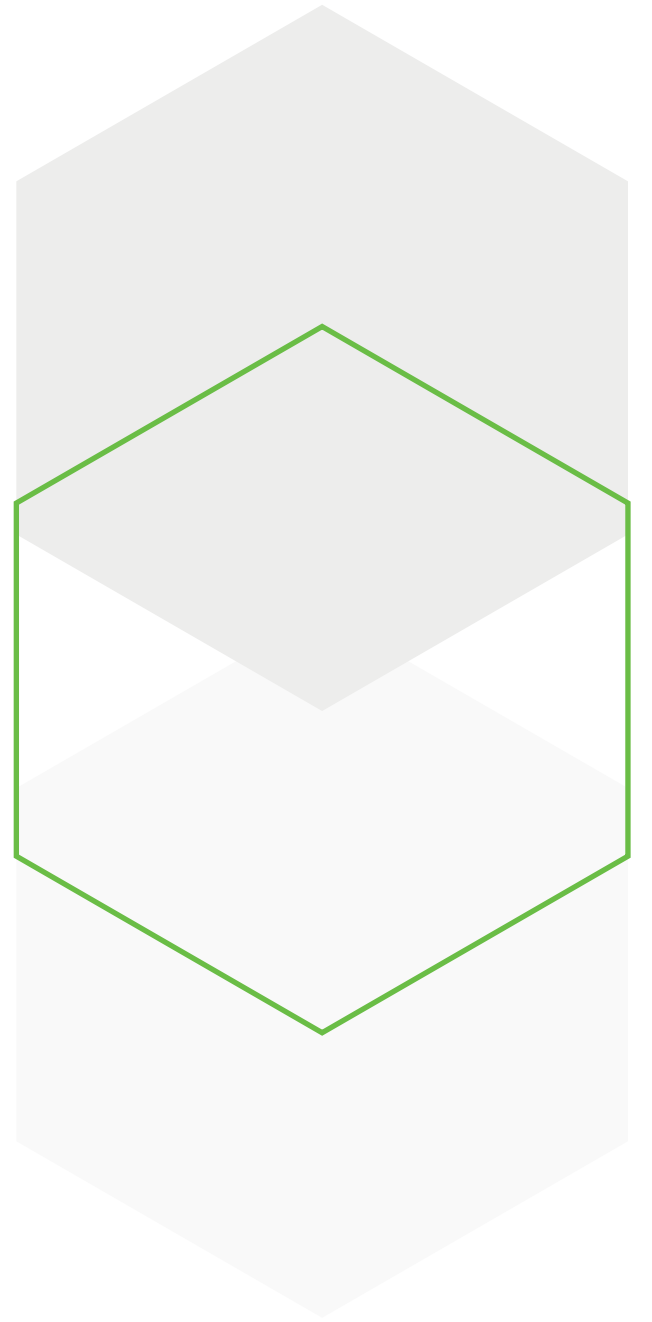
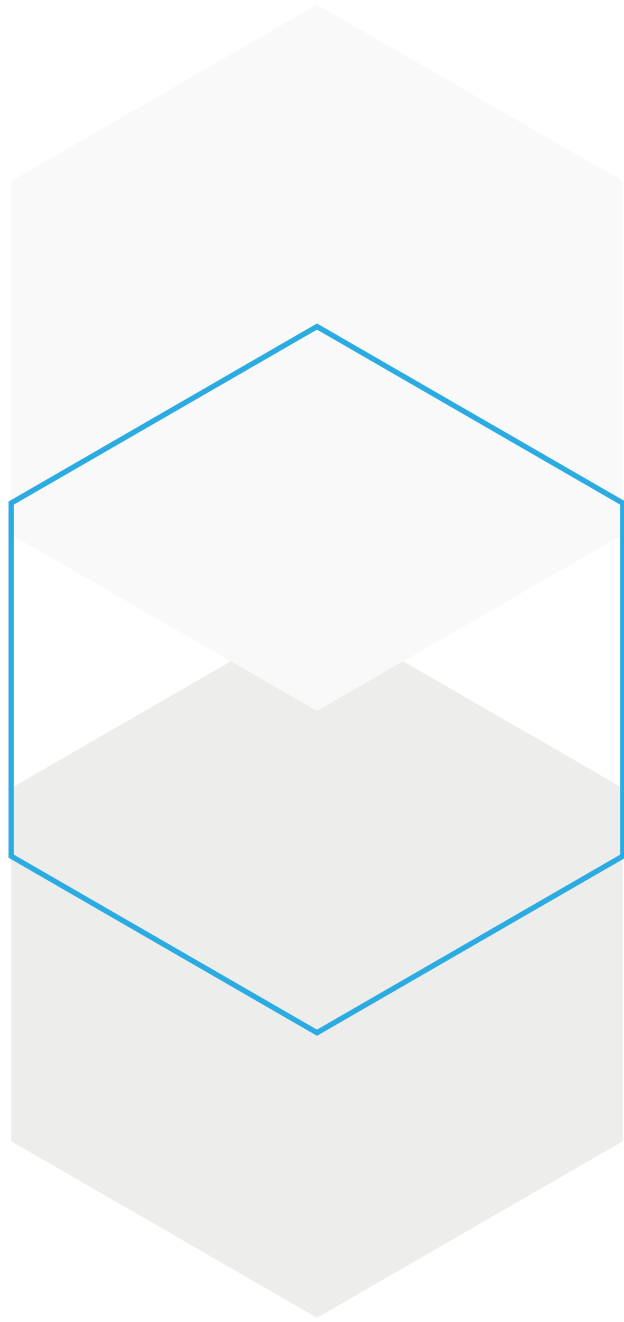


# Guidebook

on Mainstreaming  
**Gender** in the  
Implementation of the  
**Montreal Protocol**





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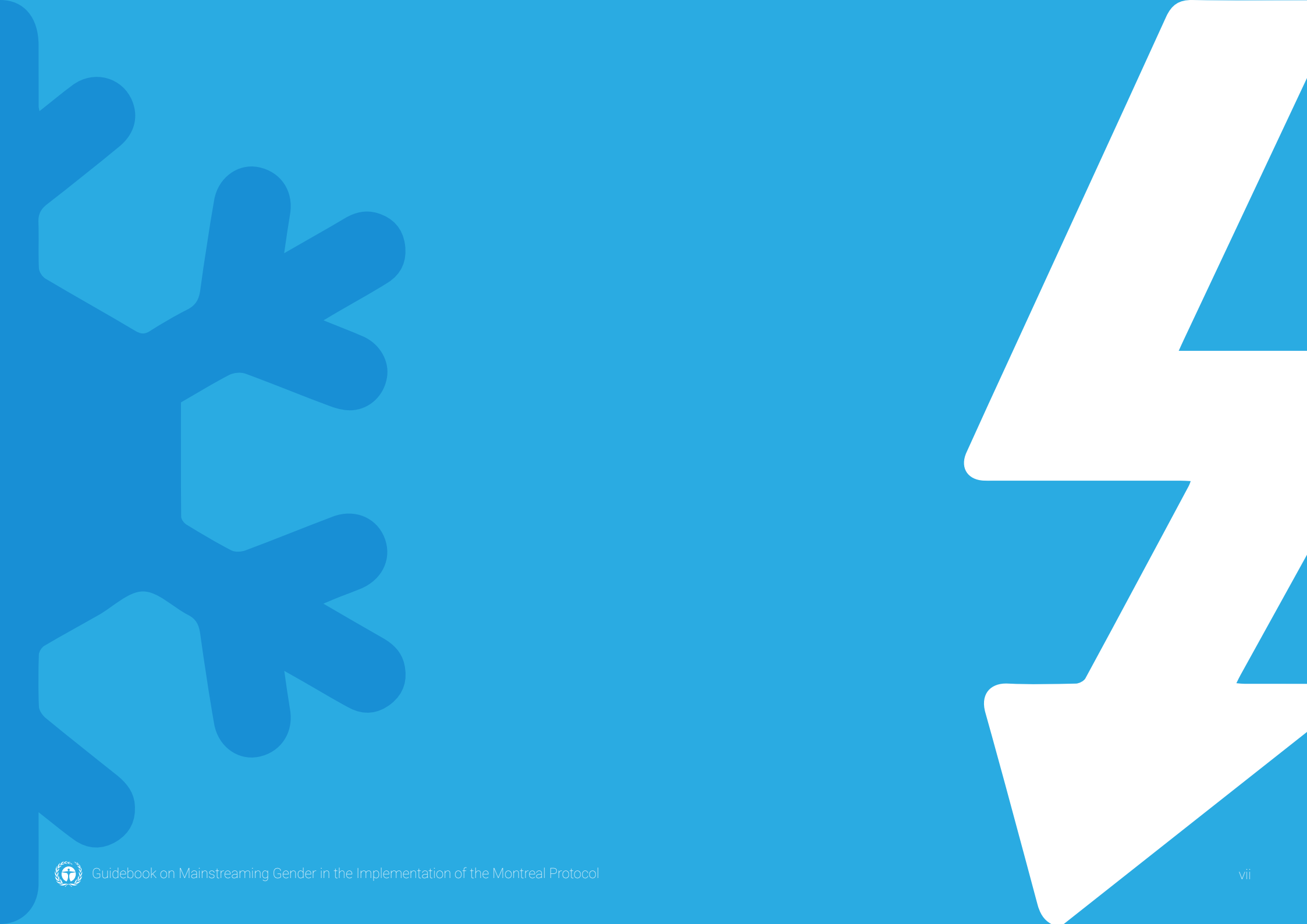
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# Abbreviations and acronyms

<b>CAP</b>	Compliance Assistance Programme (OzonAction)	<b>SME</b>	Small and medium enterprise
<b>ECA</b>	Europe and Central Asia	<b>NOO</b>	National Ozone Officer
<b>GWP</b>	Global warming potential	<b>NOU</b>	National Ozone Unit
<b>HCFC</b>	Hydrochlorofluorocarbon	<b>ODS</b>	Ozone depleting substances
<b>HFC</b>	Hydrofluorocarbon	<b>PICs</b>	Pacific Island Countries
<b>HPMP</b>	HCFC Phase-out Management Plan	<b>RAC</b>	Refrigeration and Air Conditioning
<b>IA</b>	Implementing Agency	<b>ROLAC</b>	Regional Office for Latin America and the Caribbean Office
<b>ILO</b>	International Labour Organization	<b>SDG</b>	Sustainable Development Goal
<b>IS</b>	Institutional Strengthening (projects)	<b>STEM</b>	Science, Technology, Engineering, and Mathematics
<b>IUCN</b>	International Union for Conservation of Nature	<b>TVET</b>	Technical and Vocational Education and Training
<b>KIP</b>	Kigali HFC Phasedown Implementation Plan	<b>UNEP</b>	United Nations Environment Programme
<b>MRVE</b>	Monitoring, Reporting, Verification, and Evaluation	<b>UNDP</b>	United Nations Development Programme
<b>MEA</b>	Multilateral environmental agreement	<b>UNFCCC</b>	United Nations Framework Convention on Climate Change
<b>MLF</b>	Multilateral Fund for the Implementation of the Montreal Protocol	<b>UNIDO</b>	United Nations Industrial Development Organization



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# Foreword

Empowering women and promoting gender equality is crucial for achieving sustainable development as embodied in the United Nations Sustainable Development Goal 5. The full participation and contribution of women is vital for ensuring healthy, productive, and equitable societies and for achieving economic growth. The Montreal Protocol Parties and the Multilateral Fund have an important role to play in turning this aspiration into reality through the systematic application of gender mainstreaming in their ongoing work. The United Nations Environment Programme (UNEP) and the Multilateral Fund support such efforts through dedicated gender mainstreaming policies and associated actions.

The implementation of the Montreal Protocol offers myriad opportunities for the promotion of gender equality. The historic under-representation of women in both Customs and refrigeration and air conditioning sector can be changed. Women can be encouraged and assisted to participate in Montreal Protocol activities. Role models can be held up to inspire women and girls, and young women can be motivated and assisted to enter Montreal Protocol-related professions. Existing female professionals can be encouraged to pursue career and capacity building in the refrigeration and air conditioning (RAC) sector and take leadership in environmental programming, decision making and governance processes.

As one of the Multilateral Fund Implementing Agencies, UNEP OzonAction developed its own internal Gender Mainstreaming Plan that outlines a path for systematically institutionalizing and mainstreaming gender issues in its own work and processes. This includes setting gender sensitive goals and indicators, allocating financial and human resources to reflect specific needs of women and men, delivering trainings and workshops, and assigning dedicated persons to provide advice on gender equality in environmental policies. Part of OzonAction's plan includes developing and outreaching publications that support National Ozone Officers with addressing the gender issue in their own work.

OzonAction, in consultation with UN Women and a gender expert, has developed this Guidebook on Mainstreaming Gender in the Implementation of the Montreal Protocol to advance the agenda of gender equality and women's empowerment through the implementation of Montreal Protocol activities. The Guidebook is designed to assist National Ozone Officers with addressing gender issues through their daily work and operations.

This publication is not meant to be either proscriptive or comprehensive. It provides ideas, guidance, and examples with an aim of giving the reader an idea of what might be possible. It is up to the National Ozone Officer to decide what type of actions are most appropriate for her or his country given their unique national context. UNEP OzonAction's hope is that this publication is engaging to read and inspires the reader to take action on gender mainstreaming. No action is too small – remember that a long journey begins by taking the first step.

James Curlin  
Head of UNEP OzonAction



# 1. Introduction

Mainstreaming gender in the implementation of the Montreal Protocol on Substances that Deplete the Ozone Layer (Montreal Protocol), which is an international treaty signed and adopted in 1987, is aligned with the 2030 Agenda for Sustainable Development that clearly acknowledges the link between environmental protection and gender equality, and to the United Nations (UN) mandate of promoting gender equality and empowering women.

Sustainable Development Goal (SDG) 5 states that “Gender equality is not only a fundamental human right, but a necessary foundation for a peaceful, prosperous and sustainable world. Hence, providing women and girls with equal access to education, health care, decent work, and representation in political and economic decision-making processes will fuel sustainable economies and benefit societies and humanity at large”.

Promoting gender equality and empowering all women and girls crucially contributes to the acceleration of sustainable development guided by the Montreal Protocol. As one of the landmark Multilateral Environmental Agreements (MEA), the Montreal Protocol regulates the production and consumption of 114 man-made chemicals including phasing out ozone depleting substances (ODSs) and phasing down hydrofluorocarbons (HFCs), in a stepwise manner with different timetables for developed and developing countries (referred to as “Article 5 countries”). Under this treaty, all parties have specific responsibilities for the controlled substances including those related to phaseout/phasedown schedules, control of trade with non-Parties, annual data reporting, and implementation of national licensing systems to control imports and exports.

At the end of 2019, the Executive Committee (ExCom) of the Multilateral Fund (MLF) for the Implementation of the Montreal Protocol approved its Operational Policy on Gender Mainstreaming and affirmed the importance of gender mainstreaming in MLF-supported projects. The gender policy of the UN, including that of the United Nations Environment Programme (UNEP), and the MLF's operational policy are being applied

to projects, meetings, and activities. Despite the efforts, the roles of women in refrigeration and air conditioning (RAC) sector, particularly in technical field, remains underrepresented. At the same time, there is a need to strengthen the collection of and reporting on gender-relevant information under MLF projects and activities.

UNEP is one of the four Implementing Agencies (IA) under the MLF for the Implementation of the Montreal Protocol. Under UNEP's OzonAction, the Compliance Assistance Programme (CAP) assists the National Ozone Units (NOUs) to enable national compliance to the Montreal Protocol and its Amendments. Since implementing the Montreal Protocol is ultimately the responsibility of the national governments, the NOUs are established within the governments of each country. NOUs are responsible for implementing Institutional Strengthening (IS) projects, HCFC phase-out Management Plans (HPMPs), Kigali HFC Implementation Plans (KIPs), conversion projects and other enabling activities. The NOUs are organized into ten regional or sub-regional networks, which form the backbone of a global ozone network, and are a capacity building mechanism of the MLF. In UNEP's capacity as an implementing agency of the MLF, the Law Division's OzonAction Branch promotes gender mainstreaming in line with the UN's overall policy, and specifically applies UNEP's Policy and Strategy for Gender Equality and the Environment and the Multilateral Fund's Operational Policy on Gender Mainstreaming for MLF-supported Projects.



# 03

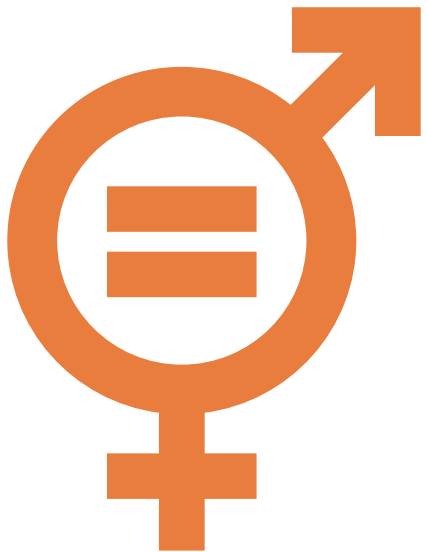


## 1.1. Overview of the guidebook on gender mainstreaming in the implementation of Montreal Protocol

The implementation of the Montreal Protocol offers opportunities for gender equality in many ways, for example, by encouraging women to pursue careers in the RAC sector and take on leadership roles in environmental governance processes, which contributes to gender equality and empowering all women and girls (SDG 5, targets 5.1 and 5.5)



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This *Guidebook on Mainstreaming Gender in the Implementation of the Montreal Protocol* (hereinafter referred to as the guidebook) has been developed to help advance the agenda of gender equality and women's empowerment under the implementation of Montreal Protocol by means of the NOUs and national stakeholders mainstreaming gender issues into their daily works and operations. The Guidebook maps the existing issues and challenges in achieving gender equality through Montreal Protocol activities, identifies gender mainstreaming opportunities under the implementation of Montreal Protocol along with examples and good practices from various countries.

The guidebook has been developed through an iterative process that included a review of MLF-related documents (global and country level), including selected MLF projects proposals, work programmes and progress reports, evaluation reports and related documents, consultation with selected NOUs and the four implementing agencies, a questionnaire survey covering 29 NOUs, which yielded further information about gender-related achievements and challenges.

### GENDER EQUALITY

#### TARGET 5.1

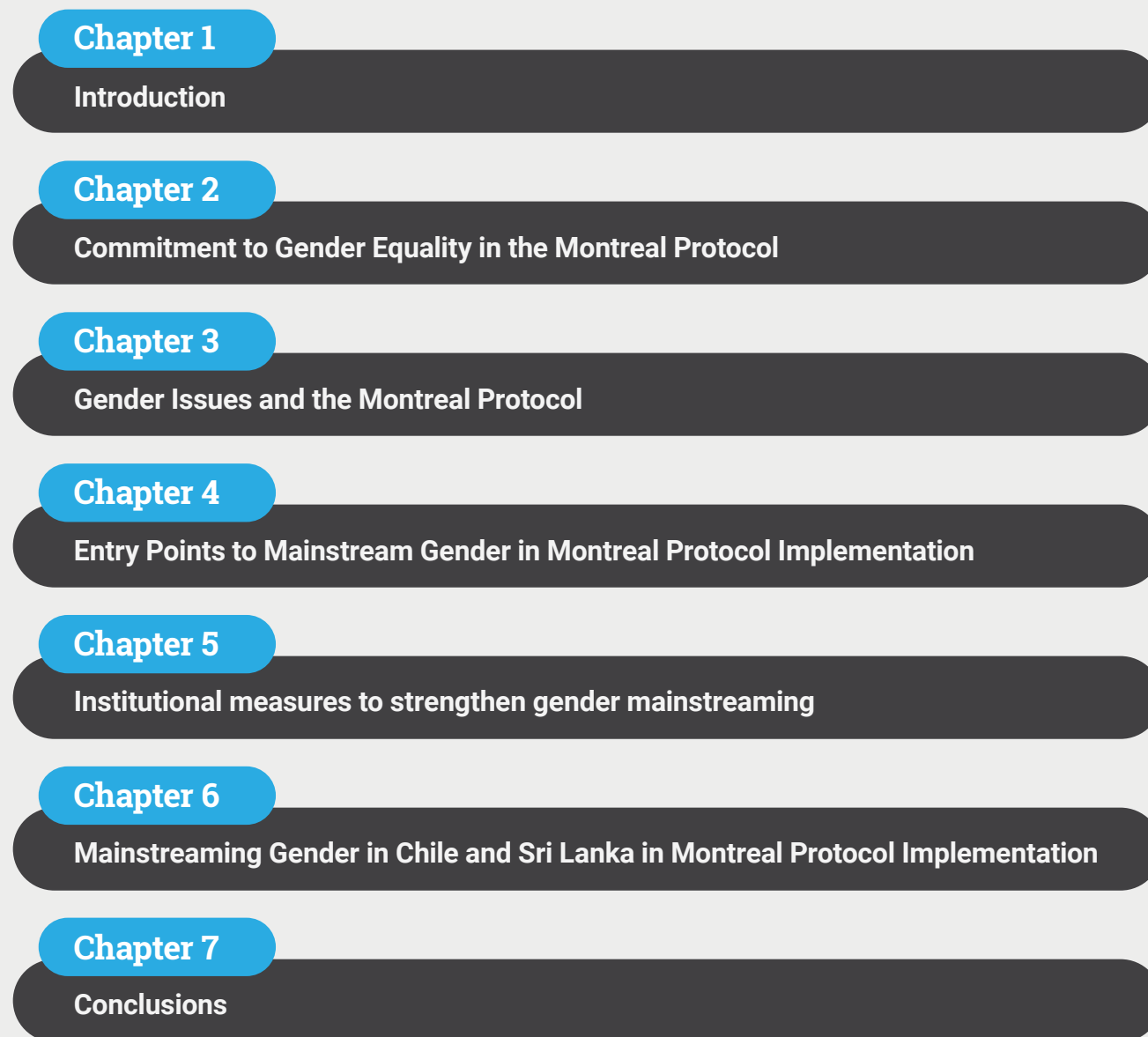
**End all forms of discrimination against all women and girls everywhere**

#### TARGET 5.5

**Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life**

Figure 1. SDG Goal 5 Gender Equality

## 1.2 Navigating through the guidebook



The guidebook starts with an overview of the global context of gender equality and the gender concepts and commitment to it under the Montreal Protocol. This is followed by a synopsis of the relevance of gender issues in Protocol implementation, examples of actions taken by different NOUs and their respective governments and the challenges they faced while doing so. Based on this assessment, and drawing from good practices, suggestions are put forward on programmatic actions (external) and possible entry points to enhance gender equality through Protocol activities. This is complemented by a set of suggested institutional measures (internal) that can be undertaken by UNEP to strengthen its processes and capacity to address gender equality issues. There are then case studies of two countries, Chile and Sri Lanka, that have made good strides in this context.



Figure 2. The layout of the Guidebook

## 1.3. Who is it for?

This guidebook is intended to be a practical document to help NOU staff, customs and enforcement officials, stakeholders in the RAC sector and investment project enterprises or partners; to help identify means of access to mainstream gender issues in their daily work of developing compliance-related strategies, policies, projects and activities, managing the implementation of national regulations, data reporting and working with national and international institutions. These include activities related to HPMPs, institutional strengthening projects, KIPs, industrial conversion or investment projects, public outreach and communications activities for awareness, as well as enabling work on policy and regulations on ODS/HFC compliance targets.



**The guidebook intends to raise the awareness of key stakeholders, including:**

- 1 Relevant government ministries or departments e.g. environment, trade, industry, customs, enforcement, bureau of standards, education, labour, women's affairs.
- 2 Universities, Technical and Vocational Education and Training (TVET) schools and other learning institutions.
- 3 Traders and suppliers of ODS/HFC chemical e.g. importers, exporters, distributors.
- 4 Companies that use ODS/HFCs e.g. importers, exporters and manufacturers of refrigeration equipment, foam products and air-conditioning systems.
- 5 RAC technicians who provide services on refrigeration and air conditioning systems and use equipment that rely on ODS/HFC.
- 6 End-users e.g. members of the general public, small- and medium-sized enterprises, commercial and residential buildings where large air-conditioning systems are used.
- 7 Companies that supply ODS/HFC alternatives and services, as well as end-users of alternatives to ODS/HFCs.



# 2. Commitment to Gender Equality and Women's Empowerment in Montreal Protocol Implementation



## 2.1. Gender equality and women's empowerment: the global context

Gender equality and women's empowerment is a prerequisite for and a key driver of sustainable development. The United Nations' 2030 Agenda for Sustainable Development emphasizes that gender equality and women's empowerment are a goal in themselves, and at the same time, cut across all SDGs (United Nations Development Program [UNDP], United Nations Environment Programme [UNEP] and UN Women 2020). It further states that "...Parties should consider the imperatives of a just transition of the workforce and the creation of decent work and quality jobs..." (United Nations [UN] 2015). A fundamental principle of the 2030 Agenda is to 'leave no one behind', which means it requires the transformation of deeply rooted systems – economic, social and political, governance structures and business models at all levels, from local to global and that development must benefit everyone with a strong focus on vulnerable and marginalized populations

(United Nations Department of Economic and Social Affairs [UNDESA]).

Therefore, achieving sustainable development requires recognizing the contributions of women, who form half of the world's population, ensuring their meaningful participation in decisions that affect their lives and their communities, and equitable benefits to both women and men. Of particular relevance to the Montreal Protocol is the 2030 Agenda's emphasis on the linkage between a net-zero transition and women's empowerment, where gender mainstreaming is highlighted as a crucial and systemic element of programme implementation. Women and girls must enjoy equal access to quality education, economic resources and political participation as well as equal opportunities with men and boys for employment, leadership and decision-making at all levels (UN 2015).



Commitment to gender equality and women's empowerment has been obligated on a global scale. Many inter-governmental decisions have been made and number of policies, strategies and programmes adopted. Most countries have embraced explicit policy mandates, established dedicated ministries or other national government organizations tasked with the responsibility to further gender equality, and enacted legislations to uphold women's rights and to advance the situation of women within their governments and society.

Despite these efforts, gender disparities continue. In most societies, gender inequalities are still deep-rooted: women suffer from lack of access to decent work and face occupational segregation and gender wage gaps. Some of the persistent gaps are as follows (UN Women 2022):

## 49 countries lack laws protecting women from domestic violence

Many countries continue to have laws that are discriminatory towards women. Forty-nine countries still lack laws protecting women from domestic violence, while 39 countries bar equal inheritance rights for daughters and sons. Gender-based violence remains one of the most pervasive human rights violations in the world today.

## 2.6x women do more unpaid care and domestic work than men

Women do 2.6 times more unpaid care and domestic work than men. While families, societies and economies depend on this work, for women it means lower earnings and less time to engage in non-work activities.

## 63% women's labour force participation rate

The gender gap in economic participation has changed a little in the last 20 years. Globally, women's labour force participation rate (for women aged 25–54) is 63 per cent compared to 94 per cent for men (UN Women 2018). In the Asia Pacific region, only 50 per cent of the women in the working age population are economically active, compared to 84 per cent of men. Around 64 per cent of the working women in the region are in informal employment (Economic and Social Commission for Asia and the Pacific [ESCAP]). Furthermore, women earn 23 per cent less than men (UN Women 2018).

## 23.7% parliamentary seats held by women

While more women have entered political positions in recent years, including using special quotas, they still hold a mere 23.7 per cent of parliamentary seats, far short of parity. The situation is not much better in the private sector, where women globally occupy less than a third of senior and middle management positions.



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## 2.2 The Montreal Protocol, Gender Equality and the Sustainable Development Goals



In addition to the restoration of the ozone layer to protect human health and livelihood, the Montreal Protocol has the potential to have other social gains such as reductions of greenhouse gas emissions, industry innovation, job creation, more-efficient use of energy, and contribution to gender equality. Some of the potential linkages between the Protocol and gender equality outcomes in various SDGs are highlighted in Figure 3.

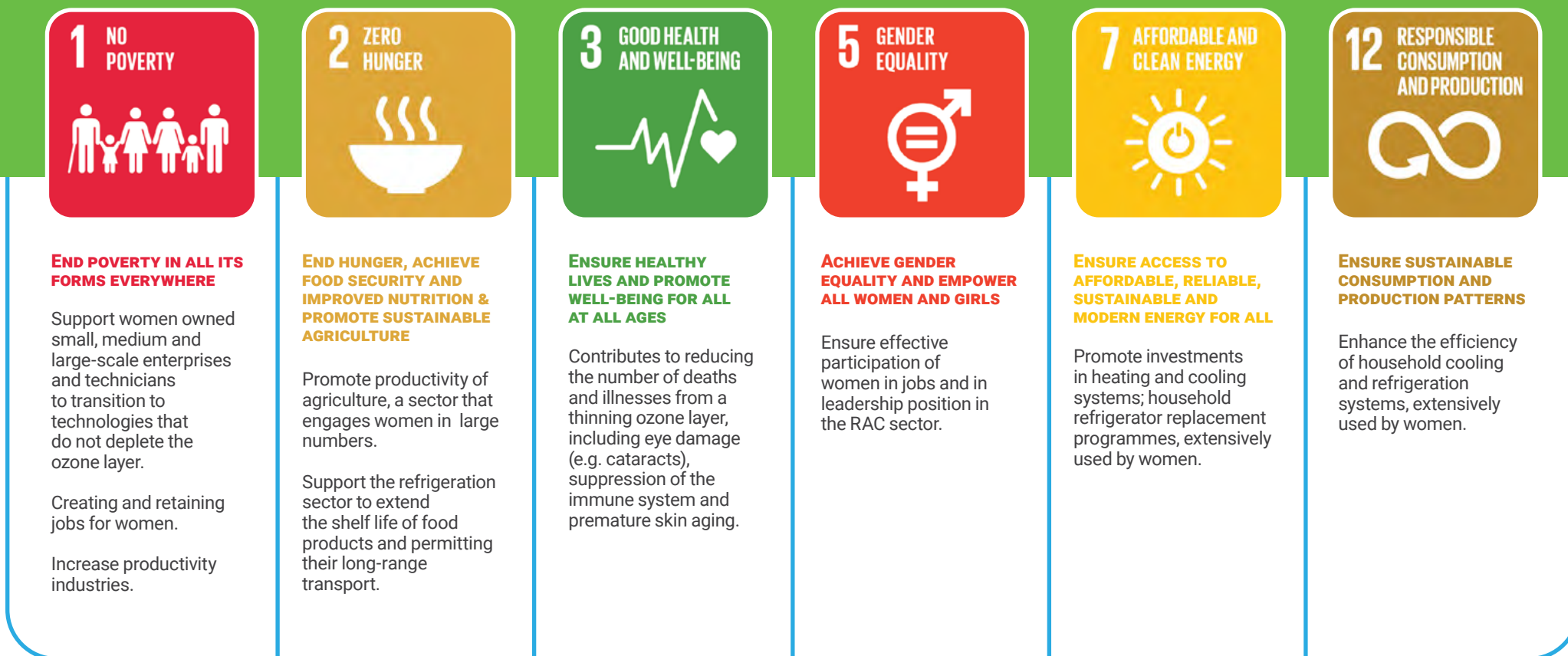


Figure 3. Potential Contribution of the Montreal Protocol to Gender Equality Outcomes in SDGs

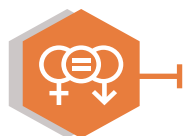
## 2.3 Conceptual framework and definitions

# USING THE TERMS CORRECTLY

The definitions of 'gender' and 'sex' are distinctive.



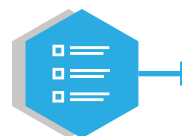
**Gender** is used to describe the socially constructed differences between women and men, while **sex** is used to describe the universally biological traits of women and men. '**Gender issue**' concerns both gender-based and/or sex-based. The terms 'gender' and 'women' are not synonymous.



**Gender equality** refers to the equal rights, responsibilities and opportunities of women, men, girls and boys. Equality does not imply sameness but that the rights of women and men will not depend on the gender they were born with. Gender equality implies that the interests, needs and priorities of all genders are taken into consideration, recognizing the diversity of different groups. Gender equality is not a women's issue but should concern and fully engage all genders while recognizing that neither all men nor all women are a homogenous group." (UNWOMEN, undated)



**Gender equity** refers to fair and just distribution of responsibilities and benefits for both women and men. Measures to compensate for previously occurred and occurring disadvantages that limit their responsibilities and benefits may be needed.



**Gender norms** set expected standards on how women and men should act and conduct themselves. These standards tend to be internalized early in life stage, leading to the widespread conformation of gender socialization and stereotyping.



**Women's empowerment** refers to the process of women gaining their power and control through political participation and leadership opportunities. In order to be empowered, women shall have equal capabilities as well as equal access to opportunities to realize their rights, potentials, confidence, and freedom of choices so that discrimination and inequality can be tackled.

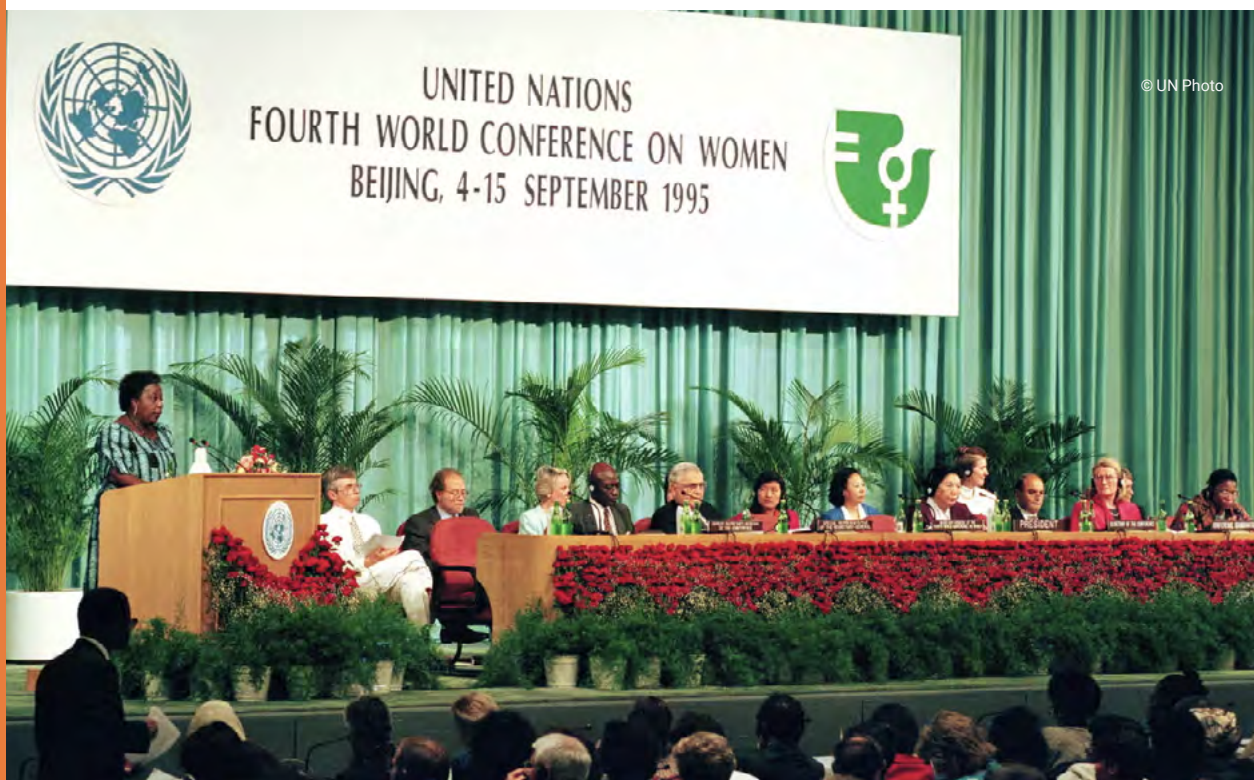


**Unpaid care work** refers to daily household activities and personal care that sustain lives and health. These tasks are predominantly performed by women free of charge.

## 2.4 The concept of gender mainstreaming

At the Fourth World Conference on Women in Beijing in 1995, the concept and importance of gender mainstreaming was highlighted. Resolutions, policies, and programmes under the United Nations, including the 2030 Agenda for Sustainable Development, have reaffirmed commitments to gender equality and the empowerment of women and girls through gender mainstreaming.

Gender mainstreaming is defined as “the process of assessing the implications for women and men of any planned action, including legislation, policies or programmes, in all areas and at all levels.... It is a strategy for making women’s as well as men’s concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of all policies and programmes in all political, economic and societal spheres so that women and men benefit equally and inequality is not perpetuated” (United Nations Economic and Social Council [ECOSOC] Resolution 1997/2). Perceiving women and men as actors and beneficiaries throughout programmatic cycle, the goal of gender mainstreaming is to achieve gender equality through women’s empowerment.



In general, four layers of programming processes need to be adopted to mainstream gender effectively and sustainably:

### FIRST LAYER

To develop national policies and legislation taking into consideration specific needs of women and girls throughout their lives.

### SECOND LAYER

To allocate budget for policies, legislation, and monitoring systems for accountability.

### THIRD LAYER

To improve the capacities and capabilities of service providers.

### FOURTH LAYER

To raise awareness of women’s rights among women and women’s organizations so that women are seen as equal actors in decision making.



## At the Programmatic Level:

- Collect sex-disaggregated data, which reveals quantifiable differences between women and men in relation to poverty, income, education, and participation levels, amongst others, and helps to better understand the context.
- Conduct a gender analysis that informs programming. Gender analysis helps understand how and why women and men perform their roles and responsibilities differently.
- Consult both women and men throughout the programme cycle so that specific needs and priorities can be identified and responded.
- Ensure that project objectives and indicators consider the changes and benefits for both women and men.
- Establish accountability mechanisms to facilitate the promotion of gender equality.



## At the Institutional Level:

- Build capacity and expertise within organizations to understand and implement gender equality and women's empowerment principles.
- Allocate financial and human resources to support gender mainstreaming efforts.
- Understand the political context, country situations, laws and policies and social norms.
- Arrange for support on gender mainstreaming such as appointing a gender unit or focal points.
- Build partnership with a wide range of other sectors and stakeholders, such as women's organizations, for programme implementation.



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**In addition to the above-mentioned actions, a multiple-track approach that combines gender-targeted and gender-integrated approaches has proven effective. These broadly combine the following approaches:**

**Gender-targeted interventions** (also referred to as **gender accommodating approaches**) that recognize and respond to the specific practical needs and realities of women (and men) based on their existing roles and responsibilities. They target a specific group, typically women and girls and are aimed at changing or shaping existing mainstream policies, sector initiatives and government systems.

**Gender-integrated approaches** (also referred to as **gender transformative approaches**), that challenge the nature of the gendered power relationship between women and men and lead to a transformation of gender division of labour. They also aim to change gender norms and relations in order to promote more equitable relationships between men and women and a more socially enabling environment.

**Table 1: Gender-targeted interventions and gender-integrated approaches**

Gender targeted interventions	Gender integrated approaches
<b>Intervention type:</b> Interventions specifically target women and girls.	<b>Intervention type:</b> Programmes and functions integrate gender perspectives.
<b>Direct interventions:</b> Mobilize for subsidies, advocacy, service provision based on specific needs identified.	<b>Indirect interventions:</b> Evidence-gathering, research, policy dialogue, institution and coalition-building, capacity development and organisational reforms.
<b>Short term measures:</b> Progressive, transitional and /or preparatory measures such as media campaigns.	<b>Long term measures:</b> Target systemic changes, behaviour and social change followed by social norms and transformation.

## 2.5 Operational policy on gender mainstreaming for Multilateral Fund-supported projects

At its 84<sup>th</sup> meeting in 2019, the MLF Executive Committee approved the Operational Policy on Gender Mainstreaming for Multilateral Fund-supported Projects (Decision 84/92). It states that the implementation of the policy will be a "... shared responsibility of the Executive Committee, the Multilateral Fund Secretariat, the bilateral and implementing agencies, and the National Ozone Units of Article 5 countries".

The Policy is designed to ensure that existing gender policies of implementing agencies under the MLF are implemented systematically and complemented where appropriate. The guiding principles of gender mainstreaming in MLF-funded projects include:

- To support gender equality and women's empowerment through strategies, policies, procedures, guidelines, and criteria in line with gender policies of the implementing agencies.
- To apply a gender-sensitive approach when designing and implementing the projects.
- To identify means of access to promote gender mainstreaming.
- To enhance reporting, monitoring and evaluation systems that track and report progresses and outcomes of gender mainstreaming initiatives.

Subsequent meetings, including the ExCom meeting held in June 2022, have further emphasised the importance of gender mainstreaming in the Montreal Protocol, encouraging the bilateral and implementing agencies to continue ensuring that the operational gender mainstreaming policy of the MLF is applied to all Protocol projects and apply, when appropriate, use of the gender indicators and checklists to facilitate reporting (UNEP 2022a).

### Three priority areas have been identified for action:

1

**Area 1:** Developing tools to facilitate gender mainstreaming in the review/approval process, and reporting, monitoring and evaluation systems of the Multilateral Fund, including the tracking and reporting on activities and results of gender mainstreaming based on the collection of sex-disaggregated data, where possible, and the reporting of any observations made during the project cycle related to gender equality and women's empowerment and/or possible gender impacts or implications.

2

**Area 2:** Considering and addressing gender equality and women's empowerment systematically in all projects prepared to phase-out and phase-down controlled substances for Article 5 countries in all phases of the project cycle.

3

**Area 3:** Delivering capacity building programmes, trainings, and activities for bilateral and implementing agencies' partners and Article 5 countries to facilitate gender mainstreaming, and effective use of the identified strategic entry points to promote gender equality and women's empowerment in all projects financed by the MLF.





**Inger Andersen**

**Under-Secretary-General of the United Nations and Executive Director of UNEP**

## 2.6 UNEP's commitment to promoting gender equality through the Montreal Protocol

Gender equality and women's empowerment is recognized as a cross-cutting priority across all aspects of UNEP's work. UNEP's Gender Equality and the Environment Policy and Strategy (2017) enables the organization to advocate for gender equality and women's empowerment in collaboration with its development partners in a coherent and coordinated manner. The strategy ensures that environmental programming incorporates the gender analysis that reflect women's insights, knowledge, and expertise. Women and men have equal voices when it comes to setting the agenda (UNEP 2022b).

UNEP's gender strategy recognizes that men and women relate to the environment in different ways, and environmental changes have different impacts on their lives. Women play a critical role in sustaining communities and managing natural resources, but their contributions are often undervalued and neglected. In considering this within the Montreal Protocol framework, OzonAction commits to actively promoting women's participation and contribution in all trainings and capacity-building programmes, and to empower women to pursue careers in the RAC sector.

Gender mainstreaming is also reflected in OzonAction's 2021–2023 CAP Strategy, which also requires Article 5 countries to conform (UNEP 2020a). In March 2022, OzonAction operationalized its own gender mainstreaming plan, which provides a comprehensive approach for its own work covering both institutional (internal) and programmatic (external) actions.

# 3. Gender Issues and the Montreal Protocol



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Women and men are differently impacted by environmental conditions. This is a result of existing inequalities and stereotypes in gender roles, responsibilities and norms. The roles played by men and women in environmental protection as agents of change are often distinguished by the gender roles. Due to these roles and socio-cultural norms, the level of awareness and knowledge of environmental protection for women and men differs, hence different strategies adopted. For these reasons, environmental management initiatives, including the Montreal Protocol, need to be gender responsive and sensitive when addressing the gender-based imbalances and inequalities in society.

While gender equality requires that women and men should

equally participate in and benefit from development, the focus of gender equality measures in the discussion here is predominantly on women. This is because where gender inequality exists, it is generally women who are excluded or disadvantaged in relation to decision-making and access to economic and social resources. There are clear patterns of women's compromised access to resources and opportunities. Moreover, women are systematically under-represented in political decision-making processes that shape their societies and their own lives.

Several gender issues come into play as far as the Montreal Protocol and its implementation is concerned. These issues, discussed in this section, have been drawn from a survey of 29 NOU staff<sup>1</sup>, various project documents, and global literature.

<sup>1</sup> Respondents included those from Bhutan, Brunei Darussalam, Cook Islands, Federal States of Micronesia, Japan, Lao PDR, Marshall Islands, Mongolia, Palau, Myanmar, Papua New Guinea, Philippines, Samoa, Sri Lanka, Singapore, Solomon Islands, Thailand, Timor Leste, Vanuatu, and Viet Nam.



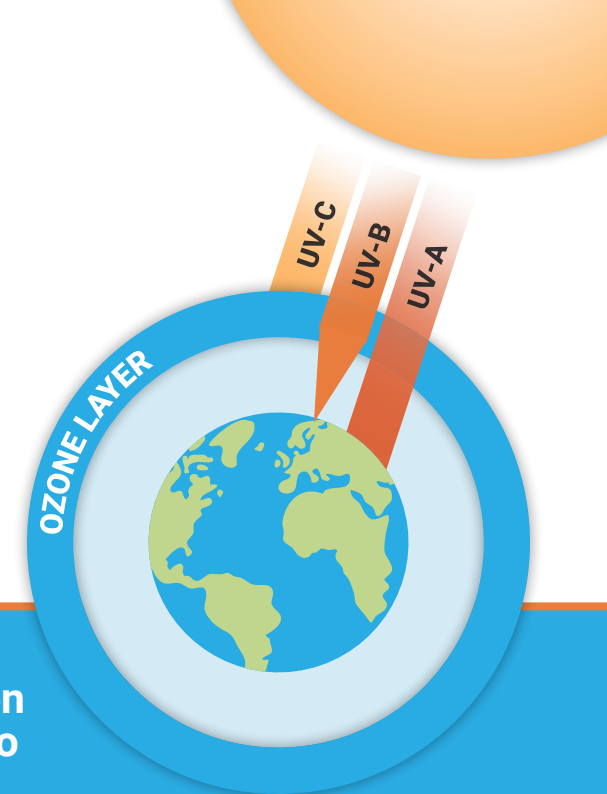
## 3.1 Exposure to ultraviolet radiation is known to affect men and women differently.

The depletion of the ozone layer and the resultant exposure to high amount of ultraviolet (UV) radiation is known to cause adverse health impacts on human beings, plants, and animals. Exposure to UV rays has been linked to higher incidence of skin cancer, cataracts, and blindness. According to the United States Environmental Protection Agency, UV-related diseases have been significantly reduced thanks to the Montreal Protocol. It is estimated that “11 million cases of melanoma, 432 million cases of keratinocyte skin cancers, and 63 million cases of cataract will have been avoided for those born between 1890 and 2100 in the United States.” (UNEP, 2022g).

In addition to damaging the ozone layer, adverse effects on women and men can happen differently when being exposed and handling ODS due to their biological differences. For example, women tend to be more vulnerable to the impacts of fat-soluble chemicals, storing more pollutants in their tissues compared to men because they have a higher proportion of body fat (United Nations Industrial Development Organization (UNIDO 2015). Reproductive health conditions such as birth defects, low birth weight, miscarriages or premature births can also occur when women are exposed to chemicals. It can be passed on to the babies during gestation and breastfeeding. Furthermore, because of their roles in the household including washing and cleaning, women tend to get a higher exposure to chemicals that routinely are a constituent of cleaning and washing agents (UNIDO 2015). Unfortunately, most people are neither aware of these impacts, let alone the gender-differentiated ones, nor the measures to prevent this exposure.

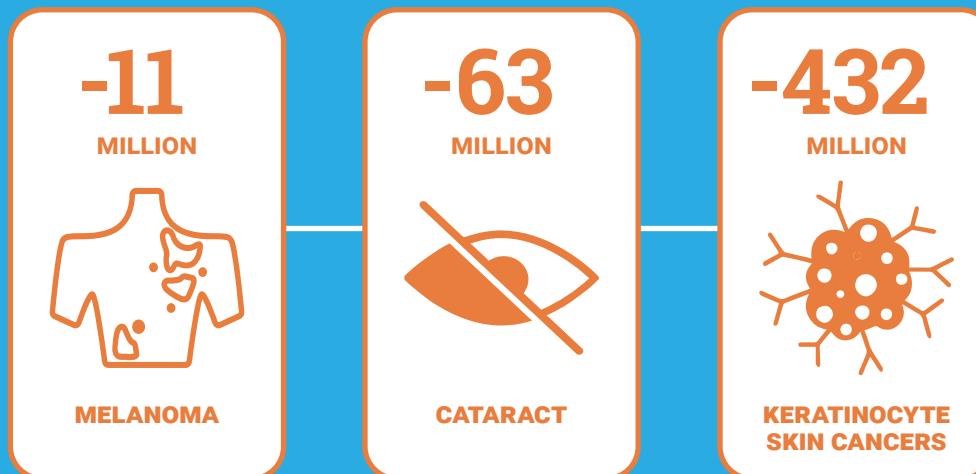
### WAVELENGTHS

- UV-C**  
100-280 nm  
entirely absorbed by the ozone layer  
**Most damaging**
- UV-B**  
280-315 nm  
mostly absorbed by the ozone layer  
**Raises the risks of skin cancer, cataract, suppressed immune system**
- UV-A**  
315-400 nm  
weakly absorbed by the ozone layer  
**Causes premature aging of the skin**



UV-related diseases have been **significantly reduced** thanks to the Montreal Protocol

MILLION OF CASES **AVOIDED** THANKS TO THE MONTREAL PROTOCOL  
PEOPLE BORN BETWEEN 1980 AND 2100 IN THE UNITED STATES



## 3.2 Women are distinctly underrepresented in the Refrigeration and Air-Conditioning (RAC) sectors, especially in technical roles.

As the demand for cooling, refrigeration and air conditioning equipment increases, the sector is likely to need more and more skilled sales, technical servicing, and engineering personnel. Occupations in the sector include business owners, contractors, engineers, and technicians (civil, electrical, mechanical, energy and maintenance), sales staff, etc. The RAC workforce is diverse, yet women are visibly and severely underrepresented with an average of 10–20 per cent of engineering workers around the globe (UNEP 2021).

### WOMEN REPRESENTATION IN ENGINEERING GLOBALLY



#### NOT EASY FOR WOMEN TO PURSUE A CAREER IN RAC SECTORS

A survey of women in the RAC sector in China, Peru and Nigeria revealed that a problem most women face is the lack of supportive provisions in place, such as childcare options or flexible working hours. While this is not always easy, many women found ways to manage this situation, especially with support from their spouses, parents and siblings who support them with childcare.

Men's perception of women working in the sector differs. While none of the men interviewed voiced concerns regarding women's competence and skills, some, especially those in management positions, were critical regarding their flexibility and availability to undertake certain components of the job, such as traveling to support customers across the country and working extra hours late at night (United Nations Development Programme [UNDP] 2018).



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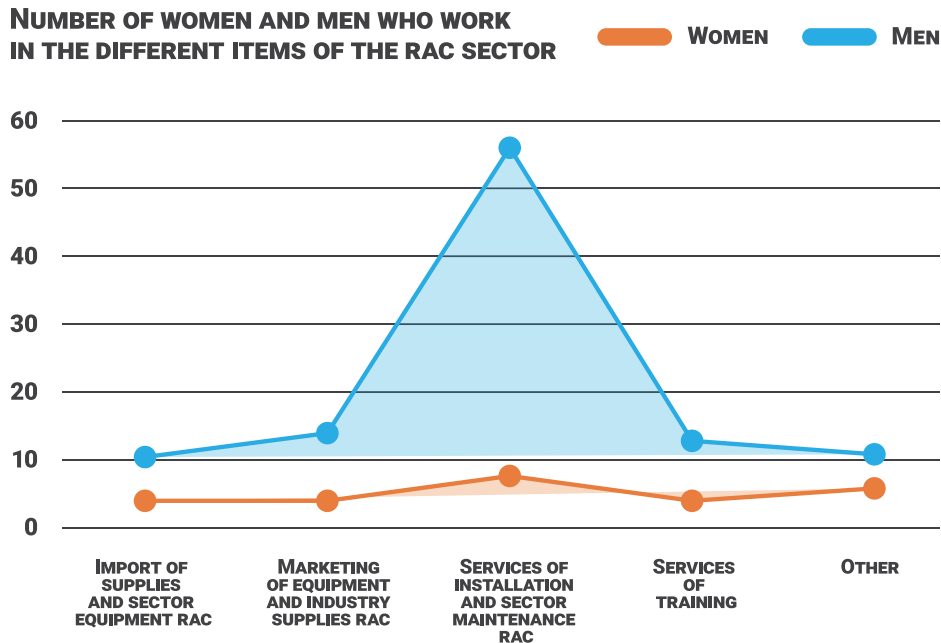


Figure 4. Comparison of women and men's employment in the RAC sector, Chile (Source: UNIDO 2019)

A survey of 810 women in the RAC sector was conducted by the International Institute of Refrigeration and OzonAction to collect the number of women as members of national refrigeration associations. The survey revealed that women constitute only six per cent of the members (UNEP 2021b and UNEP 2022c). China (20.1 per cent) and the EU (19 per cent) hold an above-average per centage of women membership.

Among the hugely disproportionate number of women in the RAC sector, a minority of them are formally trained engineers or technicians. The majority performs other roles such as sales, logistics or human resources (UNIDO 2021). The 'Women in Cooling' survey (UNEP 2022c) showed that only 8 per cent of female respondents work in refrigeration, air-conditioning and heat pumps (RACHP) application servicing; 13 per cent serves in academic and teaching roles; 15 per cent works in sale and marketing; and 22 per cent is in design and research and development. A female owner of a refrigeration company in Iran confirmed this by stating that, apart from herself, women work in research and accounts fields, but not in technical fields or in executive and decision-making positions.

Women technicians working in the RAC sector highlight several reasons for the small number of women working in the sector, starting with relatively fewer girls pursuing technical education (as compared to boys). For women that do join the RAC sector, insufficient implementation of gender-sensitive and -responsive infrastructure, workplace provisions, difficulties in managing work-home balance act as major deterrents. The few women working in RAC in Chile reported the absence of a differentiated physical space for men and women, which translates into discomfort and insecurity for them (UNIDO 2021).

Issues are only exacerbated by the lack of peer-support networks, role models and champions, and lack of access to mentoring and training opportunities. Furthermore, across the world, most of the industrial RAC equipment and technology are designed and developed more suitably for men. For example, RAC work often requires lifting of heavy equipment, which some women find difficult to execute. Hence, it is a combination of physiological and psychological factors that bar women from thriving in technical roles.



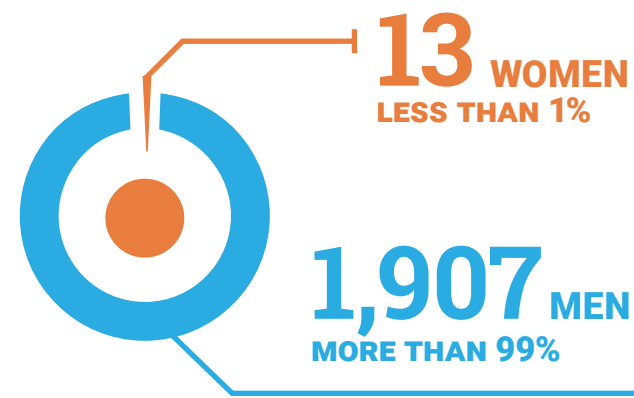
Figure 5. Top five challenges women face in their workday (Source: UNEP 2022c)



### 3.3 Since there are few women in technical roles in the RAC sector, the numbers that attend technical training, conducted as part of MLF supported projects, remains small.

In recent years, some NOUs, like in Mongolia, have started including targets in their planned activities for women's participants in technical and other training. However, the number of women participating in RAC technician training remains very small, which is a function of the very few numbers of women that are working in the sector, especially in technical roles. The NOOs face difficulties ensuring equal opportunities for women and men to participate in the trainings as a number of women in the sector is hugely disproportionate. As a result, the number of women attending technical trainings in the RAC sector is very small. For example, in technical workshops conducted in Sri Lanka between 2017–2022, 1,907 men and only 13 women participated – less than one per cent.

#### ATTENDANCE OF WORKSHOPS CONDUCTED IN SRI LANKA BETWEEN 2017-2022



### 3.4 Across the world, women face structural and societal barriers to enter and continue in technical fields.

Globally, women make up just 20 per cent of science and engineering professionals. Such low and disproportionate representation is compounded by a work environment that is typically male-centric, inflexible, and exclusionary, making the field less attractive to women and other underrepresented groups (UN Women and UNDESA 2022).

A common reason for this is that women need further education and information about how they can engage in the STEM (Science, Technology, Engineering and Mathematics) sector. Lower enrolment rate of girls in primary and secondary education persists because of patriarchal norms,

and preference for boys' education than that of girls'. A STEM career seems to be systematically out of reach for girls in multiple countries. Biases on what and how the girls should be educated are imposed with or without intention of teachers and parents (UN Women and UNDESA 2022). Even where girls pursue tertiary level education in large numbers, the proportion that wish to continue their careers in the field they studied is relatively low.

In many countries, most of the unpaid care work is carried out by women. This disproportionate burden poses barriers and challenges for women to fully integrate into labour markets and be active in paid economic activities. Lack of affordable and quality childcare services further exacerbates the problem. Trying to maintain a home life balance, leave during pregnancy and childbirth, and social perceptions related to the workplace (technical trainings for example, may be outside of the usual working hours, and husbands may not be comfortable with this) are common challenges faced by women.

**ONLY 20%  
OF WOMEN  
GLOBALLY ARE  
SCIENCE AND  
ENGINEERING  
PROFESSIONALS**




### 3.5 Women are overseen/overlooked as a household decision maker for cooling appliances

The refrigeration and air-conditioning sectors are important for our wellbeing and comfort. Our cooling needs include that for comfort (human comfort and safety), food supply (agriculture and food production and logistics cooling) and health care (medical cold chains and healthcare facility cooling). Given the rapidly warming planet, the needs for RAC equipment and refrigerants are expected to rise. Yet, studies show that the knowledge on refrigerator usage and maintenance and energy consumption is highly limited among consumers.

Women, on a daily basis, spend more time than men making economic decisions for their families – from consumer goods to services (Nelson 2019). They are known to make more sustainable consumption choices and tend to have a bigger say in household energy decisions. Within homes across the world, women are known to drive 70 to 80 per cent of all consumer purchasing, including refrigerators and air conditioners (Nelson 2019). Reducing the use of refrigerants with high-global warming potentials (GWPs) is an important element of the Montreal Protocol, especially the Kigali Amendment. Since women influence important decisions in their homes, including those related to purchasing refrigerators and air conditioners and how they are used, targeting them through awareness programmes could potentially help improve environmental choices, usage practices, and ensure equal benefits of such appliances.

When it comes to servicing, cultural norms may favour men to handle repair issues, thus transferring knowledge from servicing technicians to male clientele. At the same time, cultural norms can affect whether RAC technicians are male or female are selected for jobs that include visits by a technician to a home. As a result, women may not be receiving the same technical information regarding servicing appliances compared to the use of the appliance.

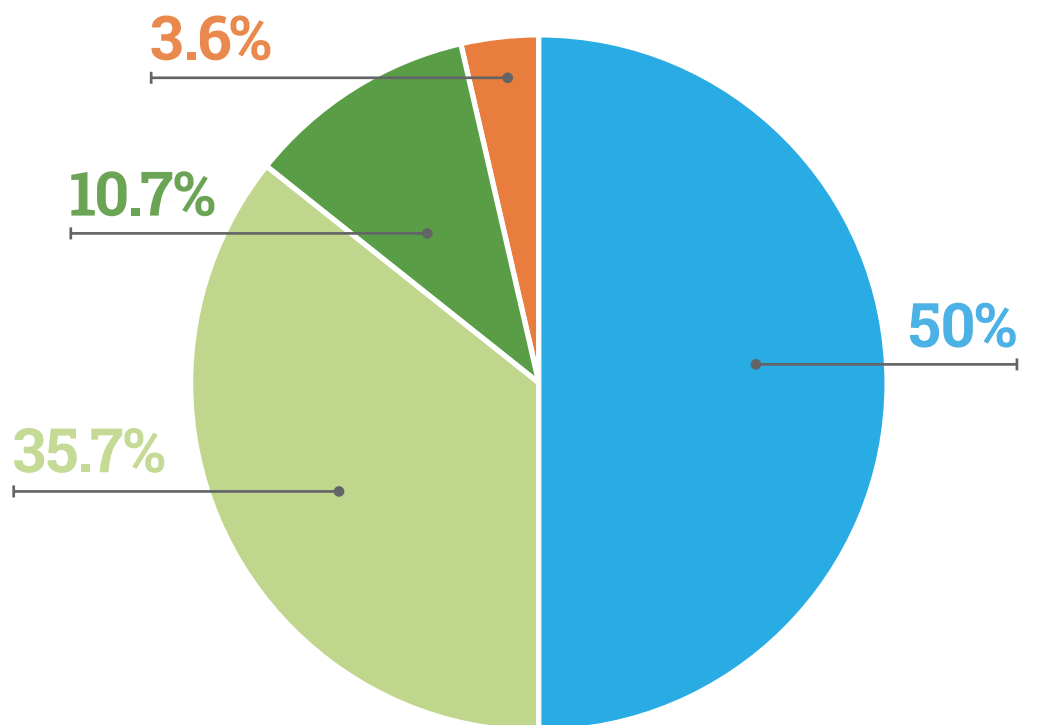


**75%**  
**OF WOMEN**  
**DRIVE MOST**  
**CONSUMER**  
**PURCHASING**  
**IN HOUSEHOLD**  
**ENERGY**  
**DECISIONS** 





## THE MLF HAS A GENDER MAINSTREAMING POLICY. ARE YOU AWARE OF IT?



- We are aware of it and have started taking actions to mainstream gender in our work.
- I am aware of it and know the contents, but are yet to start any activities.
- I have heard about it, but do not know the details.
- I am not aware of it.

Figure 6. Awareness regarding the MLF gender mainstreaming policy among NOUs (28 responses)

## 3.6 The awareness and understanding on gender issues in Montreal Protocol varies widely among the NOUs and other national stakeholders.

The NOUs are main implementors of the Protocol at the national level, including MLF funded projects. Being the implementation arm, and the intermediary between the implementing agencies, governments, and private enterprises, they design, plan, and lead the execution of activities. Discussions with NOUs indicate that gender equality is a relatively nascent topic in the Montreal Protocol. A survey of 29 NOU staff<sup>2</sup> and a review of project documents revealed that the awareness and contribution of women to the RAC sector varies widely. Encouragingly, there is a high level of interest in the topic, as evidenced by the fact that 90 per cent of the respondents are aware of the MLF gender mainstreaming policy, and 50 per cent have started initiating a few activities as well. Those that are aware voiced the need for ideas and suggestions on what practical steps they can take, within the framework of their daily work as NOOs.

Recognizing the importance of gender issues, several countries like Bhutan, Micronesia, Mongolia, Sri Lanka, Thailand, and Vanuatu have started discussions on the importance of gender mainstreaming. For example, the Thai NOU has included a requirement in conversion projects that the enterprise must consider gender mainstreaming. Similarly, the Vanuatu NOU has initiated discussions with the RAC associations to sensitize them on the need for gender-inclusive work environments.

<sup>2</sup> Respondents included those from Bhutan, Brunei Darussalam, Cook Islands, Federal States of Micronesia, Japan, Lao PDR, Marshall Islands, Mongolia, Palau, Myanmar, Papua New Guinea, Philippines, Samoa, Sri Lanka, Singapore, Solomon Islands, Thailand, Timor Leste, Vanuatu, and Viet Nam.

### 3.7 Women's participation in Montreal Protocol implementation has been rising.

In the various forums related to Protocol implementation, a large number of women have been participating. At the recently concluded Protocol meetings (44<sup>th</sup> Open-Ended Working Group Meeting and 32<sup>nd</sup> Meeting of the Parties) participation from women was approximately 46 per cent for both meetings (UNEP 2022d). In conducting national level activities too, the NOUs take into consideration gender balance and provide equal opportunities to both women and men to participate. An area where women are involved in large numbers is communication and outreach activities. Important dates for campaign moments such as World Ozone Day, World Refrigeration Day and World Environment Day are celebrated in most countries, and women and girls typically participate in large numbers.

However, globally, within the overall environmental sector, women remain under-represented at leadership and decision-making levels. Montreal Protocol implementors that work closely with the environment ministries can play a role in promoting gender equality and political participation in the ministries.

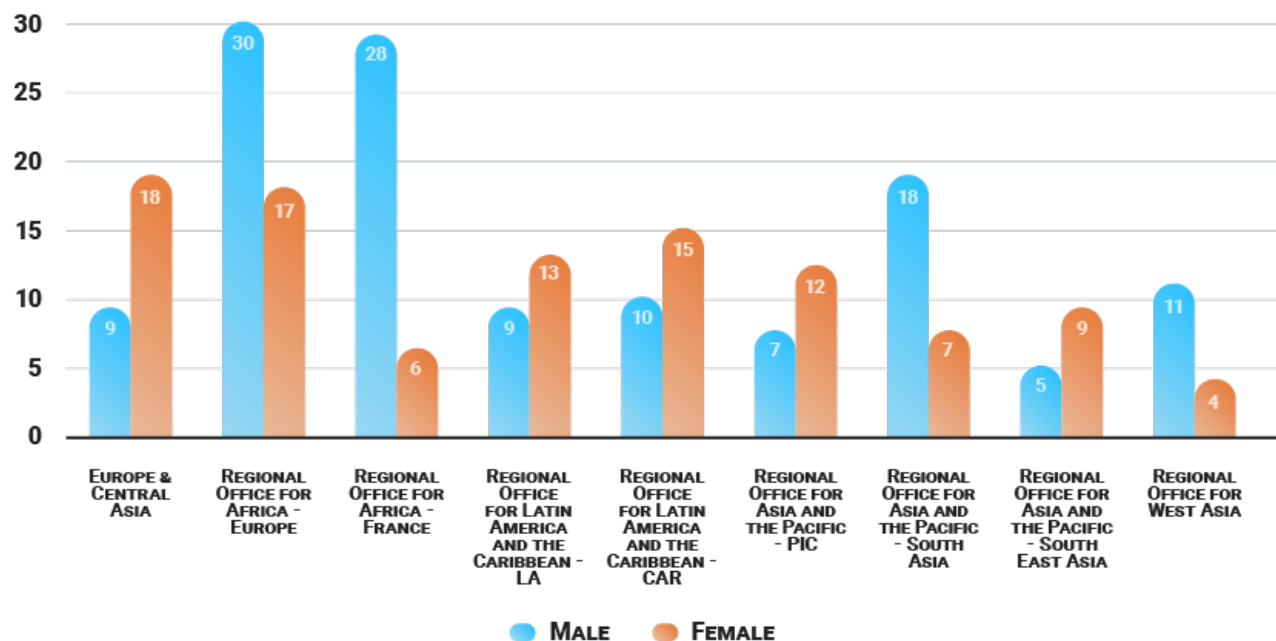


Figure 7. Number of female NOOs in various regions (Source: UNEP OzonAction, as per October 2022)



44%

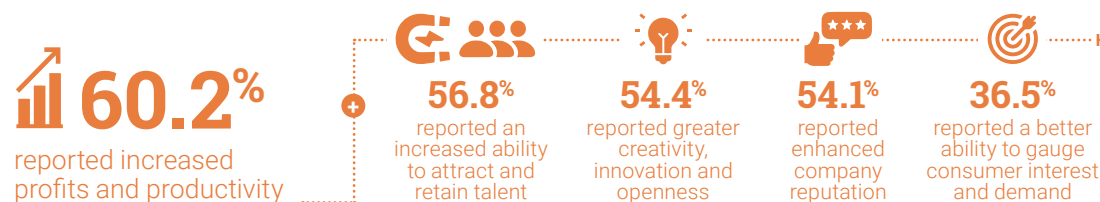
OF THE STAFF  
IN THE VARIOUS  
REGIONS  
ARE WOMEN



## GENDER DIVERSITY IS GOOD ECONOMICS

A company with a gender-inclusive work culture is 9 per cent more likely to have improved business performance (International Labour Organisation [ILO] 2019).

A global survey of almost 13,000 enterprises in 70 countries reported that gender diversity is a smart business strategy: the lack of gender diversity may act as a barrier to enhance business performance. Gender diversity helps improve business outcomes: of the companies surveyed that track the impact of gender diversity in management, 74 per cent report profit increases of 5 to 20 per cent with gender-diverse managements. These are significant numbers.



Studies have shown that countries with more women parliamentarians are more likely to ratify environmental treaties. It is seen that when women meaningfully engage in discussions on the environment, the results are positive. In companies, those with more women on their board of directors are more likely to be proactive in improving energy efficiency, lowering company costs, and investing in renewable power generation.

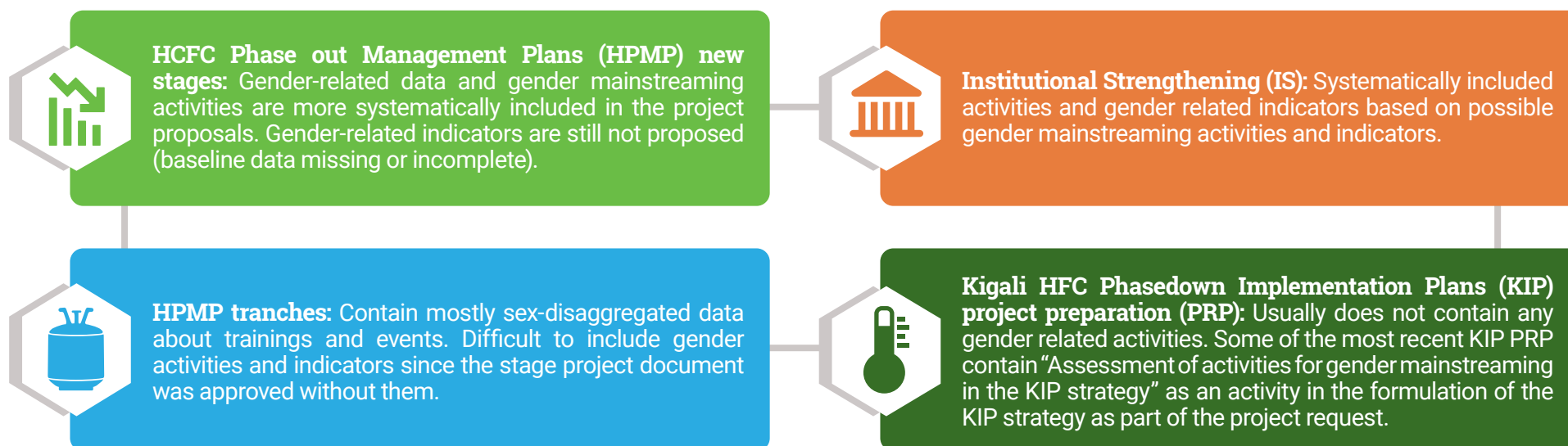
Despite this, women have less of a voice at the highest levels in local, regional, and international decision-making processes and policy formation than men. They are underrepresented in environmental decision-making in government bodies, institutions responsible for Montreal Protocol implementation. In 2015, the International Union for Conservation of Nature's (IUCN) environment and gender information data showed that only 12 per cent of 881 national environmental ministries across 193 countries were led by women. IUCN's new data reveals some progresses. Women held 30 per cent of environment-related ministerial positions in 2017. In 2020, 15 per cent of ministers of environment were filled by women (IUCN 2021). Unequal representation of women in position of power, especially in politics, leaves critical gaps in environmental governance and its developed policies and legislations. In most countries, while women are present in the ministries that the NOUs work with, only a few are in leadership and decision-making positions.



## 3.8 NOUs have started including gender equality lens in project documentation, but this needs to be strengthened further.

A review of MLF project documents shows that there is limited reference to gender equality in the older project documents, and gender equality results are not highlighted in the reports. This is not a surprise given that until recently, the focus of the Montreal Protocol projects was entirely on phasing out ODS, the reporting was focused on technical aspects and on compliance and other aspects including gender-differentiated impacts were overlooked. However, the recent guidance notes, including the February 2020 Guide for the submission of institutional strengthening projects (UNEP 2020b)<sup>3</sup> and the 2022 Guide for project preparation of Stage I of Kigali HFC implementation plans (KIP) (UNEP 2022e) requires the applicants to include a section on 'Consideration of the operational policy on gender mainstreaming'. They also provide a list of possible activities and indicators.

Since the gender mainstreaming policy was applied (at the 85<sup>th</sup> ExCom meeting), there has been an improvement in the number of projects that included gender information in their original submissions. Overall, 80 per cent of the projects reviewed for the whole period (148 submissions from bilateral and implementing agencies submitted to the 85<sup>th</sup>, 86<sup>th</sup>, 87<sup>th</sup> and 88<sup>th</sup> ExCom meetings for tranches and new stages of the HPMP) included some information on gender-related activities in their original submission (UNEP 2022a). The analysis summarised the status of gender mainstreaming in MLF funded projects as follows (UNEP 2022f):



<sup>3</sup> Institutional Strengthening (IS) projects provide training and technical assistance in management, financial systems, policy reform, governance, and/or programme design, implementation and assessment.

Recent proposals (with a few exceptions) include text such as: “Gender policy implementation: ... the operational policy on gender mainstreaming will be applied wherever feasible....by encouraging women’s participation in the events and activities organized, such as meetings, training courses, workshops, capacity-building activities and outreach activities; promoting training and awareness campaigns to develop staff competency and awareness on gender mainstreaming; and discussing gender issues in thematic workshops to share experiences and lessons learned on gender mainstreaming”. Some of the proposals, such as the HPMP of Mongolia, do make a firm commitment: “... the Government will target at least 25 per cent participation in customs training and awareness programmes<sup>4</sup>”.

All NOUs agree on the importance of sex-disaggregated data, which tracks progress of gender equality. However, in most cases, such data was not being collected and reported prior to the 85<sup>th</sup> ExCom. Participation data is sex-disaggregated for meetings and in technical and other training programmes, and in some cases, outreach for communications and awareness activities post the 85<sup>th</sup> ExCom.

In some of the recent reports, there are references to sex-disaggregated data collection<sup>5</sup>, for example the Pacific Island countries committed to collecting sex-disaggregated data, where possible, and report on these achievements under the HPMP.

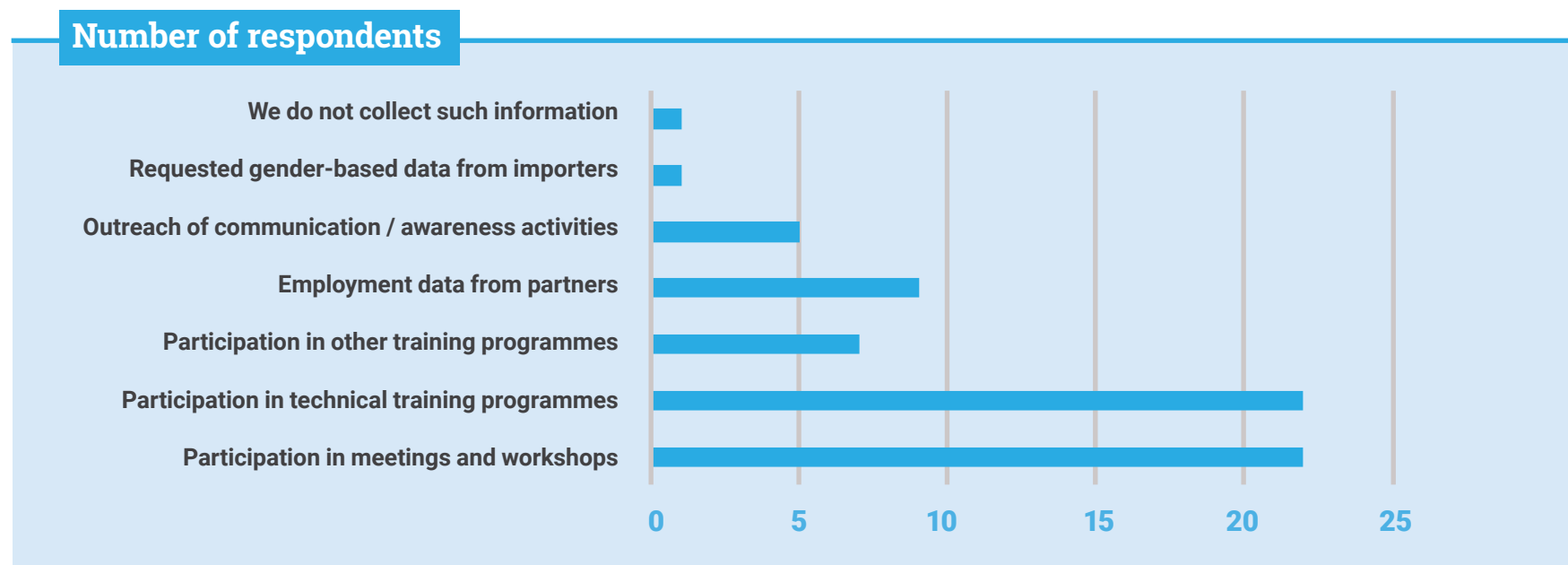


Figure 8. Sex-Disaggregated Data Collection by NOUs

<sup>4</sup> Project proposal: Mongolia, HCFC phase-out management plan (stage II, first tranche) UNEP and Japan, Montreal, 2–6 November 2020 Postponed to 8–12 March 2021

<sup>5</sup> Project proposal: Pacific Island countries, Regional HCFC phase-out management plan for 12 Pacific Island countries (stage II, first tranche), Montreal, 2–6 November 2020 Postponed to 8–12 March 2021

## Challenges in applying gender-sensitive approaches

The survey conducted as part of developing this guidebook, as well as previous studies, highlight several challenges in implementing the gender mainstreaming policy. The most reported challenge is that integrating gender elements in highly technical projects can be complicated and thus more difficult to identify entry points (UNEP 2018; UNEP 2022a).

- Prior to the 84<sup>th</sup> ExCom meeting, there was no clear guidance on what gender activities could be proposed and included in project activities
- Limited capacity and limited awareness of gender issues at country level, especially among the government and industry, which means that gender considerations are often left out in project design, and eventual implementation.
- Recruitment of women specialists to implement projects can be a challenge because of the low rate of availability.
- Low representation of the women in the RAC sector, where it is the main working area for the Montreal Protocol implementation prevents to mainstream the gender into the MP activities.
- As highlighted by several NOOs, gender mainstreaming activities such as creation of conducive working conditions in companies, recruiting female engineers is beyond the scope of the implementation of Montreal Protocol.
- Lack of concrete best-practice examples that would help to identify opportunities to ensure effective gender mainstreaming.
- Lack of dedicated resources such as gender advisors and gender focal points for gender-related activities. Since resources approved for existing projects are already allocated to specific activities, there is little room to include new activities to mainstream gender except for those that could be done without additional resources.



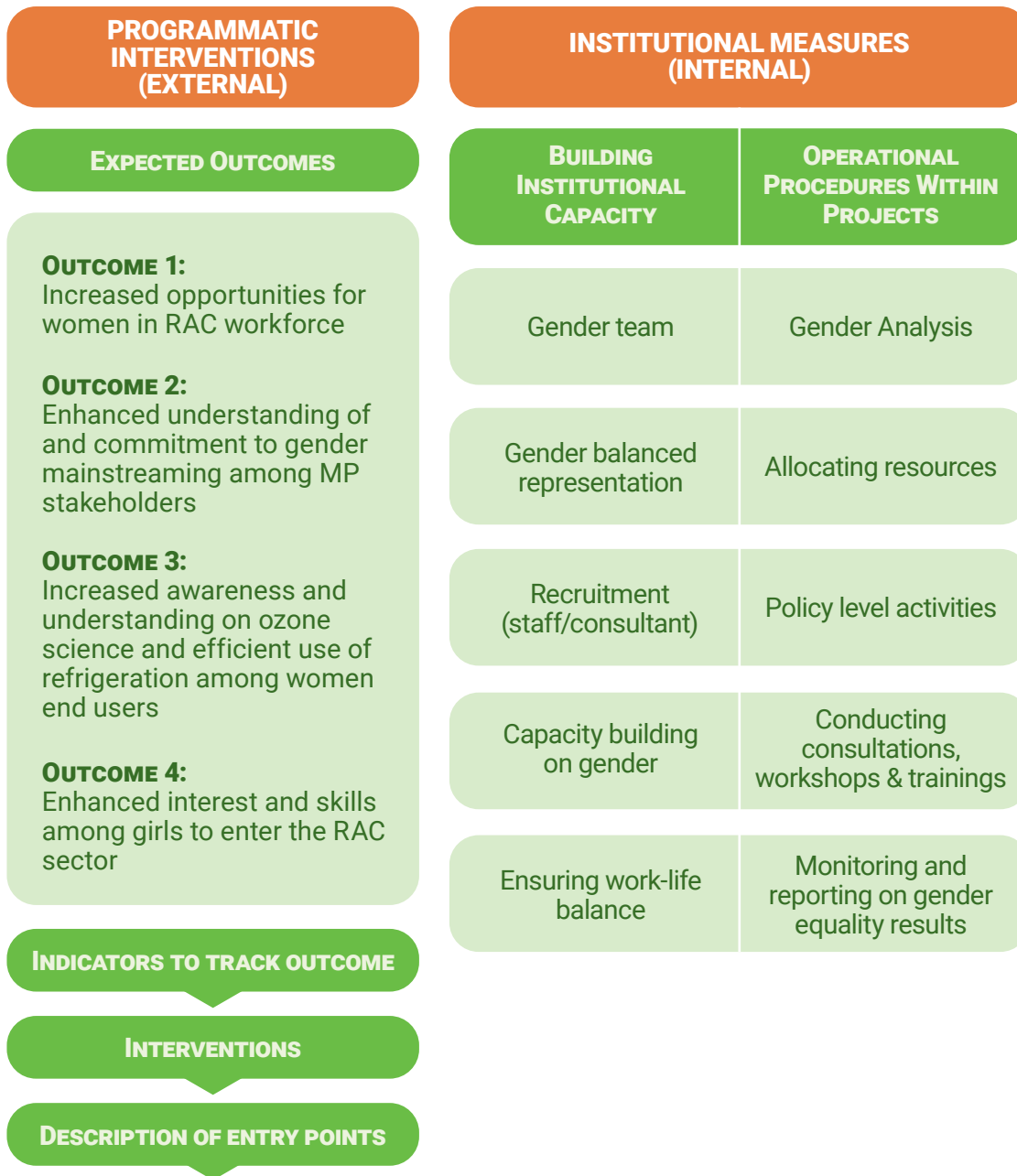
# 4. Entry Points to Mainstream Gender in Montreal Protocol Implementation: Programmatic Interventions



This chapter identifies a number of possible interventions when implementing Protocol activities that can contribute to four outcomes areas:

- (a) Increased opportunities for women in RAC workforce as employees and as leaders;
- (b) Enhanced understanding of and commitment to gender mainstreaming among stakeholders engaged in Protocol implementation;
- (c) Increased awareness and understanding on ozone science and efficient use of refrigeration among women end users of refrigeration and cooling appliances; and
- (d) Enhanced interest and skills among girls to enter the RAC sector.

Actions need to be taken at the level of NOUs, the RAC sector, as well as departments responsible for customs and enforcement, and in investment activities, which are elaborated in the sections below. In addition, suggestions are made on institutional measures and operational procedures that could be adopted in programming by the NOUs.



The NOUs have a pivotal role in the implementation of the Protocol, together with their stakeholders, including their counterpart ministries, and other institutions and the public at large. They work closely with the national ministries, establishing and enforcing effective ozone protection laws and regulations, and mainstreaming them in the national environmental policy, building capacity of stakeholders and supporting industry to convert to Ozone2Climate technologies (i.e., low-GWP technologies). In doing so, they are in a strategic position with an opportunity to influence changes in national policies and legislations. Hence, mainstreaming gender into the policies and operations of national ministries as well as other public and private partners is a practical feasibility.

The proposed interventions elaborated in this section are recommendations and will need to be tailored to specific contexts of each respective country. It is advised to start with small steps within activities that are directly funded by the MLF, such as training programmes, and then move on to larger-sectoral activities. The first activity in each country would mark a beginning of discussion on gender mainstreaming within the NOUs and their various stakeholder groups.

Figure 9. Entry points to mainstream gender in Montreal Protocol implementation





## 4.1 Institutional and programmatic interventions towards achieving gender equality and women's empowerment through Montreal Protocol activities

The suggestions for entry points are organized according to four desirable gender equality outcomes:

### OUTCOME 1:

Increased opportunities for women in RAC workforce as employees, employers and those in leadership positions.

### OUTCOME 2:

Enhanced understanding of and commitment to gender mainstreaming among stakeholders engaged in Protocol implementation.

### OUTCOME 3:

Increased awareness and understanding on ozone science and efficient use of refrigeration among women end-users of refrigeration and cooling appliances.

### OUTCOME 4:

Enhanced interest and skills among girls to enter the RAC sector.

The activities are organized and prioritized based on how easily they can be integrated within the existing activities. A good start could be to strengthen women's roles in the RAC workforce, which can be achieved through short-term measures. On the other hand, increasing the awareness on gender issues within the sector and raising the interest and skills among girls to join the technical (including RAC) sectors require long-term measures, specific indicators and collaboration with other institutions.

For achieving each of these outcomes, suggested actions and specific entry points are presented, along with examples. Suggestions are also made based on possible indicators to track the performance on these actions.

## 4.1.1 OUTCOME 1:

# Increased opportunities for women in RAC workforce as employees and as leaders

TABLE 2. INDICATORS FOR OUTCOME 1

### INCREASED EMPLOYMENT OF WOMEN IN THE RAC SECTOR

- Number and percentage of women and men in managerial, leadership, and technical positions by income and work functions.

### GENDER-SENSITIVE AND -RESPONSIVE TRAINING

- Number and percentage of male and female applicants, selection and completion of trainings (technical/ management training for industry and entrepreneurs, for customs and enforcement officers).
- Number and percentage of trainings delivered in collaboration with gender focal points/ gender experts'/gender departments.
- Number of training activities presenting data disaggregated by sex.
- Use of gender sensitive training materials (yes/no).

### CONDUCTIVE WORK CONDITIONS IN COMPANIES FOR WOMEN

- Number of stakeholders (importers, distributors, members of refrigeration association) informed on the need for gender-friendly work environments.
- Evidence of companies introducing measures to encourage women to apply for jobs (for example specific mention in job advertisements).
- Number of gender-responsive workplace measures initiated by stakeholders (importers, distributors and members of refrigeration association).
- Efforts undertaken by companies to seek out and recruit women.



In training programmes, including refrigeration technician training (in-person and online), the NOUs are making efforts to engage women. However, the numbers remain small, primarily because the overall number of women in technical roles in the RAC sector is low. A change in this situation will need the following interventions:

- » Create opportunities to promote women in the RAC sector and increase awareness about them.
- » Promote gender-responsive work environment in RAC companies involved in Montreal Protocol activities.
- » Collect and monitor gender data including sex-disaggregated data among RAC companies involved in Montreal Protocol activities.

## The interventions should consider the barriers for women working and being underrepresented in the industry.

As mentioned in Chapter 3 which include:

- » Fewer girls pursuing technical education
- » Difficulties in managing work-home balance
- » Differentiated physical space for men and women, which translates into discomfort and insecurity for them
- » Lack of peer-support networks, role models, champions, and access to mentorship and training opportunities
- » The design and development of industrial RAC equipment and technology




In organizations being supported under the MLF, introduce measures that encourage women to work in the sector and work towards removing the above barriers. Clearly, some actions can be required as a condition for the companies to receive project financing, while others will need to be introduced through encouragement and sharing good practice examples.

**Within the programmes, some entry points to work with RAC companies and other counterpart ministries and departments are as follows:**

## OUTCOME 1

# A. CREATE OPPORTUNITIES TO PROMOTE WOMEN IN THE RAC SECTOR AND INCREASE AWARENESS ABOUT THEM

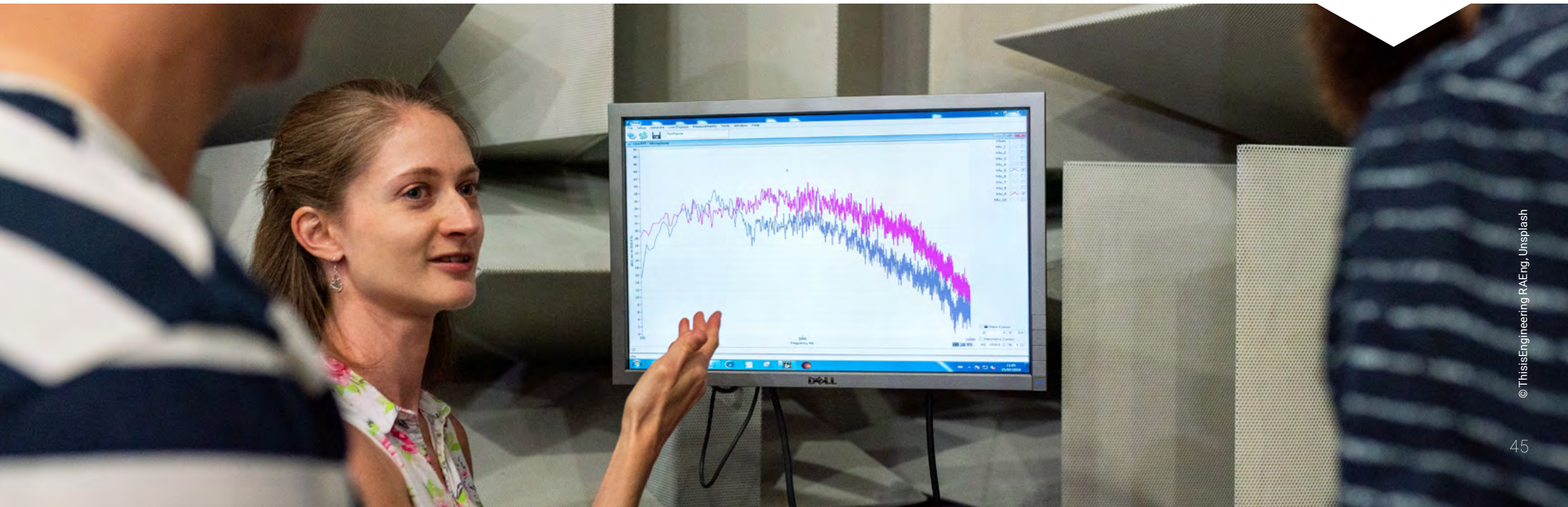
**TABLE 3. INTERVENTIONS AND ENTRY POINTS TO CREATE OPPORTUNITIES TO PROMOTE WOMEN IN RAC**

INTERVENTION	DESCRIPTION OF ENTRY POINTS	
<p><b>1. Create opportunities for women to join and professionally succeed in RAC sector</b></p> 	<ul style="list-style-type: none"> <li>→ Encourage RAC manufacturers/ servicing workshops and TVETs to recruit more women.</li> <li>→ Encourage professional networks/ forums to invite women to join proactively and provide professional and personal advice, mentoring, linkages with potential employers in the RAC and related sectors.</li> <li>→ In addition to technical positions, encourage women to join other areas such as commercial, sales and marketing, procurement and as customs/ enforcement officers.</li> <li>→ Invite women in senior positions in the RAC sector and in customs and enforcement as role models to share their experience with other women. For instance, the Samoa NOU invites women working in the sector as</li> </ul>	<p>speakers at the industry night functions. They also encourage the RAC Industry association to extend membership to anyone working in the industry, even those who are working in procurement, administration and sales of RAC products to encourage women to join the association.</p> <ul style="list-style-type: none"> <li>→ Create awareness on women’s rights and entitlements among women in various companies in the RAC industry.</li> <li>→ In areas where women are more commonly represented (as customs officers, importers and brokers and in small family-run refrigeration businesses), offer professional advice on professional development and career growth and promote learning opportunities.</li> </ul>

## 2. Support women to attend training programmes



- Specific to training design and development, conduct a thorough analysis to identify problems faced by women and challenges imposed on women etc.
- Deliver trainings and workshops specifically for female employees with strong focuses on leadership, opportunities, and transferrable soft skills. In 2019, the Brunei Darussalam programme sent women technicians as Brunei representatives to undergo training in China.
- Consider fixing a quota (if feasible) or non-binding aspirational targets for women in training. Also consider incentives to encourage more women to participate.
- In addition to technical aspects, consider other areas for training in which women can engage - as servicing experts, assessors to conduct competency assessment for RAC technicians, etc.
- Where feasible, promote e-learning and online tools to ensure that training opportunities are gender-neutral and available to both women and men.
- Consider if you can introduce flexibility in eligibility criteria (for example, a formal technical qualification may be replaced with experience in working at a technical set up/ RAC repair shop).
- In conducting training and other events, include provisions to address women's limited mobility, childcare and security challenges, if available.





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## AFFIRMATIVE ACTIONS TO ENGAGE WOMEN IN THE RAC SECTOR IN SRI LANKA

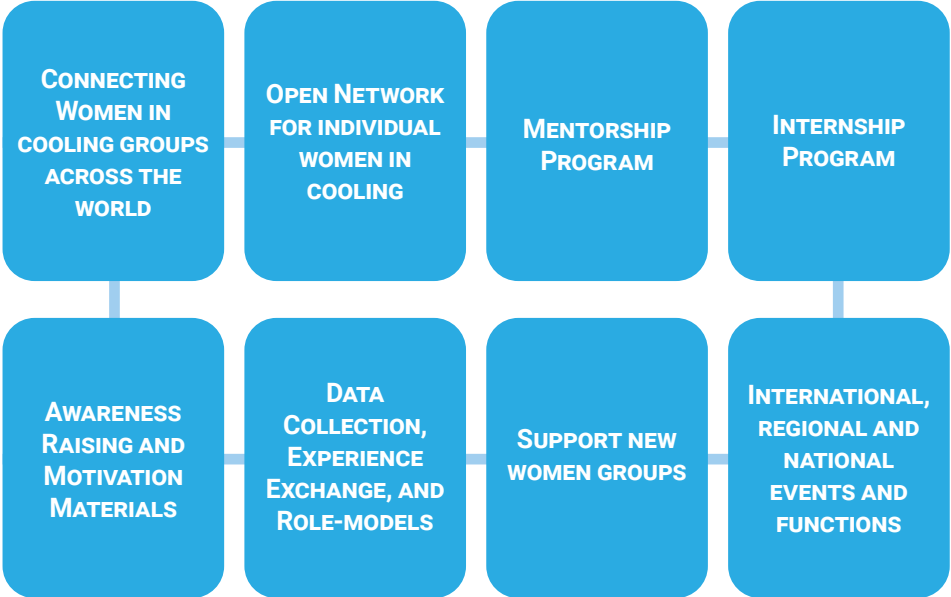
In Sri Lanka, several affirmative actions are being introduced to achieve gender parity in employment in the sector. At the national level, the Ministry of Environment has proactively proposed a quota system for women, including in vocational training, including in the RAC sector. Furthermore, an incentive system is being planned wherein in the proposal appraisal, a company will be awarded additional five points for engaging women in their businesses at decision making and technical levels.

# Main activities of the International Network for Women in Cooling (INWIC)

The INWIC was launched in April 2022 “to advance the engagement of women, promote career opportunities and increase their overall participation in the sector, which includes refrigeration, air-conditioning and heat pumps (RACHP). INWIC is led by the World Refrigeration Day (WRD) Secretariat and the United Nations Environment Programme (UNEP) OzonAction” in cooperation with several other founding partners, namely AIRAH (Australia), AREA (Europe), ASHRAE (Global), CAR (China), FAIAR (Latin America), IIR (Global), IOR (UK), ISHRAE (India), JSRAE (Japan), U-3ARC (Africa) and Women in HVAC&R (North America). (UNEP, 2022i)

The network will build a stronger network of women in the sector and empower them through mentorship and education. Once they become available, these services can be reflected in HPMP and KIP project design as part of the gender mainstreaming actions being supported by NOUs.

### MAIN INWIC ACTIVITIES IN THE PERIOD JULY 2022 - JUNE 2024



ACCESS THE OFFICIAL WEBSITE



# The Equipares Seal in Colombia

(Source: UNEP, 2022h)

The Colombian Ministry of Labour in collaboration with UNDP jointly developed a gender equality management system to issue certification for companies known as the Equipares Seal when in full compliance with gender equality as good practice for environmental protection. The 3-level certification is audited by the Colombian Institute of Technical Standards (INCONTEC), as follows:

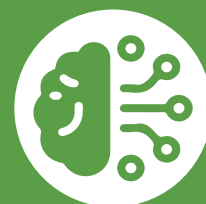


More information:  
<https://www.equipares.org/>



## LEVEL 1

COMMITMENT TO EQUALITY  
(AWARDED RECOGNITION)



## LEVEL 2

IMPLEMENTATION OF ACTIONS  
FOR EQUALITY (SILVER SEAL)



## LEVEL 3

CLOSING GAPS  
(GOLD SEAL)

© Sello Equipares

## Strengthening the administrative capacity of women to run SMEs in El Salvador

The 'Training of technicians in good refrigeration practices and alternatives to HCFCs' was conducted under the HPMP Stage 1 implementation. The NOUs noticed that male technicians were accompanied by their spouses who help handle administrative works. This is referred as 'maintenance service microenterprises'. As a response, Ozone Unit and UNDP conducted a training workshop on the adoption of alternative substances and other good practices for more business opportunities, financial management and marketing designed specifically for the spouses of male technicians.

## Training women on RAC good practices in Peru


Peru has trained RAC technicians since 2016 as part of the implementation of an import authorization system. They conducted a women-only workshop in 2017 on good servicing practices and how to safely handle natural refrigerants as a more environmentally-friendly alternatives. The workshop led to several positive outcomes. It was reported that female participants felt comfortable among one another in such setting to exchange experience and insights. Networks among female technicians were fostered. Future capacity building and job opportunities can be informed.







# Madagascar


## Gender analysis


 Women have a lower level of education than men.


 Women are less targeted by public information.

 Women are in the minority in decision-making bodies.

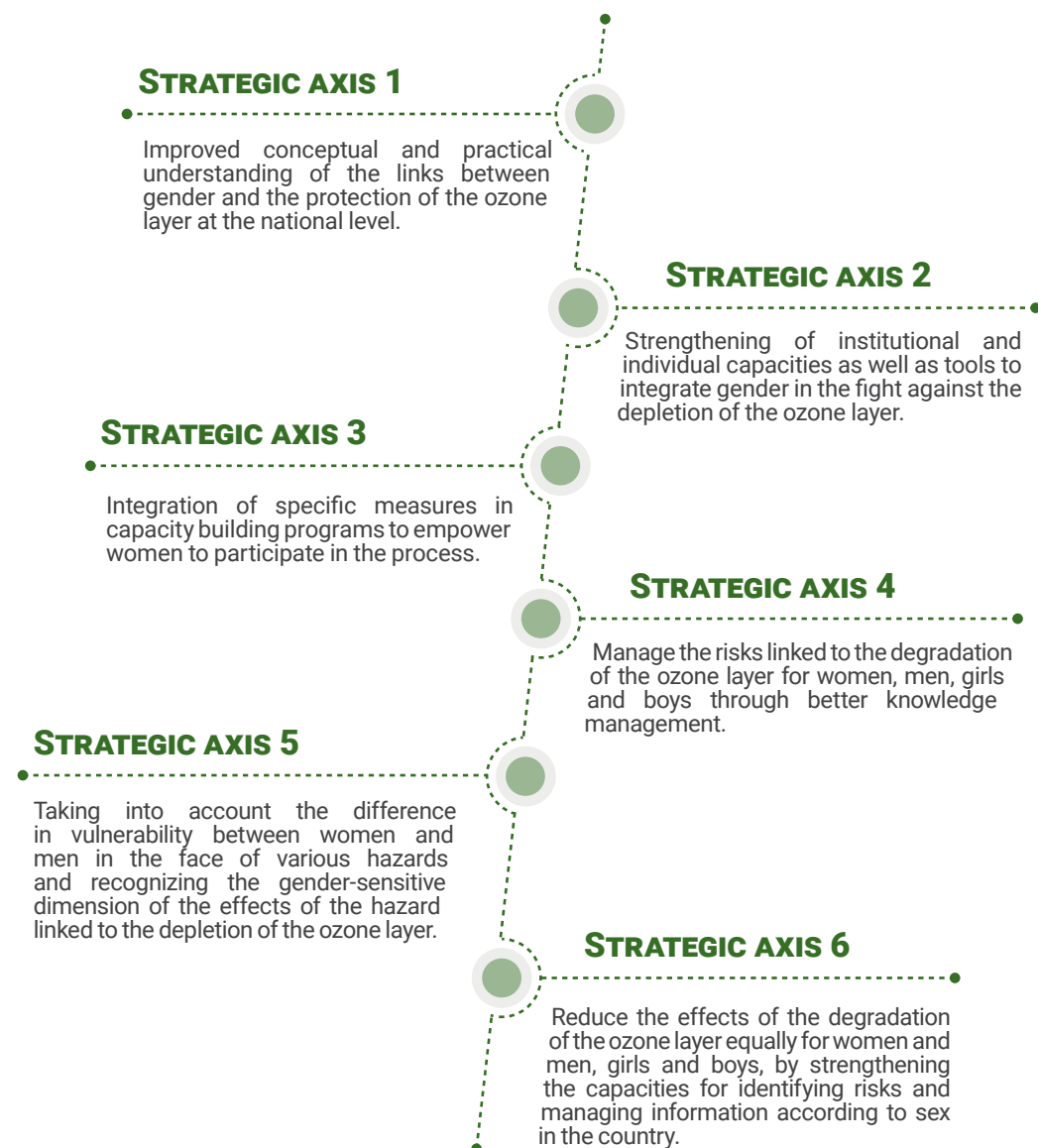
## Objectives of the strategy

 Make the gender approach a cross-cutting theme.

 Promote equality of men and women in opportunities and treatment within the framework of the implementation of the Montreal Protocol.


 Encourage collaboration between national, regional and local levels to promote and support gender mainstreaming in ODS management and phase-out initiatives.

## National Strategy for Gender Mainstreaming in the Implementation of the Vienna Convention and the Montreal Protocol



## B. ENSURE GENDER-RESPONSIVE WORK ENVIRONMENT IN RAC COMPANIES

TABLE 4. INTERVENTIONS AND ENTRY POINTS TO ENSURE GENDER-RESPONSIVE WORK ENVIRONMENT IN RAC COMPANIES

INTERVENTION	DESCRIPTION OF ENTRY POINTS
<p><b>Gender-responsive work conditions</b></p> 	<ul style="list-style-type: none"> <li>→ Encourage gender-responsive workplace policies, including mandatory equal pay for women and men, national gender-related policies, anti-sexual harassment policies, to be eligible for activities supported under MLF.</li> <li>→ Highlight the benefits and encourage companies to adopt women-friendly practices, such as the provision of childcare and flexible working hours, affordable and reliable transport, reducing occupational sex segregation; all of which allow women to engage in full-time jobs with greater responsibilities.</li> <li>→ When providing on the job training in RAC, mandate companies to ensure safety and comfort of women.</li> </ul>

# An example of a gender-responsive work condition from an electric utility

Tata Power Delhi Distribution Limited, India, have put in place the following work conditions:



**Independent promotion/work assessment** to affirm career growth for female professionals on their return from maternity leave.



**Returning mothers programme** such as re-orientation sessions and presentation of changes in their absence is provided.



**Maternity leave** can be extended by 12 weeks (unpaid) on top of 26 weeks (paid) stated by national law. It also applies to an adoptive mother.



**Day-care and nursery facilities** are offered to both male and female employees at 50 per cent fee rate.



**Flexible working hours** is an option for young mothers for their first six months after maternity leave upon the company's approval.



**Mandatory mentoring** is offered for all female managers. They are also assigned as mentors when in mid and high-level position.

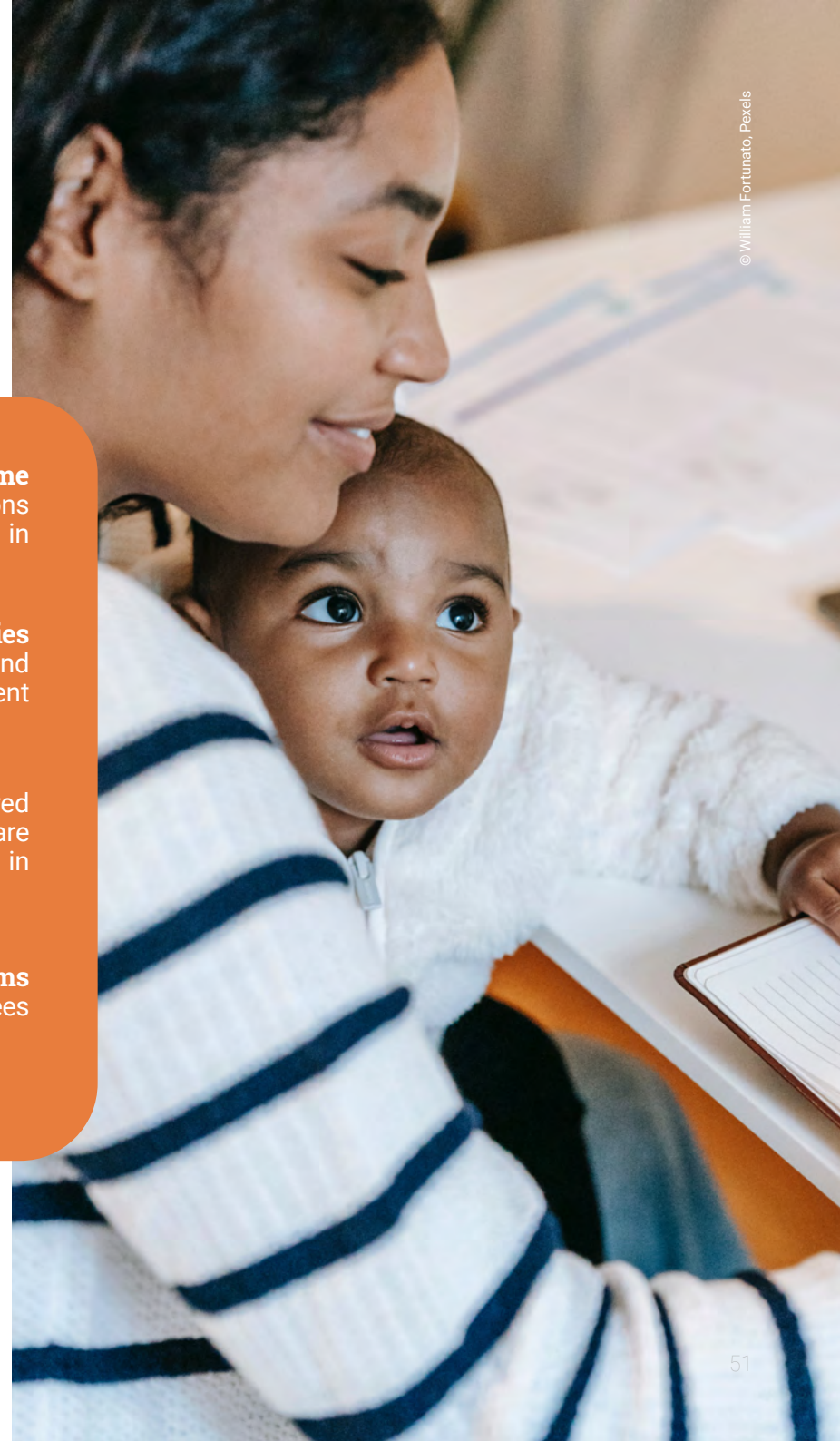


**2-year break-in-service option after maternity leave** is offered so that women can provide care for their children in the early development stage.



**Learning and sharing platforms** are introduced to women employees to meet their specific needs.

Source: World Bank, <http://www.tatapower-ddl.com/showcontent.aspx?this=638&f=careers&s=life-@tata-power-ddl&t=Inspiring-Women@Work>



## C. COLLECT AND MONITOR GENDER DATA INCLUDING SEX-DISAGGREGATED DATA AMONG RAC COMPANIES INVOLVED IN MONTREAL PROTOCOL ACTIVITIES

TABLE 5. INTERVENTIONS AND ENTRY POINTS TO COLLECT AND MONITOR GENDER DATA

### INTERVENTION

1. Encourage companies to maintain and report sex-disaggregated data on employment

### DESCRIPTION OF ENTRY POINTS

- Consult with companies on the challenges in collecting sex-disaggregated data and whether they have other initiatives in mind to collectively explore.
- Request companies to provide their sex-segregated data on to establish baseline and situational overview.



# Disaggregating employment data in an energy efficiency project in Armenia

The UNDP technical Assistance Project on 'De-Risking and Scaling-up Investment in Energy Efficient Building Retrofits, Armenia (2017-23)' works on building a market for energy efficient building retrofits in Armenia. It seeks to overcome lack of information and awareness about the benefits of retrofitting through the establishment of measurement, reporting and verification measures, and the development of policy frameworks (Harutyunyan and Mirzakhanyan 2019).

At the beginning, the project conducted a gender analysis, which identified gender parity in employment as a gap area in the construction sector. Accordingly in 2019, disaggregation of personnel data by gender is

required for bidding and reporting processes for the subcontractors. The request for proposal form shall also include a gender-oriented statement. The companies are required to provide data on the composition of key personnel by gender and main professional groups (specialties).

Systematic sex-disaggregated tracking of employment proved to be an encouraging factor for contractor-companies. Women's share in employed personnel has increased. According to the 2019 Annual report, women represent more than 43 per cent within project implementation, which is higher than average female employment rate (34.5 per cent in 2018) in the country.



43%

**WOMEN  
REPRESENTATION  
HAS GROWN  
WITHIN PROJECT  
IMPLEMENTATION**

## 4.1.2 OUTCOME 2:

# Enhanced understanding of, and commitment to, gender mainstreaming among stakeholders engaged in Protocol implementation

TABLE 6. INDICATORS FOR OUTCOME 2

**ENHANCED  
UNDERSTANDING OF,  
AND COMMITMENT  
TO, GENDER  
MAINSTREAMING IN  
NOUS**

- Demonstration of commitment to gender mainstreaming (reflected in conduction of gender analysis, dedicated resources allocated and gender action plan developed).
- Sex-disaggregated data routinely collected and applied to sectoral policy, planning, implementation and monitoring and evaluation (M&E).
- Gender focal point or other gender expert included/involved in the MP related work (number of activities and description).
- Number of staff posts with IS funded salaries (full time and half-time staff) (disaggregated by sex, level and specialization).
- Number of governments supported staff (full time and half-time staff) (disaggregated by sex, level and specialization).

**ENHANCED  
UNDERSTANDING OF  
AND COMMITMENT  
TO GENDER  
MAINSTREAMING  
AMONG EXTERNAL  
STAKEHOLDERS**

- Number of companies/ counterpart ministries/ departments/ Associations/ Networks/ other stakeholders that include a focus on gender equality in their communication and advocacy efforts.
- Evidence of efforts made by relevant ministries/ other stakeholders towards increasing women's participation and access to meetings/ training/ workshops and employment.
- Number of regional policy forums /conferences attended by women business associations representatives.



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Public awareness of the ozone depletion and recommended use of alternatives plays a critical role in supporting countries' effort to comply with the Montreal Protocol. However, the relevance of gender equality is a relatively new topic in the context of the Protocol and there is a general lack of understanding and acceptance among stakeholders. Discussions on the topic must start with building the capacity of the NOU teams, the counterpart ministries they work with, as well as the industry players to identify strong linkages between the Protocol and gender equality and to demonstrate the benefits of engaging more women in their workforce and in decision-making positions.

**Suggestions on possible interventions are as follows:**

## OUTCOME 2

**TABLE 7. INTERVENTIONS AND ENTRY POINTS TO ENHANCE GENDER MAINSTREAMING**

INTERVENTIONS	DESCRIPTION OF ENTRY POINTS	
<p><b>A. Build partnerships and support sector leaders to lead gender equality actions in Montreal Protocol implementation</b></p>	<ul style="list-style-type: none"> <li>→ Engage senior leaders in ministries and companies, with a likely interest in the topic and motivate them advocate for gender equality.</li> <li>→ Link the existing national gender policies with gender mainstreaming in the Montreal Protocol activities. The NOU of Madagascar is planning to adopt the National Strategy for Gender Mainstreaming in the Implementation of the Vienna Convention on the Protection of the ozone layer and the Montreal Protocol on Substances Ozone Depleting (ODS).</li> <li>→ Inform management, ministries, other stakeholders, and consultants about the Multilateral Fund's operational policy on gender mainstreaming for Multilateral Fund-supported projects and how it should be applied in all projects and activities and the benefits of doing so.</li> <li>→ Involve the gender focal point in the Ministry (if existing) in stakeholder's group consultations and other Protocol related activities.</li> </ul>	<ul style="list-style-type: none"> <li>→ Ally with institutions/organizations working with women (e.g., national level women's networks, NGOs, universities, and international bodies such as IUCN, UN Women, UNFCCC and include gender and Protocol issues in their advocacy work.</li> <li>→ Suggest including a member in the National Ozone Committee (NOC) to be part of the Ministry of women's committees/ task forces.</li> <li>→ Include gender considerations as a regular/ mandatory topic in all NOC meetings.</li> <li>→ Include a senior level representative of the Ministry working on gender equality and women empowerment as a member of the National Ozone Committee/ National Steering Committee.</li> <li>→ Connect communications professionals with NOU and of the counterpart ministries to organize joint events, campaigns, and publications to celebrate women in the sector, e.g., during World Ozone Day (16 September) and World Refrigeration Day (26 June).</li> </ul>



**B. Make available easy-to-use tools and resources on gender equality in the context of MP**



- Ensure that there are presentations and other knowledge products on gender equality during awareness programs, workshops, and trainings.
- Collaborate with gender related bodies/ministries or other stakeholders when designing knowledge products or services and on any other gender related gaps and needs.
- Organize periodic discussion forums for Protocol staff members, inviting government counterparts and further implementing partners.
- Provide succinct information packages that staff can use to convince external stakeholders about the linkages of gender and the RAC sector.



© Christina Morillo, Pexels

## Provincial level networking actions in Iran

Iran has a National Ozone Network (active in 31 provinces) that works closely with the NOU mainly in awareness raising. Majority of its members are women, qualified and responsible for day-to-day activities, including issues related to licenses for import of ODS containing substances, assessing the eligibility of products for imports. The networks also organize training workshops at the provincial level and public awareness events on occasions such as the National Ozone Day.

© Alireza Heydarfard, Unsplash





### 4.1.3 OUTCOME 3:

## Increased awareness and information exchange among women end-users of refrigeration and cooling appliances

TABLE 8. INDICATORS FOR OUTCOME 3

### GENDER-SENSITIVE COMMUNICATION AND INFORMATION EXCHANGE



- Communications and outreach strategy, detailing tactics, and key activities.
- Information materials, publications and awareness raising activities that are gender sensitive and portray men and women equally.
- Number of awareness campaigns that include specific messaging for women and girls.
- Number of gender-responsive content disseminated.
- Inclusion of good practices and lessons learned on gender included in project's communication material.
- Number of events (e.g., workshops, roundtables, and side events) that include a focus on gender organized.
- Number of women and men reached and engaged for action taking through awareness campaigns.



End-users in the sector include households, teachers, government officers and community members, and awareness raising content varies based on needs and perspectives of specific target audience segment. An important target group is the consumers of RAC services, including homes as well as businesses such as hotels that use RAC services extensively, since these

can contribute to the reduction in the use of refrigerants with high GWP through informed purchasing decision and efficient use of appliances. 'Consumers' could be segmented into demographic data (age, gender, location, income and level of education) and psychographic data (professional responsibility, personal interest, hobby, life stage, life goal etc.).



Efficient use of RAC appliances requires that consumers receive guidance on choice of appliances, their usage practices, energy saving potential, and use parameters such as refrigerator age, door opening frequency, damper position, load of food supplies, external and internal cleaning habits (Belman-Flores *et al.* 2019). Given that women are great influencers within the family when it comes to purchasing decisions and use of appliances, each segment of women needs to be specifically targeted in awareness raising and communication campaigns.

## Possible interventions are as follows:

**TABLE 9. INTERVENTIONS AND ENTRY POINTS TO INCREASE AWARENESS AND INFORMATION EXCHANGE**

INTERVENTIONS	DESCRIPTION OF ENTRY POINTS
<p><b>A. Target young people and women in consumer awareness campaigns, tailoring them to their interest areas</b></p>	<ul style="list-style-type: none"> <li>→ Target women and youth/adolescent girls in awareness raising activities under the institutional strengthening and HPMP programme (topics include investing in energy efficient refrigerators and ACs, purchasing low GWP refrigerant based ACs).</li> <li>→ Support manufacturers to provide practical guidance to consumers, especially women who are the primary users, on better usage practices for appliances, through user manuals and other tools such as signages outside or inside refrigerators and ACs.</li> <li>→ Launch mass media (radio and television) campaigns to raise awareness on proper servicing practices and energy savings in homes related to RAC equipment.</li> <li>→ Involve universities and school and vocational students through existing clubs, like the scouts, girl guides and environmental clubs, to campaign about use habits of cooling appliances.</li> <li>→ Encourage participation of children in activities such as fun competitions.</li> <li>→ The Palau NOU conducts outreach activities through women’s groups since women are the household’s main decision maker from purchasing to maintenance of home appliances. Palau is planning to support women’s groups in basic maintenance, ‘do’s and don’ts’ and best practices for RAC.</li> </ul>



## INTERVENTIONS

### B. Ensure that all communication products are gender-sensitive



## DESCRIPTION OF ENTRY POINTS

- When preparing information materials, publications and awareness raising activities, both women and men are equally and positively portrayed in graphic materials. Ensure the use of gender-sensitive language and visualization.
- In communicating on gender, it is important to not reinforce existing gender stereotypes and instead highlight their skills and capacities.
- Tell real human stories and testimonials on women's contribution to the sector and the national economy.
- Establish feedback mechanism to measure effectiveness of communications strategy.

"It is important to not reinforce existing gender stereotypes and instead highlight their skills and capacities..."



# SRI LANKA GIRL GUIDES ASSOCIATION



## Ozone Friends of Sri Lanka

During the past three decades of working on the protection of the ozone layer, the Sri Lankan Ministry of Environment has observed that female participation in the air conditioning and refrigeration sector is very low in Sri Lanka. In addition to addressing the institutional barriers, it decided to address the social barriers by introducing air conditioning and refrigeration to the girls at a younger age.

Accordingly, the Ministry has partnered with the Girl Guides Association of Sri Lanka to introduce the Ozone Friends Badge. The Girl Guides Association of Sri Lanka is more than a century old and aimed at empowering young girls with the motto of 'Be prepared'. It engages different groups of young girls: Butterflies (Age 5–8); Little Friends (8–12); Guides (12–16); Rangers (15–23) and differently abled (any age). The Ozone Friends Badge will be an optional national badge for each group of the Girl Guides. Each member needs to complete certain activities based on the curriculum to achieve the ozone friends badge of their respective group. Ozone Friends Badges will be awarded at the National Celebrations of the World Ozone Day every year.



Figure 10. Ozone Friends of Sri Lanka



## 4.1.4 OUTCOME 4:

# Enhanced interest and skills among girls to enter the RAC sector

TABLE 10. INDICATORS FOR OUTCOME 4

### WOMEN RECEIVING TRAINING/ EDUCATION FOR RAC SECTOR EMPLOYMENT

- Percentage of women and men who have completed or are attending education programs to work in the RAC sector (technical, professional, specialization and training in good refrigeration practices).
- Percentage of women and men certified in job skills in the RAC sector.



In most developing countries, gender stereotyping, patriarchal norms, and limited number of girls in technical education restricts their entry into the STEM sectors. Often, women who enrol in the field are perceived inferiorly in comparison with men, and eventually this is the primary reason for their being few women in the RAC sector (World Bank 2020).

Encouraging more girls and women to take up STEM education and careers in the RAC sectors calls for societal level attitudinal changes, which can be achieved through long term sustained efforts.

## Potential interventions that can be promoted by the NOUs and other stakeholders are as follows:

TABLE 11. INTERVENTIONS AND ENTRY POINTS TO ENHANCE INTEREST AND SKILLS AMONG GIRLS TO ENTER THE RAC SECTOR

### INTERVENTIONS

**Reach out to young girls and women to make them aware about career opportunities in the RAC sector**



### DESCRIPTION OF ENTRY POINTS

- Identify suitable educational institutions and develop outreach programmes using messaging that attracts young women into the sector, using role models and featuring success stories from women technicians.
- Encourage companies to widely circulate job advertisements, also through women's networks and associations and women are specifically encouraged to apply.
- Campaigns that celebrate women's engagement in the RAC sector, for example at the International Women's Day (8 March); International Day of Women in Science (11 February), International Women in Engineering Day (June 23).





## INTERVENTIONS

### Cultivate girls' interest in STEM and RAC sector

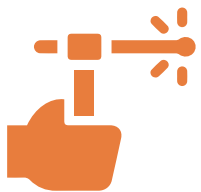


## DESCRIPTION OF ENTRY POINTS

- Engage with the Ministry of Education on early introduction of gender equality in the education system related to the RAC sector.
- Launch targeted gender-based campaigns for female students to enter the RAC field / scholarships for female candidates. The Belize NOU included two scholarships for women to take up the RAC profession in their HPMP. NOUs of several countries in Francophone Africa (Chad and Benin) included targeted awareness campaign to encourage students, particularly young women, to study for professions in the RAC sector at vocational training schools, technical high schools and universities.
- Introduce the science of the ozone layer at an early stage with schools and colleges to promote interest in the sector.
- Offer opportunities such as internship and mentorship for women enrolled in STEM programmes. INWIC aims to offer both mentorship and internship opportunities for its members and it can be used as a resource to plan activities under HPMPs or KIPs.
- Encourage private companies and ministries to invest in dedicated programmes for girls in STEM sector.

## INTERVENTIONS

**Engage RAC Associations and TVET institutes to raise awareness on RAC jobs for women**



## DESCRIPTION OF ENTRY POINTS

- Organize specific sessions with representatives of RAC associations to discuss gender mainstreaming into their work.
- Encourage RAC Associations to invite and facilitate women speakers at their functions.
- Encourage RAC Associations to invite female members, including those in non-technical functions.
- Organize specific sessions with female participants only (RAC service technicians/RAC business owners/trainers/instructors/professors) to allow for open communication on gender-related issues they face with in their work.





# STEM for girls, IBM India

IBM in India launched an initiative to enhance the education and career pathway for schoolgirls, committing to influence 200,000 girls across the country. The programme—an initiative under IBM’s Corporate Citizenship—focuses on teaching girls in grade eight and upwards the technical knowhow of coding and the nuances of workplace skills, communication, and leadership, as well as build an awareness among them about the kinds of careers available to them in the STEM fields. Young girls are exposed to a range of skills, exposing them to and preparing them for careers in STEM sectors. (Source: IBM undated)



Photo © Robo Wunderkind, Unsplash

# 5. Institutional Measures to Strengthen Gender Mainstreaming



## 5.1 Strengthening institutional capacity to mainstream gender

### GENDER MAINSTREAMING TEAM

The NOU may wish to consider establishing a focal point or team to regularly support the NOU in planning and implementation of gender mainstreaming activities. The team's role may include liaising with Gender Units or focal points in the Ministry/Department, as well as monitoring the application and reporting of gender mainstreaming in the country's Multilateral Fund projects.



## RECRUITMENT

---

Within the rules and policies of the NOU's host Ministry or Department, the NOU may consider using recruitment as a tool for achieving a 50/50 gender balance in the composition of its staff. While the approaches vary from one institution to another, the ideas that could be considered include:

- (a) Ensuring that each recruitment panel has at least one female member.
- (b) Providing guidance and relevant policies about gender mainstreaming to the hiring manager.
- (c) Maintaining oversight of the recruitment process including the shortlisting stage to ensure equitable consideration of qualified female candidates.
- (d) Giving due consideration to recommended female candidates during the final selection for the post.

Similarly, in consultant recruitment, while the technical quality, timelines and cost effectiveness of the finals output are the principal focus of consultant recruitments, it is important to consider qualified female candidates for when opportunities arise, to give everyone a chance.

## CAPACITY BUILDING ON GENDER

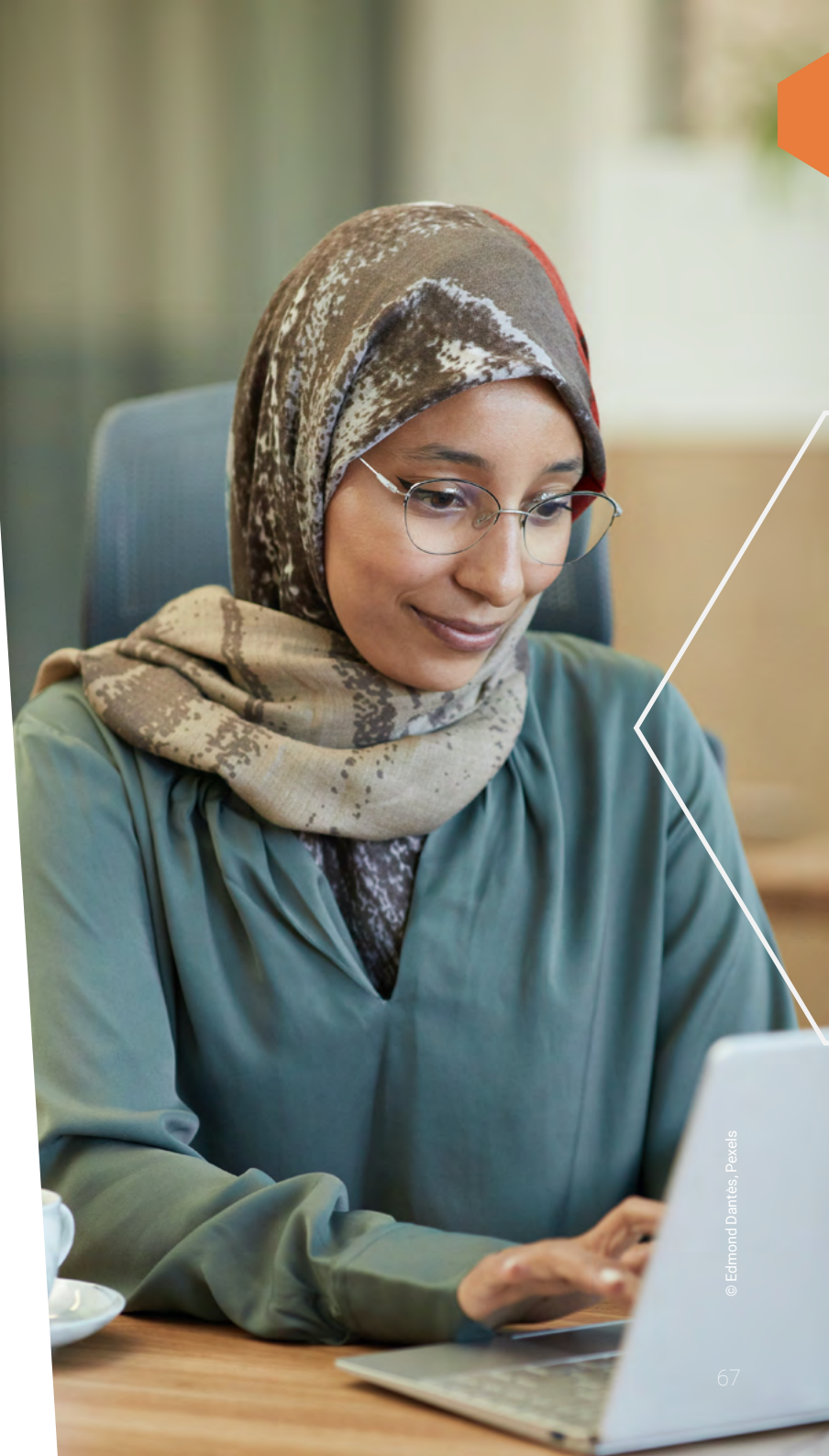
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The NOU may seek out gender-related trainings or information sharing events offered by their Ministry/Department that are relevant to the Montreal Protocol and encourage and facilitate both female and male staff to access them. In addition, staff should be required to take at least one mandatory gender training. Capacity-building has further been set forth in Article 11, Paragraph 2 of the Paris Agreement, "Capacity-building should be an effective, iterative process that is participatory, cross-cutting and gender-responsive".

## WORK-LIFE BALANCE

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To the extent feasible within the Ministry/Department's existing human resource policies, rules and regulations, the NOU may promote work-life balance for its personnel, both women and men, through such means as flexible work arrangements, maternity leave, etc.



## 5.2 Operational procedures within Montreal Protocol projects and activities

In systematically mainstreaming gender in their work, the NOUs may wish to consider adopting a number of operational procedures.

TABLE 12. OPERATIONAL PROCEDURES

ACTIVITY GROUP	SUGGESTED GENDER ACTIVITIES
<b>PROJECT DESIGN AND PREPARATION</b>	<p data-bbox="595 587 1279 635"><b>✓ CONDUCT GENDER ANALYSIS</b></p> <p data-bbox="665 676 2024 810">Gender analysis, as a tool applied in the design stage of a project/ activity, should inform project design and therefore should either precede or be conducted in parallel with preparing a funding proposal. It should also provide baseline data which is essential for comparing the gender situation before and after an intervention. Depending on the scope of the project, data should be collected on:</p> <ul data-bbox="665 852 1989 1262" style="list-style-type: none"><li>✓ Proportion of women and men in leadership positions, including owners in companies in the RAC sector.</li><li>✓ Employment of women and men in managerial, technical and other positions in the RAC equipment and supplies manufacturing companies, importers.</li><li>✓ Composition (e.g. male to female ratio) of other organizations such as RAC Associations.</li><li>✓ Awareness levels on the use of RAC appliances among men and women in households.</li><li>✓ Level of knowledge/ awareness on gender issues in Montreal Protocol among partner organizations.</li><li>✓ Enrolment of boys and girls in TVETs and other technical institutions providing training on RAC issues.</li></ul> <p data-bbox="665 1342 2024 1406">Specific questions that can guide a gender analysis in the context of the Montreal Protocol can be found in UNIDO (2015). <a href="#">Guide On Gender Mainstreaming Montreal Protocol Projects</a></p>



## ✓ **ALLOCATE RESOURCES FOR GENDER FOCUSED ACTIVITIES**

In planning projects, check whether project managers or implementors have allocated sufficient budget to implement additional activities, for example, designing and implementing women-focused technical training programmes. This is especially important when ambitious activities are planned. An illustrative list of cost items include (a) Fees associated with the appointment or hiring of a gender expert; (b) Recruitment of specialized consultancies (c) Costs of a communications and outreach plan; (d) Implementation of the M&E system, including cost of additional gender data collection and reporting; and (e) Cost of building gender expertise within team and stakeholders.

## ✓ **APPOINT GENDER EXPERT**

In projects aiming to achieve significant gender outcomes, it is advisable to appoint a gender expert. Their tasks should be clearly defined by the project manager and team members should be briefed about the role.

## ✓ **INCLUDE GENDER EQUALITY DIMENSION IN THE RESULTS FRAMEWORK**

Ensure that the results framework include specific goals and objectives, indicators, targets, and baseline data that are gender responsive to monitor the outcomes and results of gender mainstreaming activities.

### ✓ ADVISE ON POLICY DEVELOPMENT AND IMPLEMENTATION

In supporting the countries to strengthen the national systems to monitor and regulate the import/export of ozone-depleting substances, the NOUs work with governments and industry to elaborate and enforce the policies required to implement the Montreal Protocol and to make informed decisions about alternative technologies. While the NOUs may not directly support policy making, questions that are worth highlighting policies and legislations related to the Protocol are as follows:

- ✓ Are the policies aligned with the national policies and commitments on gender equality and women's empowerment?
- ✓ Do the existing policies and legislations recognize women's roles and potential contributions in the RAC sectors, as employees, service provider, entrepreneurs as well as consumers of services?
- ✓ In what ways, can we engage with Ministry that promote gender equality and women's empowerment, as well as other networks and groups advocating for women's rights?
- ✓ How can we support and assist gender focal points to develop systems to increase women's participation?
- ✓ What inputs (examples on gender equality actions from Protocol implementation) can be provided to other relevant ministries' and stakeholders' gender equality initiatives?



## ✓ **INCLUDE GENDER BALANCED REPRESENTATION**

Bodies that are involved in the implementation of project activities (e.g., National Ozone Committees, hiring panels) should include women and/or women's representatives, and this should be mentioned explicitly in the terms of reference.

## ✓ **CONDUCT CONSULTATIONS, WORKSHOPS AND TRAININGS**

To what extent women and men can participate meaningfully in global, regional, and national conferences and events, is determined by a number of factors. To ensure that both men and women have equal opportunity to participate in abovementioned activities, NOUs should:

- ✓ Ensure that women and men have equal opportunities to speak, lead tasks and set up different groups such as focus group discussions to be heard.
- ✓ Integrate gender perspectives in all speeches and presentations where relevant, as a standard practice, as well as inclusion of gender issues on the agenda.
- ✓ Collect and report on sex-disaggregated data on participation and speakers and trainers.
- ✓ Detect gender-sensitive data and visuals to avoid gender stereotypes that impose roles and responsibilities on women.
- ✓ Hold the trainings with more time flexibility to ensure women's full participation and at accessible site with transport facilities to facilitate the participation.

## MONITORING GENDER EQUALITY RESULTS

- ✓ In setting up a monitoring system (which is done at the time of proposal development), collection of sex-disaggregated data is necessary for creating a baseline and for future monitoring of impacts of proposed activities. This should always be the first step and completed periodically in the future.
- ✓ Not all data needs to be sex- disaggregated. It is useful to develop few gender-relevant indicators. At least one outcome level indicator is recommended.
- ✓ NOUs should use gender specific project requirements, outcomes and outputs and performance indicators that are adopted by the Executive Committee of the Multilateral Fund, as part of implementation of the Fund's Gender Mainstreaming Policy.<sup>3</sup>
- ✓ It is judicious to use a mix of qualitative and quantitative indicators to measure the gender results of an intervention. A balanced mix is essential to generate pertinent information, to add credibility to the data and to probe more profound aspects of the changes that take place. Qualitative indicators are useful to capture changes that are difficult to measure such as changes in perceptions.

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<sup>3</sup> The Executive Committee of the Multilateral Fund established a list of mandatory and optional projects requirements, outputs/outcomes and indicators for the systematic application of the operational gender mainstreaming policy of the Multilateral Fund in HPMPs and KIPs. More information can be found in the Decision 92/40 - [Home - 92nd meeting of the Executive Committee \(multilateralfund.org\)](https://multilateralfund.org)



## COMMUNICATING AND REPORTING ON GENDER EQUALITY RESULTS

- ✓ All key documents such as concept notes, strategy documents, call for proposals, especially those which have an interface with external stakeholder such as national governments, partner institutions and other organizations, should include a commitment to and clear guidance on mainstreaming gender.
- ✓ All projects are required to report on results of project activities on gender equality and to present data disaggregated by sex, where relevant. Include in the progress report templates, and implementation status reports a section on gender equality actions and results. Critical areas for reporting on gender equality are: (a) Gender-related progress/impact on men and women; and (b) Qualitative lessons learned and best practices through narrative reporting.
- ✓ Results of gender mainstreaming activities must be reported throughout the reports, not just on a dedicated section.

# 6. Mainstreaming Gender in Montreal Protocol Implementation in Chile and Sri Lanka: Good Practice Examples



## 6.1 Chile

### 6.1.1 BACKGROUND

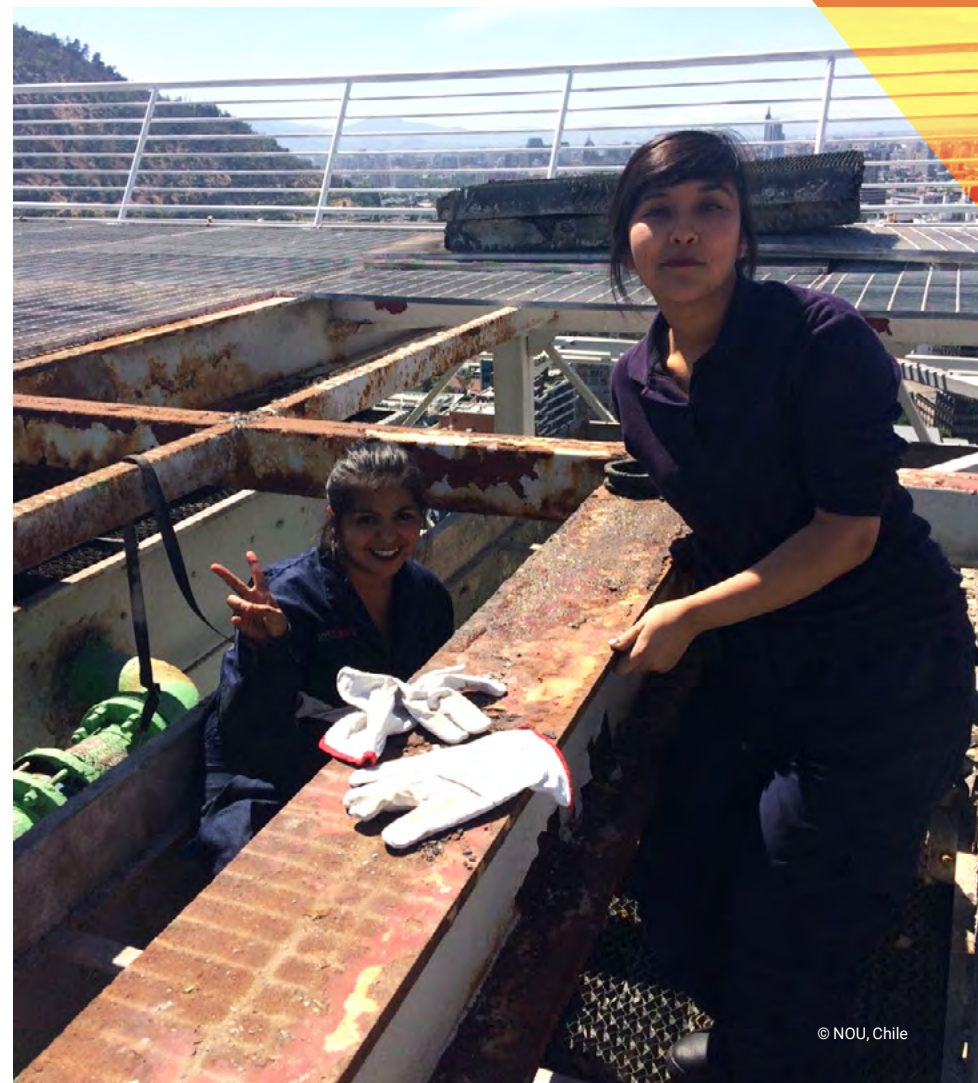
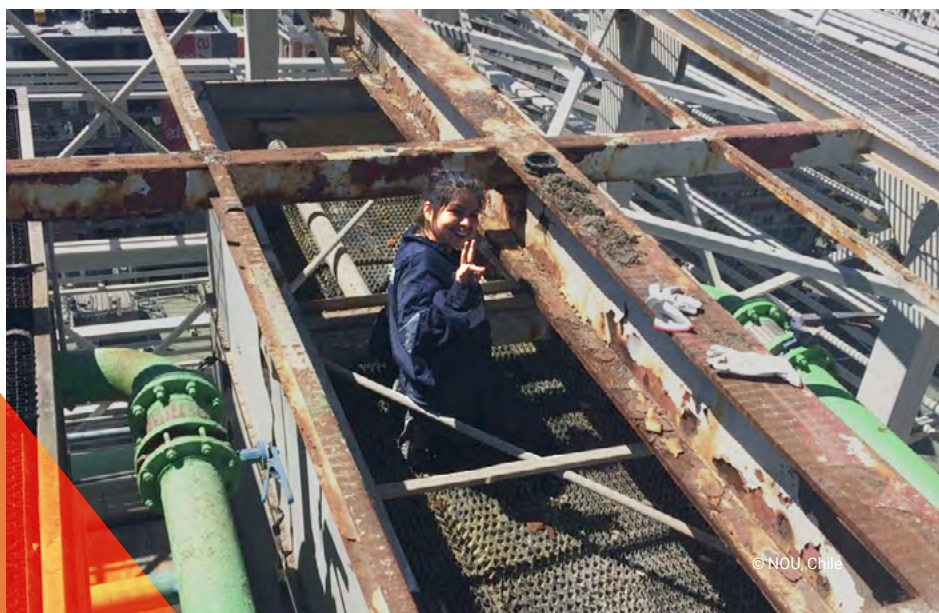
The Ministry of the Environment, through the ozone unit of the climate change office, is the local counterpart of the projects and initiatives within the framework of the Montreal Protocol and the MLF. In 2021, on behalf of the Government of Chile and UNEP as a co-implementing agency, UNIDO as the lead implementing agency submitted a request for HPMP stage III, which was approved at the 88<sup>th</sup> ExCom meeting to phase out the remaining consumption of HCFCs by 2030.



## 6.1.2 FINDINGS OF GENDER ANALYSIS OF THE RAC SECTOR AND ACTION PLANNING

In preparation of stage III of the HPMP, the NOU initiated gender analysis of the RAC sector, prepared a baseline and developed a gender action plan, aimed at incorporating the gender perspective in the sector, with an estimate of its implementation cost and a description of the monitoring and evaluation system (UNIDO, 2021).

The results showed low participation of women in education, jobs, and leadership positions in the RAC sector, with women's representation lower than that of men in all areas. The main barrier highlighted was the "low representation of women in management and representation positions", followed by "salary differences between men and women in the same position".



## 6.1.3 MEASURES INTEGRATED IN HPMP STAGE III TO STRENGTHEN THE GENDER DIMENSIONS

In line with these findings, the NOU, with the assistance of a gender expert, incorporated a gender-responsive approach in all activities of the implementation of Stage III, with emphasis on programme support and programme awareness. UNIDO's Guide on Gender Mainstreaming for Multilateral Fund Projects, as well as a checklist for integrating gender into climate change management that is part of the Government's gender policy, are used during implementation of the HPMP. Specific actions related to gender issue planned include:



**Delivering service technicians training and certification programmes:** Activities include four (out of eight) train-the-trainer workshops for women only, technical support to the technician certification centres (Chilean Chamber of Refrigeration and Air-Conditioning, and Chile Valora) to develop job/skills competency profiles for service technicians, especially for female technicians; and training and certification for 100 female technicians.



**Delivering other training programmes:** development and implementation of labour competence standards in good refrigeration service practices for women technicians and support for 20 women for training and certification.



**Implementing dedicated awareness activities related to reclamation:** Activities include development of a virtual platform to demonstrate the functions and benefits of a reclamation centre; promotion of the concept of reclamation and its benefits; organization of one workshop for owners of reclamation centres on communication, representation, ensuring gender balance in all of these.



**Launching awareness campaigns:** creation of an award or recognition for companies using good practices in servicing refrigeration and/or supporting women within the RAC sector.



**Monitoring:** a consultant has been hired to support gender mainstreaming within HPMP activities, who will develop gender indicators in line with decision 84/92, monitor and prepare HCFC consumption verification reports, collect gender-aggregated data to be used for implementation of the HPMP.



## 6.2 Sri Lanka

### 6.2.1 BACKGROUND

Sri Lanka acceded to the Montreal Protocol on 15 December 1989 and established the National Ozone Office within the Ministry of Environment in 1994. As a Party, Sri Lanka is responsible for designing and implementing national level activities to phase out ODS through the preparation and implementation of National Phase-out Management Plan and related activities.

The HPMP Stage I project aimed to phase out 35 per cent consumption of ODS, i.e. 14.09 Ozone Depleting Potential (ODP) tons, later revised to 13.90 ODP tons for the period of 2013 – 2020. Activities include investment and non-investment interventions in the RAC manufacturing, assembling, and servicing sectors.

A gender analysis was conducted towards the end of phase I of the HPMP project, and the findings have informed the HPMP Stage II.

**Asia Pacific Regional Ozone2Climate Art Contest**  
3<sup>rd</sup> Place in the Youth Drawing Category  
*Let's heal the ozone layer*  
by Theertha Weeraratne of Sri Lanka

## 6.2.2 FINDINGS OF THE GENDER ANALYSIS

The gender analysis highlighted the limited engagement of women in the sector across all actions related to the project. The lead Ministry at decision making level is largely dominated by men, who tend to make overall decisions on framing interventions relevant to Protocol. As such, no specific attempts are made to change this situation by the implementing partners during any calls for applications from professionals or in technical training programmes. The lead Ministry ascribed this to the traditional attitudes on women's capacities, where men have greater expertise/ experience in the areas of RAC engineering where ODSs are widely used.



## 6.2.3 MEASURES INTEGRATED IN HPMPs TO STRENGTHEN THE GENDER DIMENSIONS

Learning from this, the Stage II of HPMP included a range of measures to rectify the situation. Perhaps the most important structural change that came about was that the NOU made significant progress in recruiting a gender representative team. The project management unit is composed of an equal number of professionally qualified women and men officials. By doing so, the project ensured a gender balance at implementation level. A major achievement is that the Ministry has responded positively to these measures and working with the NOU to initiate sector-wide steps, for example, assigning additional points to companies participating in the HPMP programme for instituting gender sensitive arrangements for their employees. The staff also plays the role of influencer to harmonize gender incorporation across management tiers. Other steps include:

- Launching school awareness programmes, targeting both girls and boys.
- Providing incentives and scholarships to enable women to enter the sector, with training opportunities especially for women, to equip them to work in this highly specialized field.
- Encouraging women to apply for technical and vocational training in the RAC sector. Further, design of training programmes takes into consideration specific needs for men and women.
- In addition to technical areas, encouraging women to apply for administrative and policy making positions in the RAC sectors.
- Raising awareness and building confidence among women end-users to handle domestic RAC equipment, learning about potential dangers and hazards. It is expected that promotions on RAC could create a positive image among women to move into the sector.
- Raising awareness for policymakers to draft new policies, including development of a gender strategy for the RAC sector.

- Encouraging women participation in the event/activities organized under the HPMP Stage II such as meeting, training, workshop, capacity building activities and outreach activities etc.
- Including gender as an agenda point in thematic workshops to share experiences and lessons learned on gender mainstreaming.
- Publishing success stories of women in the RAC sector, recognizing their contribution and encouraging them to take part in the development of the sector.

Several of these actions are reflected in the proposal including budget and specific responsibilities, as shown below:

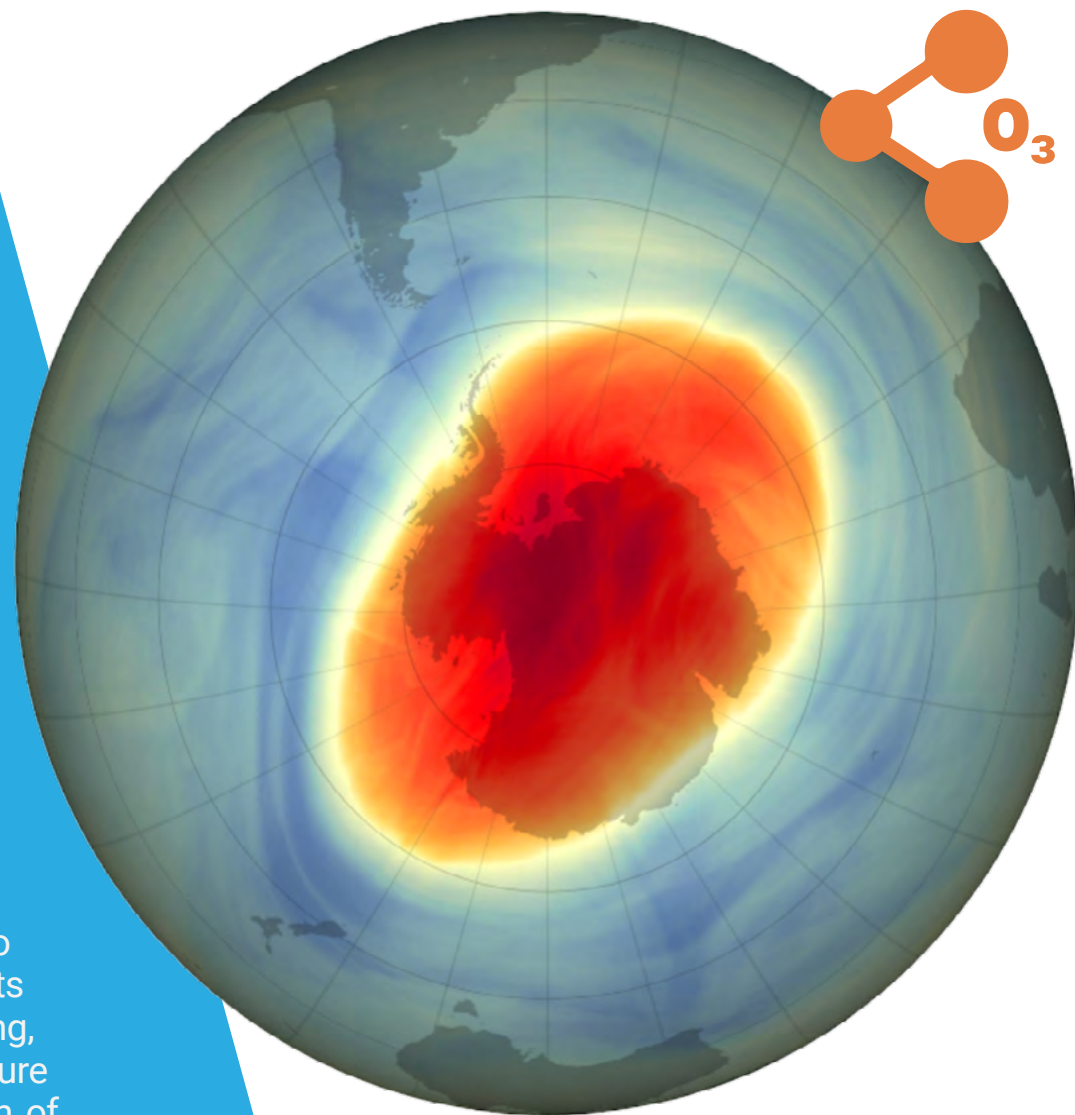
TABLE 13. PROJECT ACTIVITIES

ACTIVITIES (AS PER THE PRESENT WORKPLAN)	UPDATED NEW ACTIONS INCORPORATING GENDER EQUALITY	UPDATED / NEW INDICATORS INCORPORATING GENDER	RESPONSIBLE INSTITUTIONS
<b>OUTCOME 1: IMPROVED POLICIES AND STRATEGIC INTERVENTIONS ENSURE SUSTAINABLE ENVIRONMENTAL MANAGEMENT AND CLIMATE CHANGE ADAPTATION</b>			
<b>ACTIVITY 2: TECHNICAL ASSISTANCE FOR ENTERPRISES ASSEMBLING RESIDENTIAL AND COMMERCIAL AIR CONDITIONERS</b>			
2.1 Build the capacity of domestic air-conditioner assemblers who import second-hand air-conditioning equipment to adopt HCFC free alternatives.	Promote women in the RAC sector through awareness at academic level.	<ul style="list-style-type: none"> <li>• # of women in RAC subject streams</li> <li>• # of male trainers / mentors as change agents</li> </ul>	NOU / UNDP
<b>ACTIVITY 5: EFFECTIVE MANAGEMENT OF THE PROGRAMME MANAGEMENT UNIT</b>			
5.1 Provide management support to implement HFC phase-out.	<ul style="list-style-type: none"> <li>• Recruitment of 50% of female staff members</li> <li>• Representation of women in management decision making</li> </ul>	<ul style="list-style-type: none"> <li>• # of women/ men in project management</li> <li>• # of women in management levels</li> <li>• Key decisions made by women in the management team</li> </ul>	NOU / UNDP

# 7. Conclusions

As a very important topic in the context of the Montreal Protocol, gender mainstreaming has started receiving increased attention since the Operational Policy on Gender Mainstreaming for Multilateral Fund-supported Projects was adopted in 2019. Even though most countries have adopted policy and legislative measures to promote gender equality and women's empowerment, the Montreal Protocol was perceived largely as a technical issue. Since 2019, countries have started introducing some gender-sensitive and -responsive activities in MLF-supported projects, despite the depth and scope of interventions on gender varies across projects and countries.

The potential for undertaking measures to promote gender equality and women's empowerment through the Montreal Protocol activities varies from country to country. While there are opportunities within projects to include some activities for gender mainstreaming, there is a need for targeted efforts at all levels to ensure fully mainstreaming gender into the implementation of the Montreal Protocol.



This map shows the size and shape of the ozone hole over the South Pole on Oct. 5, 2022, when it reached its single-day maximum extent for the year.  
Credits: NASA Earth Observatory image by Joshua Stevens



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OzonAction, in consultation with UN Women, has developed this Guidebook on Mainstreaming Gender in the Implementation of the Montreal Protocol to advance the agenda of gender equality and women's empowerment through the implementation of Montreal Protocol activities. The Guidebook is designed to assist National Ozone Officers with addressing gender issues through their daily work and operations.