

Guide to Ensure Gender-Responsive Action in Eliminating Plastic Pollution

GUIDANCE DOCUMENT



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Executive summary

Gender equality is an important human right in itself, but it is also widely acknowledged as a basis for sustainable development, particularly in environmental protection. Given women's central role in entrepreneurship, resource management, waste disposal and unpaid household labour and informal sector work, policies that aim to support women's rights and livelihoods should naturally complement efforts to transition to a more sustainable and circular plastics economy.¹

The Global Plastic Action Partnership (GPAP) has created this guidance to support actors in the plastics value chain and plastic pollution action community to adopt a gender-sensitive approach in their areas of work. The guidance provides several important principles for gender mainstreaming in this sector, along with detailed guidance on each principle, made specific to a variety of stakeholders, including policy-makers, industry and business leaders, innovators, civil society organizations and academia.

Overarching principles

In every action, process or decision, women and traditionally marginalized communities need to be seen and treated as integral drivers of the solutions – and not solely as victims who may be adversely affected. While women may be most affected by plastic pollution, this also means they are in the best position to create and implement sustainable solutions that will benefit the most vulnerable segments of society.

Actions such as investment and design solutions should be informed by a prior gender analysis or gender-sensitive considerations² that are incorporated from the outset; gender and inclusion should not be introduced late in the process, after most of the decisions have already been made.

1 Gender-mainstreaming principles for all actors in the plastics value chain and pollution action space

A. Use evidence collection and gender analysis to determine who is being affected disproportionately and why

1. Disaggregate collected and shared data by sex as well as other variables as appropriate. Include gender indicators in the collection of data where relevant.
2. If a sex- or gender-based inequality in terms of risk, access, exposure, benefit or outcome is identified, undertake an analysis of laws, policies, norms and practices to locate the causes of the inequality.

B. Establish accountability through monitoring, implementation, reviewing and reporting

3. Facilitate the public availability of collected and analysed gender-related data and evidence.

4. Include clear accountability, at the senior level and for all staff, for gender mainstreaming in the action area.

C. Build capacity, promote diversity and dedicate resources through effective management

5. Undertake systematic and effective capacity-building for gender mainstreaming for staff, project implementers, evaluators, clients, beneficiaries and other stakeholders.
6. Promote and support the meaningful participation of diverse individuals and communities when planning, implementing, monitoring and evaluating an action.
7. Allocate adequate levels of resources to implement the above principles for each plastic pollution action.

2 Actor-specific guidance to ensure gender-sensitive and responsive action

8. Integrate gender considerations into all actions and take gender-targeted action to reduce identified inequalities and discriminatory practices.

A. Policy-makers/regulators

- **Issue:** Occupational segregation in the waste management sector with women concentrated in the informal economy and lower-paid, lower-skills jobs.
- **Solution:** Conduct relevant gender analyses to inform the development of new government policy and regulations related to waste management systems and the plastics industry. Once a gender analysis is complete, solutions should be proposed that help formalize waste management systems and include strategies and measures to ensure that women and men currently working in the informal sector do not lose income or employment due to this transition.
- **Issue:** Current guidelines for safe exposure levels to plastics are not gender-inclusive.
- **Solution:** Ensure occupational health and safety regulations in the plastics industry are gender-sensitive by conducting a review of existing policy and regulations related to exposure to plastic and worker and public protection to ensure that women's and men's different sensitivity levels to toxic plastics is taken into account with regards to safe exposure levels.
- **Issue:** Behavioural change campaigns that do not take into account gender considerations will be less effective and can reinforce harmful gender norms.
- **Solution:** Ensure that behavioural change campaigns on household plastic waste are gender-targeted and gender-responsive.
- **Issue:** Economic investment and the expansion of formal economy sectors often benefit men more than women due to existing unequal power relations and privileges held by men.
- **Solution:** Set job quotas and implement gender-responsive budgeting to ensure financial resources and opportunities benefit women and men equally.

B. Industry: plastic producers and users

- **Issue:** A lack of women in diverse roles in plastics production and the oil and gas industry is perpetuating gender inequality and reducing profits and innovation.
- **Solution:** Increase diversity at all levels of the company by strengthening the inflow of diverse women; maintaining women's enthusiasm; and increasing women's representation at the top, particularly women from under-represented communities.

- **Issue:** Safe exposure levels to plastics are not the same for women and men, and safety measures often do not reflect the greater impact on women at lower exposure levels.

- **Solution:** Review safety measures, redesign plastic production processes, substitute hazardous chemicals and incorporate green chemistry.

C. Innovators

- **Issue:** Sustainable solutions to plastic pollution such as plastics alternatives need to give greater consideration to the people who disproportionately purchase/use them.
- **Solution:** Support diverse innovators/designers and gender-sensitive market and product research and design.

D. Civil society and others in the plastic pollution action space

- **Issue:** Currently, few actors in the plastic pollution action community transparently and systematically include gender considerations and analysis in their platforms and actions.
- **Solution:** Have anti-plastic pollution actors systematically mainstream gender into their work, making actions and solutions more effective and sustainable.
- **Issue:** Financing, investing and access to capital are harder to access for women, and particularly women from marginalized communities.
- **Solution:** Undertake targeted investments by seeking out and systematically prioritizing women-led (particularly women from underfunded communities) and community-led projects.

E. Academia

- **Issue:** A lack of research and evidence on plastics related to sex and gender and their intersection with other identity factors.³
- **Solution:** Conduct academic research on the plastic value chain, plastic pollution and the transition to the circular economy as they relate to the intersection of sex and gender with other identity factors. This could include identifying the key research gaps; holding information and dissemination sessions on the results of the research findings; ensuring research proposals include a gender-sensitive, intersectional research methodology; developing intersectional gender methodology guidelines; and providing training to researchers on how to conduct intersectional gender-sensitive research and gender analyses.

Introduction

Gender equality is enshrined as a human right in many international declarations and conventions, including the Rio+20 outcome document *The Future We Want*,⁴ the Beijing Declaration and Platform for Action and the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW). The Sustainable Development Goals (SDGs), negotiated and adopted by United Nations members states in 2015, include “achieve gender equality and empower all women and girls” as goal number 5, and “reduce inequality within and among countries” as goal number 10.

Gender equality is an important human right in itself, but it is also widely acknowledged as a basis for sustainable development, particularly in the environmental management dimension. Given women’s central role in entrepreneurship, resource management, waste disposal and unpaid household labour and informal sector work, policies that aim to support women’s rights and livelihoods should naturally complement efforts to transition to a more sustainable and circular plastics economy.⁵

Current linear plastics and waste management economies are not set up effectively to reduce and eliminate the huge amount of plastic waste humans generate. There is an urgent need to fast-track the transition to a circular plastics economy to address the global and local challenges generated by plastic waste. This involves all actors in the plastics value chain and plastic pollution action space. In each of their spheres of influence, actors must use this opportunity for radical change

in the plastics economy to dismantle negative gender norms and roles within plastics production, as well as plastics collection, recycling and waste management. Such attention to gender and equality is not a side priority, but is essential to a successful transition.

For this reason, the Global Plastic Action Partnership created this guidance to support actors in the plastics value chain and pollution sphere, – such as policy-makers/regulators, companies, innovators, civil society and academia – to be gender-sensitive and responsive. The guidance provides:

- A. A summary of the principles for mainstreaming⁶ gender into the plastics value chain and plastic pollution action space
- B. Detailed guidance on each principle. All principles are general to the plastics value chain and plastic pollution action space. They can therefore apply to all stakeholders and actors. The principles are practical steps to be taken in order to integrate gender considerations into actions and institutional processes as well as actions by individuals
- C. Stakeholder-specific guidance to ensure gender-sensitive and responsive action, with opportunities for policy-makers, industry, innovators, civil society and academia to adopt gender-sensitive and responsive approaches to their work

A note on terms

An important clarification: “**Gender**” does not equal “**sex**”. Sex refers to the biological differences, such as the genitalia and genetic differences, between males, females and intersex persons. Gender refers to the socially constructed norms that impose and determine power, roles and relationships between groups of women, men, boys and girls in all their diversity, and which operate at various levels, from households to communities and institutions. Gender also refers to expressions and identities of women, men, boys, girls and gender-diverse people. Gender cannot

be separated from other social and structural determinants (race, disability, sexual orientation, class, etc.) that shape people’s socioeconomic status and opportunities and must be analysed in context.

Gender mainstreaming is not a synonym for adding women into a project. Gender mainstreaming is also not the same as gender parity. Mainstreaming involves looking at the lived experience, needs and interests of diverse women and men, and adapting projects to challenge existing social structures in order to place women and men on an even footing.

“Gender mainstreaming goes beyond counting the number of women and men in a room. Rather, gender mainstreaming addresses the gender inequalities that are at the core of project, policy or process, leading to more gender-responsive actions.”⁷ Gender mainstreaming requires a contextual analysis of the needs, priorities, roles and experiences of women and men, as well as the integration of specific actions to address any gender-based inequalities that may have emerged from this analysis.⁸ Gender mainstreaming in the context of this guidance is about embedding the consideration of gender into all aspects of an action. Gender equality is not about one action to target women, but about systematically taking the different perspectives, experiences and needs of diverse women and men into account.

Intersectionality is an important concept in mainstreaming gender. Intersectionality is the complex, cumulative way in which the effects of multiple forms of discrimination (such as racism, sexism and classism) combine, overlap or intersect, especially in the experiences of marginalized individuals or groups. Kimberlé Crenshaw, a legal scholar and activist, introduced the theory of intersectionality, the idea that when it comes to thinking about how inequalities persist, categories such as gender, race and class are best understood as overlapping and mutually constitutive rather than isolated and distinct.⁹ An intersectional gender analysis underscores that women and men are not homogenous groups and that there is a need to consider overlapping identity factors when assessing needs, impact, risks, etc. For example, sex or gender **intersecting with** age, ethnicity, religion, health status, sexual orientation, disability, location, economic status, education level, migrant status, geographic area (rural/urban and/ or geographic unit of relevance) **to create a unique form of discrimination.**

Being **gender-inclusive** means actively and meaningfully including the voices of men, women and gender-diverse persons from various backgrounds in planning and decision-making, as well as ensuring they have equal access to opportunities and benefits arising from actions taken.

A gender-sensitive approach¹⁰ to any action **considers gender norms, roles and relations, in order not to have that action further gender inequality**; however, it **does not address inequality** generated by existing unequal norms, roles or relations. This approach indicates gender awareness, although often no direct remedial action is developed to combat gender inequality. It can be seen as a “do no harm” approach. This should be the minimum approach for any investment, design solution, project, programme or other action in the plastic pollution action space.

Example of a gender-sensitive approach: *When decisions are made by a board about what design solutions to invest in, the gender impact of the solutions are considered and any with a negative impact on one gender are discarded. The bidding process has also been designed to consider gender bias in final decisions.*

A gender-responsive approach¹¹ to an action **considers gender norms, roles and relations** for women and men and how these affect opportunities, exposures, risks, outcomes and effects. It considers women’s and men’s specific needs and addresses the causes of gender-based inequities. Such an approach **includes ways to transform harmful gender norms, roles and relations.** One objective of a gender-responsive action will be to promote gender equality, including progressive changes in power relationships between women and men. It can be seen as a “make society more equal with my action” approach. Almost all actions have the potential to transform society’s norms, roles and relationships. With some analysis and consultation of the people affected, there is often a way to support gender equality and positive gender norms alongside meeting the primary objective.

Example of a gender-responsive approach: *When decisions are made by a board about what design solutions to invest in, the gender impact of the solutions is considered and any with a positive impact that redresses historical gender inequalities are prioritized. The bidding process has also been designed to consider gender bias, and firms with staff gender parity, including senior leadership, are prioritized.*

1

Why gender and inclusion are key to plastic action



A gender-responsive transition to the circular economy, in which existing inequalities in the plastics value chain and pollution action space are systematically addressed, directly benefits the individuals and groups involved. It creates safer, better and more opportunities for traditionally marginalized communities, including women. A gender-responsive transition is also essential to successful and sustainable change in how we address plastic pollution – an issue that affects women and men differently in terms of opportunities, risks, exposure and health outcomes due to biological and social factors. This is particularly true for women and men from marginalized communities who often earn their incomes in the informal economy and from lower-paid, higher-risk jobs. Achieving the shift towards a sustainable circular economy requires solutions that consider and respond to the disparate needs of diverse communities.

The exclusion of women and under-represented groups from decision-making at the highest levels of policy, operations, planning and programme design has led to a fragmented response to plastic pollution. Numerous studies indicate that women's attitudes towards plastic pollution and prioritization of environmental and human health lead to different behaviour and decision-making. Women's over-representation in the informal labour sector, as opposed to the formal plastics waste management economy, has meant they not only benefit less from their labour, but are in less of a position to influence their sector and environment.

In their work for the Swedish International Development Cooperation Agency, Beth Woroniuk and Johanna Schalkwyk found that “despite women's relatively high involvement at the local level, men are more likely to have access to institutions that set priorities and make decisions regarding municipal infrastructure. Community consultations processes often fail to take gender inequalities into consideration and thus neglect women's preferences. Unless explicit measures are taken to ensure women's participation, their priorities, responsibilities and needs will not be heard.”¹²

Amiyna's story

1 | Amiyna, like her mother, works as a waste picker in a landfill. Most men in her neighborhood work in the government-run recycling plant. They have health insurance, sick leave and regulations that protect them at work. Amiyna works without protection and often has to work even if she is feeling ill. The recycling plant doesn't say it, but everyone knows they hire men only because the work is considered dangerous. Despite the many formal jobs in plastic sorting, recycling and disposal, Amiyna did not think to apply because the other women in her family work for the family business and, in any case, she has seen only men working in the formal economy waste jobs.

Exclusion from the more formalized, powerful spaces in the plastics value chain occurs despite the fact that women around the world are more often the ones making the decisions regarding plastic purchases for the household and how to dispose of the plastic at the end of use. **Solutions to plastic pollution will continue to fall short if the actors who have the most potential to effect change and who are most affected are not at the helm.**

The key gender equality issues in the existing linear plastics economy that need to be addressed in the transition to a circular plastics economy are focused in the areas of:

- Negative gendered health impacts for both women and men, particularly those from marginalized communities
- Limited or non-existent gender-inclusive waste management policies
- Occupational segregation in both the informal and formal waste management sectors, which most often favours men
- Lack of diversity on research and design teams and lack of diverse consultation on design solutions
- Gender differences in consumer behaviour and unpaid labour related to plastics use and disposal

One way of looking at these issues is through the story of Amiyna, a woman who is directly and indirectly affected by gendered and discriminatory roles, norms and relations in the plastics value chain and her wider society. Amiyna lives in a city in which single-use plastics are not banned and waste from other countries is regularly shipped to the outskirts. Amiyna is living in poverty, and comes from a community and society in which social mobility is rare due to ethnic stereotypes and relations.

- Women's participation in the informal waste management sector (often as unpaid family labour) is disproportionately high in many countries.
- Women are also often involved at the lower end of the waste sorting/recycling value chain and their work takes place in municipal waste, dumpsites and landfills while the higher-value businesses are predominantly owned or operated by men.¹³
- Female informal-sector waste workers also report that they experience high rates of sexual harassment and risk of sexual assault.¹⁴

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| 2 | <p>Due to her mother and father's work in the landfill, Amiyna has been exposed from birth to components of plastics that will increase her likelihood of having breast cancer later in life. It was not possible for her mother to take maternity leave during pregnancy due to her informal work status, nor did she know there were risks from plastic components exposure to her foetus.</p> | <ul style="list-style-type: none"> - Research studies show that some plastics components act as endocrine disruptors (EDCs). Pre-birth or early-life exposure to certain EDCs can increase the likelihood of future breast cancer diagnosis in both women and men.¹⁵ |
| 3 | <p>As Amiyna grows up, she will be continuously exposed to these components. First, her parents regularly take her with them to work, where her mother collects old plastics components for recycling and her father smelts them. She will be more affected by exposure to toxic chemicals than her brothers, who will spend more time in school, being prioritized for education. Secondly, she will be more exposed than others, mostly men, in the community who work in formal recycling plants, because she, unlike them, does not have protective gear to shield her from the plastic fumes that she is consistently inhaling.</p> <p>Even if she worked in a formal recycling plant, however, she would not be protected because the regulations on safe exposure levels were based on studies that solely investigated safe levels for men, since only men worked in recycling plants at the time they were conducted.</p> | <ul style="list-style-type: none"> - Plastic pollution and exposure to plastics within the home, workplace and general environment have a differential impact on women's and men's health due to gender roles at home and work; and women's physiology (higher body fat content) makes them more vulnerable to chemical exposure than men.¹⁶ - Women are often also employed in the lower-paid and less-skilled positions in production plants and therefore are more likely to be exposed to working with toxic chemicals in the plastics industry. - Informal economy work is also precarious, not protected by national occupational health and safety laws, and the workers are not eligible for social protection benefits. |
| 4 | <p>When she is 13 years old, Amiyna gets her first period. She and her mother must now decide on what menstrual hygiene method to use. Like the vast majority of menstruators in their country, they cannot afford sanitary products so must use often unsafe materials such as rags and sawdust. No one has ever talked to Amiyna about her period, and she feels uncomfortable discussing it with anyone in her community. Despite the fact that disposable menstrual products are meant to be provided free to adolescents through a government initiative, Amiyna is missed by the programme because she does not attend school or have a formal workplace, and her dwelling is not on the formal grid. These factors also mean that Amiyna's small community is often missed or overlooked in planning processes and consultations for the larger district in which she lives. Some community members also believe that their exclusion is rooted in the fact that they are an ethnic minority group that lacks respect and representation from the majority population and government administration.</p> | <ul style="list-style-type: none"> - In many countries, the majority of young women are unaware of the details of menstruation; in terms of sanitary products, they often cannot afford them, and do not know how to use or have a hygienic place in which to use them. - Disposable single-use plastic-based sanitary products are not available to the poorest people. Reusable products such as a silicone cup can be a good alternative to unsafe materials, but high costs, cultural taboos (and lack of behavioural change campaigns to address them) may result in a lack of take-up. - When designing cultural acceptability, safety and simplicity, as well as financial accessibility, may not be taken into account without a diverse design team whose members understand the needs of the broader population. Women, however, are vastly under-represented in the science, engineering, technology and mathematics (STEM) field and in technical roles in the plastics industry, and market research may often miss marginalized communities in product research and design. |

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| 5 | | <p>Amiyna now has a family of her own. On top of her work in waste collection and sorting, Amiyna is responsible for the family's shopping, cooking and cleaning, as well as caring for her children, parents-in-law and husband, as is the custom in her community. She makes decisions about how to dispose of waste in her home. Due to economic constraints, when Amiyna buys products with plastic packaging, she often reuses the plastic longer than it is safe to do so, and when she disposes of it, it often ends up in the river, on the ground or burned without containment processes. There are community workers who come door-to-door to provide her with information on how she can avoid allowing her plastic waste to leak into the nearby river. She does not want to pollute her community, but the disposal centre is too far away and she already spends all of her "free time" on her domestic duties.</p> | <ul style="list-style-type: none"> - There are differences in consumer behaviour related to plastics and plastic waste disposal, with women often having significantly more favourable attitudes regarding environmental and ethical practices and their willingness to use their consumer power to influence companies and governments to change these.¹⁷ - However, solutions and behavioural change campaigns must take into account the needs and impact on women, particularly considering that the burden of change and extra time needed will largely be borne by them. |
| 6 | | <p>Around the moment when Amiyna will have grandchildren, her husband passes away. Amiyna has no pension because she was never in the formal economy and will now need to rely on the formal wage earners in her extended family and community for economic security, making her more vulnerable to old-age poverty. Women are over-represented in low-productivity sectors, informal work and part-time work. Not only do they have more problems procuring paid employment and generally receive lower wages and fewer benefits than men, they also suffer from higher levels of irregular payments. Frequently, they are expected or forced to give their earnings to their husbands or other family members.</p> | <ul style="list-style-type: none"> - These gaps during women's working years feed significant gender gaps in old-age income security, in the form of far fewer women being eligible for contributory pension payouts and earning substantially lower income from work late in life.¹⁸ |

2

Principles for gender-inclusive plastic pollution action



A Gender mainstreaming guidance for all actors in the plastics value chain and plastic pollution action community

Principle 1 Disaggregate collected and shared data by sex as well as other variables as appropriate. Include gender indicators in the collection of data where relevant

Rationale:

Data disaggregation is a fundamental step in policy analysis, product research, marketing and project planning and implementation. It allows the actor to understand the true needs and experience of a population, instead of taking an average number, which can mask extreme privileges held by some populations compared with others. Aggregated data will often lead to fragmented actions that do not provide an accurate reflection of reality. As has been widely noted by plastic pollution action stakeholders, sex-disaggregated information, particularly on health and paid and unpaid labour, is missing in the plastic pollution action space. The same is also true with regard to other communities that often have very different experiences and impacts within the plastics sector.

Implementation notes:

- **Data should be disaggregated** by sex and any of the following as appropriate and available: age, ethnicity, religion, health status, sexual orientation and/or gender identity, disability, location, economic status, education level, migrant status, geographic area (rural/urban and/or geographic unit of relevance). These stratifiers include the internationally prohibited grounds of discrimination.
- **Gender indicators should also be included in data collection** where relevant. While sex-disaggregated data refers to collecting and breaking down data separately for women and men, gender indicators go deeper as they

consider wider gender inequalities and gender bias in data collection methods and tools. In addition, gender indicators have the potential to reflect different groups of women and men and support the analysis of intersecting inequalities (see above listed stratifiers).¹⁹

- When not available, **the collection of, or advocating for the collection of disaggregated data** should be a priority action.²⁰
- **Data collection should be undertaken with adequate safeguards** for confidentiality and anonymity, and safe data storage, in accordance with international research ethics standards.
- **Time-use surveys are useful to better understand gender-differentiated roles and responsibilities** and illustrate existing gender-differentiated time burdens that in many countries lead women to suffer from time poverty, limiting their lives, livelihoods and empowerment in myriad ways, including limiting opportunities to participate in income-generating activities, education and leisure time. Time-use surveys could be used, for example, to assess waste management labour (paid and unpaid) in the informal economy or time spent on household plastics shopping, use, recycling and waste management. It could also be used to assess the impact of pilot solutions and products on the time of women and men.²¹

Principle 2 If a sex- or gender-based inequality in terms of risk, access, exposure, benefit or outcome is identified, undertake an analysis of laws, policies, norms and practices to locate the causes of the inequality

Rationale:

Analysis of the root causes of inequalities faced by specific populations is necessary to develop gender-sensitive or responsive action, as well as for monitoring and evaluation. It facilitates the adaptation of policies, products, projects and programmes to the needs of those disproportionately affected by targeting the deeper issue leading to inequality as part of the wider action.

Implementation notes:

- **Analyse quantitative and qualitative evidence.** Quantitative evidence includes e.g. census, surveys, administrative data; qualitative data includes e.g. interviews and user surveys.
- **Identify root causes of inequality** that explain the inequalities pinpointed in the data or secondary sources. These will be related to,

for example, laws, policies, norms and practices that affect women and men differently, and particularly those from marginalized populations. Marginalized populations often include persons living in rural areas, people with disabilities, those living in the lowest wealth quintiles, young persons and religious, ethnic and racialized minorities. It is essential not to look at women and men as a single homogenous group as some women and men face different forms and levels of discrimination. Analysing the intersections of these forms of discrimination is the only way to isolate populations that are the most negatively affected by actions.

- To identify root causes of inequality, in some cases it may be necessary to **look at secondary sources and analysis²² to identify some of the deeper-rooted and hidden gender norms** that are difficult to extract due to cultural taboos or because the data collection process was not sensitive to gender considerations in the first place.
- **Outline inequalities and their root causes** in key documents, including in planning, workplans, strategies, frameworks,

action plans, guidelines, reports and other technical documents.

- Analyse the inequalities in a way that supports **mainstreaming of gender from the outset**.
- In practice, **a gender analysis will often result in the identification of barriers and inequalities faced by women, girls and men who do not conform to traditional male stereotypes**, particularly those from marginalized communities. Be aware, however, that a gender analysis may also uncover poor outcomes or increased exposures for men due to masculinist societal expectations and norms.

Tip:

It can often be difficult to undertake a gender analysis on large projects without some background knowledge on gender and human rights.²³

Consider investing in expertise in this area to ensure action is not perpetuating gender inequality by reinforcing harmful norms, roles and relations or inadvertently privileging one group at the expense of another. Free online courses are available, such as the GBA+ course, an introduction to intersectional gender analysis from the Canadian government.²⁴

Principle 3

Facilitate the public availability of collected and analysed gender-related data and evidence

Rationale:

Without public availability of data, policy-makers, implementers and others cannot make informed decisions on investing, project planning and programme design, including budgeting, design of participatory approaches, implementation plans, and monitoring and evaluation.

Sharing of data with and by civil society organizations, international organizations, the private sector and government actors strengthens the sector's ability to drive forward a gender-responsive plastic action agenda. In particular, it may be constructive to share gender inequality and plastics data with large multisectoral platforms as a way to expand important messages outside of the plastic pollution action space and among governments, civil society and the public.

Implementation notes:

- Any knowledge or data that has been collected on gender equality in plastic pollution should be **systematically documented and publicly shared** in order to counter the current deficit of public information in this sphere.

- Any organizational **communications plan should include gender equality** as an integral component to help ensure that gender and plastics data and knowledge is systematically disseminated where available.
- Organizations that have undertaken a gender audit (see principle 4) may **publicly share the results and/or recommendations for transparency** and encourage other organizations to undertake similar action.
- Gender-sensitive language, data and evidence should be integrated into all materials, prioritizing public materials. Recall that gender goes beyond female and male categories and organizations should provide accurate and understandable evidence, data and content on female/male subpopulation groups, paying attention to individuals and groups that have historically faced marginalization, discrimination or stigmatization. For a better understanding of this intersectional approach to gender, see "A note on terms" in the introduction.

Include clear accountability, at the senior level and for all staff, for gender mainstreaming in the action area

Rationale:

Under SDG 5.1, all governments are tasked with ending all forms of discrimination against all women and girls everywhere. Within the private sector, most companies have committed to gender equality within their institutions and processes and in their corporate social responsibility commitments to the public. For civil society and international organizations, human rights and gender equality have long served as the grounding principles that drive mandates.

Gender mainstreaming is therefore not a novel concept, nor is it irrelevant to any plastic pollution actors. Institutions that integrate gender considerations into their core processes ensure that gender will be taken into account for the duration of their mandate – not only within the institution itself, but in the programmatic work they undertake. Gender mainstreaming ensures that organizations illustrate the importance of gender-responsive working environments, policies, products, programmes and processes by putting these into practice.

A main part of gender mainstreaming for every plastic pollution actor is to ensure that all staff are accountable for mainstreaming gender into their work to fulfill their mandate, as opposed to limiting the work to a designated gender team or focal point. This will involve capacity-building (see principle 5) and the allocation of adequate resources (see principle 7), but it starts with accountability.

Implementation notes:

- To achieve accountability, all terms of reference for staff, including at the senior level, should **incorporate responsibility for mainstreaming gender into all deliverables** and allocate training time to undertake a training on gender mainstreaming.

- **Accountability must also be for the programme, not just its staff.** Reporting, monitoring and evaluation of the programme should be gender-sensitive. This means ensuring that programme performance indicators are gender-sensitive and measurable and that sex-disaggregated baseline data is identified and collected to assist in the monitoring of the programme's gender equality results.
- **Another useful tool for programme accountability is a gender audit**, which may be undertaken every five years or more. There are many excellent audits that an organization can undertake (see endnote for suggestions).²⁵ A gender audit is a useful tool to ensure transparent and unbiased evaluation of gender mainstreaming and is valued by investors, clients, partners, the public and other stakeholders.
- **Accountability goes beyond programmatic work and extends to accountability for an inclusive culture at the organization.** All workers must feel safe, empowered and that they do not face discrimination in any form. This translates to a:
 - Detailed and visible code of conduct that includes a definition of and prohibition of sexual harassment²⁶ and clear instructions for complaints
 - Senior-level accountability (articulated in the terms of reference) for ensuring promotion of gender equality, diversity and non-discrimination within the team, and internal and public championing of gender equality

Undertake systematic and effective capacity-building for gender mainstreaming for staff, project implementers, evaluators, clients, beneficiaries and other stakeholders

Rationale:

Mainstreaming gender into diverse areas of the plastics value chain and plastic pollution action space requires significant capacity and knowledge. The best way to ensure systematic gender-sensitive action is to ensure that considering and seeking to practise gender equality is second nature to all staff. Gender-sensitive action is not a one-time initiative, but rather requires persistent and dedicated integration into all actions.

Implementation notes:

- **All staff should have the necessary tools and knowledge to integrate gender-sensitive and responsive actions into their work.** This requires mandatory gender mainstreaming training for all staff, including senior managers.

- Details on training courses can be found on the UN Women Training for Gender Equality Community of Practice (CoP) platform.²⁷ UN Women has also produced a Compendium of Good Practices for Training in Gender Equality.²⁸ The simple and quick Gender Based Analysis+ training by the Canadian government is useful as a free online resource.²⁹ Additionally, there are many tailored gender-mainstreaming, gender equality and gender-awareness trainings for the private and public sector. Many private companies have also created tailored online trainings courses that can be purchased by organizations for their staff.

Promote and support the meaningful participation of diverse individuals and communities when planning, implementing, monitoring and evaluating an action

Rationale:

Meaningful participation requires that individuals are entitled to participate in the decisions that directly affect them. Meaningful participation is a human rights principle and a means to more effective action, as it aims to ensure all perspectives and voices are heard and integrated.

Implementation notes:

- **Meaningful participation requires that individuals and/or the organizations that represent them participate in the decisions that directly affect them**, including in regards to the design, implementation and monitoring and evaluation of the action, project and design solution, together with external or advisory groups for programmatic or normative work. This includes, for example, women and men and people with non-binary identities when programmes directly affect them.
- **Meaningful participation may take different forms depending on the actors**, including informing people with balanced, objective information, gaining feedback from the affected population in a community, involving or working directly with communities, partnering with affected communities in each aspect of decision-making, including the development of plastic alternatives and identification of solutions, and empowering communities to retain ultimate control over the key decisions that affect their well-being.³⁰
- **Meaningful participation should also be sought beyond sex categories** to include other intersecting identifications, conditions or statuses, such as people with disabilities, adolescents, older people, Indigenous populations, ethnic minorities, Afro-descendants, people identifying as LGBTI, migrants and many other groups.
- **Diverse participation from a multidisciplinary and geographic perspective is also important in governance.** Whatever the governance structure at the organization, department, team, etc., it should be inclusive of gender diversity by ensuring 50/50 gender parity and geographic balance (where appropriate). When ensuring gender balance, it is not enough to consider only gender, which will often lead to only the most privileged women and men in a society having a voice. Consider diverse women and men, including people with disabilities, LGBTI persons, people from racialized groups and those from marginalized communities.
- **When hosting an event, ensure it is gender-inclusive.**³¹ Ensure that hosted panels and panels that are attended by members of the organization are gender-inclusive: see, for instance, the panel parity pledge by the International Gender Champions.³² This is a pledge to host and sit on only gender-inclusive panels. It also enables the leadership to craft its own gender equality goals publicly.

Allocate adequate levels of resources to implement the above principles for each plastic pollution action

Rationale:

The fulfilment of the other seven criteria is reliant on adequate funding for planning, programme design, implementation, capacity-building, etc.

Implementation notes:

- Resources are required to support disaggregation and analysis of data; to collect further evidence if needed, planning and implementing remedial actions to address gaps in mainstreaming of gender; to bring forward accountability mechanisms and the participation of individuals and communities; and to address capacity-building needs.
- The level of funding required will differ depending on the action, so a specific target is not provided here. However, the allocated budget should be commensurate with the expected achievement.
- To ensure accountability for meeting the funding needs of gender equality objectives in the programmatic work, budgets should be measured by a financial resource-tracking mechanism to quantify disbursement of funds that promote gender equality and women's empowerment (see section on policy-makers under principle 8 for more information and resources on gender-responsive budgeting).

B Actor-specific guidance to ensure gender-sensitive and responsive action

Principle 8 Integrate gender considerations into all actions and take gender-targeted action in order to reduce identified inequalities and discriminatory practices

Rationale:

Gender mainstreaming is important across the entire value chain in order to achieve a sustainable solution to plastic pollution. The exclusion of women and marginalized groups from decision-making at the highest levels of policy, operations, planning and programme design has led to a fragmented response to plastic pollution. Numerous studies indicate that women's attitude towards plastic pollution and prioritization of health and profit lead to different behaviour and decision-making. Women's over-representation in the informal sector, as opposed to the formal plastics waste management economy, has meant that not only do they benefit less from their labour, but they are in less of a position to influence their sector and the environment.

Exclusion from the more formalized, powerful spaces in the plastics value chain occurs despite the fact that women around the world are more often the ones making the decisions regarding plastics purchases for the households and the disposal of plastic waste at the end of use. Finally, women and men have different risks, exposure and impact from plastic pollution due to biological and socioeconomic factors. No meaningful transition to a circular plastics economy can take place that does not meet the needs of all of the people who stand to lose or benefit.

Policy-makers/regulators

Issue: Occupational segregation in the waste management sector, with women concentrated in the informal economy and lower-paid, lower-skills jobs

At the waste management level of the value chain, gender equality would mean better protection for workers, more women participating in the formal economy and more sustainable solutions.

There is significant occupational gender segregation in the informal plastics industry, with women's participation in the informal waste management sector disproportionately high in many countries.³³ In this context, women may also be working as unpaid family workers or have

General implementation notes:

- **An action that is gender-sensitive or gender-responsive will look very different for different actors.** This is why the following sections are tailored to different value-chain actors. The chief executive officer of a design solutions company might consider becoming a Global Gender Champion and commit to sitting on panels with gender parity. The manager of a plastic waste strategy might systematically employ women from marginalized communities who are often found in the informal economy, adapting work schedules to their needs for flexible work.
- When taking action, an analysis of the gender implications will allow the actors to ensure that **at a minimum they are not contributing to gender inequality**; ideally, the actions can also contribute to dismantling existing inequalities.
- For actions involving measurement such as baseline surveys and monitoring and evaluation, **gender-inclusive metrics and measurement methodologies are essential** to drive informed action and tackle plastic pollution issues at source. Those who are not measured will not be accounted for in the solution. Therefore, it is essential that any metrics and measurement methodologies include systematic sex-disaggregation and gender indicators in the baseline and throughout the lifetime of the data-taking.

limited decision-making authority about how the businesses operate.

Women are also often involved at the lower end of the waste sorting/recycling value chain and their work takes place in municipal waste sites, dumpsites and landfills, while the higher-value businesses in the recycling sector are predominantly owned or operated by men.³⁴ Informal economy work is also precarious and not protected by national laws, and the workers are not eligible for social protection benefits. Female informal-sector waste workers also report that they experience high rates of sexual harassment and the risk of sexual assault.³⁵

Informal-sector waste management work is likely to be reduced significantly in the transition to a more circular plastics economy, and case studies from formalization in several countries indicate that women disproportionately lose out on jobs once formalized, due to various factors.³⁶ Related solutions and new approaches therefore also need to find ways to ensure that they include gender-inclusive mitigation strategies for those who will lose out on employment and income and ensure that the employment and income gains generated are both equitable and do not reinforce existing gender imbalances and inequalities. There is an urgent need to ensure that both women and men working in this sector are able to benefit from the shift to more formal-sector work.

Solution: Make waste management work for women

The first step for policy-makers will be to conduct relevant gender analyses to inform the development of new government policy and regulations related to waste management systems and the plastics industry. This includes using data to determine which types of occupational segregation already exist, why women and men are concentrated in certain occupations and how this affects women's and men's incomes in the sector. It will also include determining:

- What are the gender-specific occupational challenges, hazards or safety issues of working with waste?
- What are the needs of women and men workers in relation to their domestic/household labour roles?

Once a gender analysis is complete, solutions should be proposed that help formalize waste management systems, particularly with regard to the recycling of plastics, and include strategies and measures to ensure that women and men currently working in the informal sector do not lose income or employment due to this transition.

Note that not all solutions and innovations need to be top-down or science-driven. There are many examples of community-based waste management solutions – often initiated by local women's organizations – that have been successfully scaled up and represent viable models that can be applied in multiple contexts. Investing in such schemes has generated a good return for all stakeholders involved. In practice, this means supporting the formalization of existing informal systems and collectives and ensuring that the flexibility needed by women working in the informal economy is maintained in the transition.

When assessing a solution, consider:

- Are there existing community solutions that already do this well or that could be adapted to meet the need?
- Will the proposed solution lead to any changes in female and male employment in either the informal or formal waste management sector? Who will lose or gain income? Will working conditions and input into related decision-making change for either sex?
- What are the non-financial barriers to the adoption of profitable circular economy approaches?
- Are public consultations regarding the location of future waste collection sites organized at times and places that allow both women and men to participate actively?
- Are consultations with the private sector on circular economy-related issues inclusive of all types and sizes of businesses, including small- and medium-sized enterprises (SMEs) and microenterprises, plus businesses owned by women – noting that the majority of women business owners are found in SMEs (combined with microenterprises).
- That related services, such as healthcare, childcare and maternity and paternity leave, are necessary to ensure women can participate equally to men.

During the transition to more formalized waste management work, it is essential to support workers in the informal economy by developing a safe means for informal-sector waste workers to exercise their labour and social rights. SDG 5.4 establishes a target to “recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate”. Much of the informal economy labour borne by women is unpaid family labour. Women are also often in the informal economy in order to accommodate their domestic labour roles. Governments should build awareness of women's social rights (access to education, legal recourse against crime, access to healthcare, etc.) among informal-sector waste workers and ensure that social protection policies reach them.³⁷

Issue: Current guidelines for safe exposure levels to plastics are not gender-inclusive

There is a critical knowledge gap globally in sex-based differential exposures, risks and effects related to plastic. Plastic pollution and exposure to plastic have a differential impact on women's and men's health for two reasons. The first is that women's and men's different gender roles at home and work can lead to them being exposed to different degrees of hazardous plastic waste or

chemical components. Women are often employed in the lower-paid and less-skilled positions in production plants. Thus, even though there are fewer women than men working in the plastics industry, women are more likely to be exposed to working with toxic chemicals. The second reason is that women's bodies generally have a higher proportion of fat and this fat provides a greater reservoir for bioaccumulating and lipophilic (fat-loving) chemicals. This means that women exposed to these compounds often have higher concentrations of stored toxic chemicals in their bodies than men who experience a similar degree of exposure.³⁸

A review of the gendered health impacts of exposure to plastics, especially in production, finds that there are sex-specific health impacts for both sexes. For example, women exposed to plastic pollution at work either before pregnancy and/or during their first trimester can give birth to babies with specific birth defects.³⁹ Bisphenol A (BPA) and other endocrine disruptors can interfere with male sperm in terms of motility, sperm count and concentration. This, in turn, can hamper conception and fertility.⁴⁰ Effects from exposure to these chemicals also appear to be occurring at much lower levels than those established by various governments as being safe for daily exposures to both female and male employees in the workplace.⁴¹

Research studies also show that some plastics components act as endocrine disruptors (EDCs). When there is pre-birth or early-life exposure to certain EDCs it can increase the likelihood of future breast cancer diagnosis (noting that breast cancer affects both women and men). In many studies, the levels of toxic chemicals such as phthalates, BPA and styrene found in male workers who work with PVC pellets or epoxy resin are significantly higher than those found in the general population. This is significant as the levels measured in these workers are at levels in which laboratory animals produce breast tumours and other adverse health effects.⁴²

The Center for Disease Control and Prevention has also reported that women had significantly higher levels of 10 of the 116 toxic chemicals for which they were tested. This exposure extends beyond the workplace, as well, with three of the 10 chemicals in their study found to be phthalates – chemicals commonly found in health and beauty products and plastics and linked to birth defects.⁴³ Safe exposure levels must take sex (biological differences) and gender (social factors such as who uses the product more) into account when considering safety.

Many studies and regulations on plastics risk and exposure and occupational health and safety do not systematically take sex differentials into account. There is a need to revisit the question of safe exposure levels and ensure that related regulations take these gender-based physiological differences into account.

Solution: Ensure occupational health and safety regulations in the plastics industry are gender-sensitive

Regulators should conduct a review of existing policy and regulations related to exposure to plastic and worker and public protection to ensure that women's and men's different sensitivity levels to toxic plastics is considered with regards to safe exposure levels.

- The review should also assess whether and how women and men were considered in studies on which the regulations are based. The main questions of the review should be: *Are existing policies and regulations related to waste management and plastic production based on safe exposure levels data for both women and men? Do the guidelines reflect the different ways in which exposure to toxic plastic components affect women and men? If not, what changes are needed?*
- The answer may also lead to the decision that more data is needed to determine safe exposure levels for women, as women have often historically been left out of health studies. In this case, investing in a literature review or more data collection may be necessary.

Once gender-sensitive safe exposure levels are established, **regulations should be developed, adapted and enforced on occupational health and safety, as well as clear labelling** of personal care, cosmetics, cleaning products and paints containing microplastics. This should include a timeline on the decomposition of all ingredients in consumer products, and transparency about ingredients and procedures throughout the supply chain.⁴⁴

Issue: Behavioural change campaigns that do not take into account gender considerations will be less effective and can reinforce harmful gender norms

The difference in the disposable time women and men have in their off-work hours means that women and men often view domestic waste and its disposal quite differently.⁴⁵ They often have differing views about what they regard as waste.⁴⁶ Research carried out in Sweden shows that women there are more likely to feel concern about their ecological footprint than men (61% women compared to 43% men). They are also more willing to reduce their carbon emissions by buying from companies and producers whose activity mitigates climate change, such as organic food producers.⁴⁷ A recent study in Indonesia, Viet Nam and the Philippines found that overall men in these countries are more knowledgeable about what happens to waste, but that women are more willing to learn about waste management.⁴⁸

Gender-targeted behavioural change campaigns are effective and sustainable because they account for the decision-making roles within the household and target the people most able to effect change.⁴⁹

However, behavioural change campaigns, particularly those related to household domestic labour, may inadvertently reinforce existing harmful gender roles if they don't purposefully seek to dismantle gendered stereotypes about the roles of women and men. Similarly, there is a growing understanding that the labour burden of behavioural change at the household level is often borne by women, who may also be blamed for plastics entering the environment, despite often having no other choice or alternatives.⁵⁰ The extra domestic work generated by change, such as forgoing certain products that had made domestic and care work easier, often falls disproportionately on the shoulders of women, who already bear a larger load of domestic and care work in every country in the world.⁵¹

Solution: Ensure that behavioural change campaigns on household plastic waste are gender-targeted and gender-responsive

Consumer education programmes designed to get members of the public to reduce their use of single-use plastics should incorporate a gender analysis to determine gender roles, norms and relations regarding household decision-making, labour and inequalities. Such an analysis will need to consider other factors such as income, ethnicity, rural/urban location and education levels of respondents as gender norms, roles and relations differ considerably across these population groups. Such analyses will help target the programme to make it more effective and sustainable, taking into account the perspectives, needs and experiences of diverse populations within the country or region. Any education programme, but particularly those that are gender-targeted, must ensure that harmful gender stereotypes are not perpetuated. For a better understanding of what harmful gender stereotypes are, see the UK's Advertising Standards Authority's report Advertising Guidance on Depicting Gender Stereotypes Likely to Cause Harm or Serious or Widespread Offence.⁵² This provides some initial guidance on the types of stereotypes to avoid.

With regards to **campaigns aimed at reducing household plastic waste**, consider:

- What are women's and men's different perceptions of household waste management?
- Who (male or female) makes the consumer decisions regarding which plastic products to purchase and whether to buy goods wrapped in plastic?
- What are the different roles of women and men with regards to household waste management in different contexts (e.g. income levels, rural/urban locations)? How will this be taken into account without perpetuating stereotypes about women's role within the home?
- Who (male or female) has the greatest understanding of and commitment to household

waste management issues related to the disposal and recycling of plastic waste?

- Will the behavioural change increase women or men's workloads? If so, how will this be addressed in the programme to more equally distribute the extra burden of change among women and men?
- How can the change campaign help address the unequal burden of unpaid domestic labour placed on women?

With regard to **plastic waste regulations and change management**, consider:

- What are the attitudes of women and men of different age groups to recycling and the adoption of new waste regulation?
- Which groups of consumers (female/male, at what age, etc.) are most concerned about the generation of plastic waste and are willing to "vote" with their purchasing power to buy only products that are sustainable in nature?
- What are the attitudes of women and men towards any changes needed in consumer behaviour to reduce plastic waste (e.g. use of cloth bags or bringing their own containers for bulk buying, etc.)?
- For women and men, how much unpaid time will any changes in consumer behaviour required to eliminate plastic waste generate? Will this be likely to affect the degree to which male or female consumers adopt new plastic products and related consumer behaviour?
- What are the most effective ways to communicate with female/male members of the public of different ages about plastic waste issues?
- How do women and men in different age groups, locations and ethnic groups and at different income levels prefer to communicate? How can we use this information to inform our marketing and communications strategies?
- How can we adapt campaigns to account for gender differences in order to make the campaign more effective without using or perpetuating harmful gender stereotypes?

Issue: Economic investment and expansion of formal-economy sectors often benefits men more than women due to existing unequal power relations and privileges held by men

Tackling plastic pollution will involve investing in several new areas, including research, waste management jobs, education and enforcement. Traditionally, those who hold the power tend to hire/take into consideration people who look like them or to whom they relate most. Women remain under-represented in public life, which

means that government policy, including budgets, may not take their needs and priorities into account. For example, entitlement to state benefits and pensions are often tied to formal paid employment. Women who work in the informal plastics economy or who do not work full time throughout their lives because they are caring for children, parents or other family members may not qualify for these benefits. At the same time, most governments base their budgets on those sections of the economy on which data is gathered – the formal, paid labour market and census surveys that require an official residence. When producing a budget, a policy-maker will look at these figures and may ignore other relevant factors because the data is missing. However, estimates of the unpaid economy show that it is worth at least as much as, if not more than, the paid economy. But unpaid caring, cleaning, child-rearing and domestic food production are all unmeasured and may therefore not be considered when policy is made.⁵³

This is particularly relevant to the plastics value chain, which is highly segregated by gender, not only in the formal vs. informal economy, but also at the sector and occupational levels. Women's unpaid labour, and how that affects their involvement in plastics consumption and waste as well as their paid labour in the plastics value chain, needs to be assessed and included in investment and budgeting.

Industry: plastic producers and users

Issue: A lack of women in diverse roles in plastics production and the oil and gas industry is perpetuating gender inequality, and reducing profits and innovation

For companies, hiring more diverse women will lead to more innovation and allow them to better meet the needs of customers, and make healthier choices and higher profits. Women represent around a third of employees in the plastics industry⁵⁵ and a fifth of employees in the oil and gas industry⁵⁶ – a significantly smaller share of the workforce than in almost any other sector. Within oil and gas and plastics manufacturing, but also within industries that may use plastic packaging and products, women are also heavily under-represented in higher occupational levels and on boards. In Latin and South America, only 7% of company board seats are held by women. Similarly, just below 8% of board members in Asian companies are women, while in the Middle East it is slightly higher at 11% and in North America, 15%. Africa, Australasia and Europe have the highest representation of women on company boards, with 19%, 21% and 23% respectively.⁵⁷ Women's lower levels of representation in top decision-making positions means that decisions may not be informed in a balanced way by both women's and men's priority needs, capacities and potential solutions to problems.

Solution: Set job quotas and implement gender-responsive budgeting to ensure that financial resources and opportunities benefit women and men equally

Where new jobs are created, ensure that women and men have equal opportunities and are equally represented at all occupational levels. For example, an increase in resources to enforce violations of environmental regulations related to the release of plastic waste into rivers, oceans and wild dumps by private-sector companies should ensure that an equitable number of enforcement positions are held by women and men through strict quotas at all occupational levels.

Adopt gender-responsive budgeting for the budget allocated to implementing a plastic pollution policy.⁵⁴ Gender-responsive budget initiatives are not “budgets for women”, although they will inevitably examine spending on services specifically aimed at women to see if they meet women's needs. Gender-responsive budgeting also does not advocate dividing budget expenditure 50/50 between women and men. Instead, the budget is examined from a gender perspective, to analyse how it will meet and respond to the different needs of everyone, including women and men, girls and boys and gender-diverse persons. They can also involve assessment of the intersection of women and men, girls and boys with other dimensions (such as by age, wealth quintile or ethnicity).

Considering women are more likely to prioritize health and the environment⁵⁸ and make greener choices,⁵⁹ the added value of more women in these industries may be higher prioritization of corporate social responsibility, greener investments and design solutions, and a greater prioritization of health.

More women in diverse roles is also good for business. According to a 2019 report by the International Labour Organization (ILO), The Business Case for Change, “Most companies of all sizes around the world report that 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.”⁶⁰ The same principle holds true for diversity of all kinds, including race, ethnicity and disability. The more a team reflects society, the better placed it is to meet the needs and expectations of society.

Solution: Increase diversity at all levels of the company⁶¹

Strengthen the inflow of diverse women

- Promote STEM programmes among girls and young women, and offer scholarships and internships to high-potential female students, particularly those from marginalized communities.

- Establish clear recruiting targets for women and men, and develop appropriate key performance indicators (KPIs) for attracting and retaining women.
- Consider outside-the-box approaches to recruitment. Actively recruit in diverse female-dominated spheres and associations, and at linked events. Form bonds with associations for people with disabilities and minority groups and advertise for positions through them.
- Make job postings more inclusive. Focus job descriptions on the expectations of the role and remove female-alienating language.^{62, 63}
- Ensure that bias and systemic barriers do not prevent diverse women candidates from entry.
- Establish clear evaluation criteria. Evaluation tools should also be easy to use and designed to gather objective, measurable input.
- Put evaluators through unconscious bias training, prioritizing entry-level positions. Candidates tend to have shorter track records early in their careers, and evaluators may make unfair, gendered or discriminatory assumptions about their future potential.
- Identify and remove structural barriers that thwart women’s advancement in the company, particularly those from marginalized communities.
- Develop a larger number of visible and diverse female role models in the industry’s senior ranks.

Engaging and supporting women workers

- Ensure that diverse women are aware of and are offered equal career advancement opportunities such as leadership training, sponsorship and high-profile assignments.
- Encourage women, and in particular those from marginalized communities, to make their career goals clear.
- Create more flexible career paths.
- Insist on the development of separate and sufficient facilities and accommodation for women working in field roles. Provide reasonable accommodation for the needs of women with disabilities.
- Actively dismantle enterprise cultures that require “anytime, anywhere” availability, which disproportionately affects women, given their household and family responsibilities.
- Insist that every executive and senior manager mentors at least one talented female employee.

- Make a firm and clear policy on sexual harassment, discrimination and bullying in the workplace and ensure a safe way to issue complaints that will not put the complainant’s career at risk.
- Actively encourage greater flexibility in women’s careers, especially in the early stages. This means specific policies embracing flexi-work, telework, part-time work, job-sharing, generous maternity and paternity leave, and a welcoming environment post-maternity leave, including pumping/breastfeeding facilities and time allocation. Encourage both male and female employees to take advantage of policies that encourage a better work-life balance.
- Give diverse women influential roles in developing those policies.
- Make gender equality and diversity training mandatory for all employees, especially leaders.

Increase women’s representation in senior leadership

- Work with women employees to create upward mobility goals and the necessary support to achieve them.
- Broaden the criteria for inclusion on the list of high-potential candidates.
- Apply uniform standards when making promotion decisions.
- Adopt an inclusive, gender-neutral approach to advancement, coupled with quantitative targets that support growth in diverse women’s representation.
- Ensure that there is demonstrated commitment and accountability to gender balance and diversity from the top of the organization, especially the chief executive officer. This can be demonstrated by the chief executive officer signing on to the International Gender Champions and other similar initiatives and setting measurable targets.⁶⁴

Issue: Safe exposure levels to plastics are not the same for women and men, and safety measures often do not reflect women’s greater impact at lower exposure levels

Plastic pollution and exposure to plastics have a differential impact on women’s and men’s health. Employees who have to work directly with plastics and the chemicals needed to produce plastic products must not be exposed to harmful levels of toxic chemicals and plastics that are carcinogenic, mutagenic or reprotoxic substances and EDCs from plastics manufacturing and plastic additives.⁶⁵ See policy-makers/regulators section for an overview of the various disparities for women and men.

Solution: Review safety measures, redesign plastic production processes, substitute hazardous chemicals, incorporate green chemistry

- Review company safety measures to ensure that the policies are based on the most up-to-date studies on safe exposure levels for both women and men.
- Redesign plastic production processes that expose female and male workers unnecessarily,

Innovators

Issue: Sustainable solutions to plastic pollution such as plastic alternatives need to take better account of the people who disproportionately purchase/use them

At the design and use level of the plastics value chain, gender equality is critical to designing sustainable alternatives. Due to prevailing gender norms in many cultures, the majority of household consumer decisions globally are made by women. Diverse studies have shown that women and men often have significantly different attitudes regarding environmental and ethical practices. Women in many cases are more likely to prioritize the environment and make greener choices when empowered to do so.⁶⁷ Any new plastics (or alternative) products consumed at the household level therefore will need to consider women's priorities and preferences as consumers and the people who make financial decisions with regard to household-level waste disposal. *The Business Case for Change* report by the ILO (2019) found companies with equal opportunities and gender-inclusive cultures are almost 60% more likely to experience greater creativity and innovation, yet women are still significantly under-represented in the STEM fields, as well as in the industrial design field.⁶⁸ If women are missing from design-side solutions with regard to plastic packaging and single-use plastics, new designs will be less innovative, and may inadvertently miss important gender-based factors that influence consumer behaviour and decisions.

Solution: More diverse innovators/designers and gender-sensitive market and product research and design

Companies engaged in design solutions and innovation should **create diverse teams and consult with diverse voices** throughout the design process in order to ensure that the solution will be effective and sustainable.⁶⁹ See diverse recruitment resources in the plastic production companies section just above.

Design solutions should undergo a gender analysis to ensure that the solutions work for the people who will be using them and do not perpetuate harmful gender roles or create extra work for women, who already bear the disproportionate burden for unpaid domestic labour. Solutions should take into account:

with a move towards automation, local exhaust systems, confinement, and wet methods to reduce dust or airborne particles.

- **Work towards safe substitution of hazardous chemicals** where possible.
- **Incorporate green chemistry in corporate procurement** and focus on reducing the use of toxic plastics and informed substitution principles in purchasing practices.⁶⁶

- Who (female/male) is responsible for purchasing, using and/or disposing of the new solution proposed?
- Who (female/male) will be the end users of any new plastic products or similar function products made from alternative materials?
- How will these end users' (female/male) use of these products influence their design and marketing?
- What are female/male attitudes towards pricing regarding any additional costs needed to produce waste-free or fully recyclable products?
- How much unpaid time will the proposed solutions require from women and men in specific contexts?
- Will the solutions increase women's or men's workloads? If so, how will this be addressed in the solution design?
- How will the answers to these questions affect the different solutions developed to reduce plastic waste?

Prior to marketing, consumer and market studies should be undertaken that take both female and male consumer behaviour and priority needs related to plastic-based products and use into account. The results of these analyses should be used to help **develop gender-specific consumer and marketing strategies** (where needed). When developing a marketing strategy that is gender-targeted, it is important to consider:

- How will these solutions be marketed to potential customers/users? Does marketing reinforce harmful gender norms? Can marketing help dismantle harmful gender stereotypes and norms and normalize more equal sharing of the burden of unpaid domestic labour?
- For a better understanding of harmful gender stereotypes, see the UK's Advertising Standards Authority report *Advertising Guidance on Depicting Gender Stereotypes Likely to Cause Harm or Serious or Widespread Offence*.⁷⁰ As noted earlier, this provides some initial guidance on the types of stereotypes to avoid.

New products made with more sustainable materials or with genuinely compostable and safe plastics **need to be tested by both male and female consumers** as a part of their development and subsequent marketing.

- This includes personal care, cosmetics and cleaning products that are disproportionately

used by women. Other products, such as industrial paint, may be used more by men in some countries.

- Safe exposure levels must take sex (biological differences) and gender (social factors such as who uses the product more) into account when considering safety.

Civil society and others in the plastic pollution action space

Issue: Currently, few anti-plastic pollution actors transparently and systematically include gender considerations and analysis in their platforms and actions

The plastic pollution action space is science-driven and dynamic, but a brief literature review from the online resources of several leading anti-plastic pollution actors indicates that gender has not been mainstreamed in data, reporting, solutions or communications.⁷¹

Gender equality is not one action alongside others; gender considerations should be integrated into all actions by all actors, resulting in gender equality.

Solution: Anti-plastic pollution actors systematically mainstream gender into their work, making actions and solutions more effective and sustainable

In order to mainstream gender and diversity considerations into programmes and processes, **following a guide and retaining some gender expertise** are a good place to start. There are currently no comprehensive resources on how to undertake gender mainstreaming specifically for the plastic pollution action space. However, there are resources aimed at gender mainstreaming in environmental management, and these are broad enough to be directly relevant to the plastics sector.⁷²

One essential part of gender mainstreaming is to **conduct a relevant gender analysis** to inform planning, implementation, and monitoring and evaluation in actions to support the transition to a gender-inclusive circular plastics economy. These gender analyses will help inform the important gender-based issues for both women and men in the organization's sphere of action. Principles 1 and 2 of this guidance provide a good start for a gender analysis:

- Disaggregate collected and shared data by sex as well as other variables as appropriate. Include gender indicators in the collection of data where relevant.
- Once you identify a sex-based inequality in terms of risk, access, exposure, benefit or outcome, undertake an analysis of laws, policies, norms and practices to identify the causes of the inequality.

There are many tools online that can guide a more comprehensive overview of how to undertake a gender analysis. Searching for one that is specific to the organization's goal (project planning and implementation, behavioural change campaign, etc.) will often lead to more specific resources.⁷³

Establishing a clear gender strategy that indicates not only measurable gender equality objectives but also the actions needed to meet the objectives ensures that gender mainstreaming will not be a one-off exercise but will be embedded for the whole course of the organization's actions. Objectives should be both programmatic (with a gender equality objective in its sphere of work) but also institutional: How will gender equality be embedded in processes to ensure that the organization is gender-equal, and that gender equality work will continue to be prioritized in the programmatic work for the duration of the work? All objectives and actions should include gender-sensitive monitoring indicators and adequate resources to fund the proposed actions. An example of a gender strategy in the plastic pollution action space is the GPAP Gender Strategy.

Issue: Financing, investing and access to capital are harder to access for women, and particularly women from marginalized communities

Tackling plastic pollution will involve investing in several new areas, and financing new solutions, including research, waste management jobs, education and enforcement. There are significant gaps in the research surrounding the factors that limit the access of specific marginalized communities, such as women in the lowest wealth quintiles and in rural areas, to the opportunities and services provided by the financial sector and other forms of financing, compared with that of individuals from privileged communities in society. One study of 98 developing countries found that the significant gender gaps in using financial services were attributed to legal discrimination against women (legal restrictions in their ability to work, head a household, choose where to live and receive inheritance) and gender norms (the level of violence against women and the incidence of early marriage for women) to explain some of the cross-country variations in access to finance for women.⁷⁴ Another 2011 study, covering nine countries in sub-Saharan Africa, examined the gender gap in financial services and found that the

lower use of formal financial services by women in these countries could be explained by gender differences in education and income levels, formal employment and whether they are the head of the household.⁷⁵ A 2008 study on the Middle East and North Africa region noted that access to capital is one of the biggest challenges faced by women in this particular region.⁷⁶ Where women cannot access formal capital, they often need to rely on informal sources of finance, which often have high rates of interest.⁷⁷

Achieving equality and financial inclusion is an important way of unlocking resources for economic empowerment and encouraging growth, by enhancing access to economic opportunity for wider segments of society.⁷⁸

Solution: undertake targeted investments by seeking out and systematically prioritizing women- and community-led projects, particularly those led by women from underfunded communities

Investors, funds and development banks can undertake targeted investments by seeking out and systematically prioritizing women- and community-led projects, particularly those led by women from underfunded communities. Prioritizing gender-responsive projects that benefit disproportionately affected communities ensures not only that funders benefit less-represented project implementers but also that the projects help dismantle the harmful gender and cultural norms that led to a lack of representation in the first place.

There are a number of ways to ensure gender is mainstreamed within funding:⁷⁹

Ensure that those allocating funds are representative of the diversity of women and men in the society within which you are working and that they have some understanding of gender mainstreaming. For example, ensure that:

- An equal number of women and men⁸⁰ are represented in the different parts of the allocation process
- Decision-makers in the allocation process have been instructed and have adequate knowledge with respect to gender and gender equality issues
- Diverse women and men have the same power and influence in the different parts of the allocation process

Ensure that women and men benefit equally from funding and that underfunded communities are prioritized for funding. For example, ensure that:

- An equal number of women and men benefit from the allocated grants. This entails considering not only how many women and men receive funding but also how many women and men benefit within implementing organizations and within the project itself.
- Women and men are allocated equal amounts of money through the grants. While grants may differ depending on the type of project or implementer, it is essential to be conscious that larger grants are not systematically granted to one gender.
- The gender distribution of approved grants is similar to the gender distribution of submitted requests.
- Applicants of the under-represented gender are given priority in cases where several applications are of similar quality.
- Consideration is given to prioritizing funding where the outcome of the projects granted funding contributes to increased gender equality.

Academia

Issue: A lack of research and evidence on plastics related to sex and gender and their intersection with other identity factors⁸¹

There are gaps in knowledge regarding a) the intersection of sex and gender with other identity factors and b) how these intersecting identities affect exposure, risk and impact from plastic pollution; how plastics are purchased, used and discarded; participation and benefit in the plastics value chain; and policy decisions related to plastic pollution and transitioning to a circular plastics economy. More understanding is needed of the extent to which various intersecting identity factors relate to, affect or are a factor in a successful transition to a circular plastics economy.

Solution: Academic research is conducted into the plastics value chain, plastic pollution and the transition to the circular economy as they relate to the intersection of sex and gender with other identity factors.

Academic institutions/departments should identify the key research gaps with regard to the intersection of sex/gender with other identity factors and how they relate to the plastics value chain, plastic pollution action and what is needed to make the transition to a circular plastics economy.

The fact that there are gaps in knowledge should be disseminated to academics, scholars and researchers working in diverse relevant areas of work. Funding PhDs in this area is also a way of ensuring that research is undertaken. Institutions can work with the public, private and civil society

sectors to raise funds for a call for research proposals to fill these critical knowledge gaps.

Institutions can also **hold information and dissemination sessions on the results of the research findings** from the call for research proposals. Institutions should also ensure that **any research proposals include a gender-sensitive, intersectional research methodology** as part of the overall methodology prior to awarding them funding.

Additionally, institutions can **develop intersectional gender methodology guidelines** to help researchers integrate gender-sensitive methodology into research studies related to the transition to a circular plastics economy. There are many resources on how to undertake legal research from an intersectional approach. The Gender-Based Analysis Plus (GBA+) Research Guide from the Canadian government, for example, provides guiding questions that can assist in designing, undertaking or evaluating research, beginning with the development of the research question itself.⁸² Some important guiding principles of intersectional research include:⁸³

- **Gender ≠ women.** (See “A note on terms” in the introduction.) Gender also does not equal simply women and men. Gender is a social construct that ascribes to an individual roles, responsibilities, norms, aptitudes, behaviours and expectations. In reality, gender roles are affected by a variety of other identity factors including age, class, race, ethnicity, religion and ideology.
- Does your research look at the situation of women, men and gender-diverse people?
- All women are not the same; all men are not the same; all gender-diverse people are not the same. Does your research look at diverse groups of women, men and gender-diverse people?
- **Avoid oversimplifying diversity.** Does your research consider differences among diverse groups of women, men and gender-diverse people? It is important to understand the complexity of different aspects of identity or different socioeconomic factors. For example, research that does not distinguish between the experiences of diverse ethnic groups in waste management could mask important differences in benefit and needs.
- **Individual versus household-level analysis.** Does your household-level research also consider individual members and account for intra-household inequalities? Analysis and information gathered at the household level can hide intra-household gender differences and dynamics, i.e. one spouse/partner may spend much more time than the other on household plastic purchasing, use and disposal and

gendered decision-making power may be very different depending on location, income level or ethnicity, for example.

- **Avoid overgeneralizing/overspecifying.** Does your research ensure that it does not take one gender or population group as the norm? Overgeneralization occurs when a single group is considered the norm for all: i.e. a study of only one sex presumes that findings apply to both. Overspecificity occurs when research is reported in such a way as to make it impossible to determine whether it applies to one or both sexes. Many historical health studies, including those on safe plastic exposure levels, included more men than women or only men as participants, but presented the data as universal. To combat this, all population-related data should be collected and disaggregated by sex and other relevant identity factors. This disaggregated data should be analysed to determine if there are any significant differences in research findings between male and female research subjects and between the other identity factor as related to the research questions. To answer gender-specific questions, data collection methods should include the use of both qualitative and quantitative methodologies.
- **Question data.** Does your research consider the existence of bias in the data sources used or other resources consulted? Most data (quantitative or qualitative) is “constructed”, i.e. shaped by the categories used to gather and interpret it, and – in the case of human subjects – by the way the research subject interprets and decides to react to what is being asked. In a large-scale survey questionnaire, this “social construction” (so called because of the influence of broad social norms on how we think about data) occurs largely during questionnaire design.

Institutions can also **provide training to researchers on how to conduct gender-sensitive research and gender analyses** within the context of a larger-scale research question related to the plastics value chain, plastic pollution or the circular plastics economy. This would include information about the essential questions to ask to ensure a credible gender analysis and how to collect relevant qualitative data to support the gender analysis in different contexts.

Contributors

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Endnotes

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- 63 Apps such as Textio Hire can be useful as they uses data science to highlight problematic words or phrases in job descriptions and suggest language that will attract more diverse applicants. Other recruiter tools include: Toggl Hire, a piece of skills-based screening software (through an anonymous exam) designed to provide an initial list of the candidates with the most potential, without looking at subjective factors such as age, gender, education and previous work experience; GapJumpers, which asks candidates to provide anonymous answers to assignments related to the roles for which they are applying; Blendoor, a merit-based job-matching app; Entelo Diversity, a diverse candidate-sourcing platform; pymetrics, a screening phase of hiring in which applicants spend about 20 minutes playing behaviour-based games to measure inherent traits, and if their results match the required profile of a certain position, they can move on to the next round; Talent Sonar, a “blind” resumé software that also helps hiring managers to develop job postings that will attract a wide range of candidates, and structure job interviews that focus on the candidate’s specific qualifications.
- 64 International Gender Champions, <https://genderchampions.com/> (link as of 29/7/20).
- 65 Adapted from Women Engage for a Common Future (WECF), “Women Engage for a Common Future, Plastics, Gender and the Environment”; WECF (a), “Gender Dimensions of Hazardous Chemicals and Waste Policies under the Basel, Rotterdam and Stockholm Conventions”, Utrecht: WECF, 2017.
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- 67 Zelezny, Poh-Pheng and Aldrich, “New Ways of Thinking about Environmentalism: Elaborating on Gender Differences in Environmentalism”; Kallgren, Reno and Cialdini, “A Focus Theory of Normative Conduct: When Norms Do and Do Not Affect Behaviour”; Rätty and Carlsson-Kanyama, “Energy Consumption by Gender in Some European Countries.
- 68 Walker, A., “Women in Industrial Design: Where My Ladies At?”, *GOOD*, 8 November 2010, <https://www.good.is/articles/women-in-industrial-design-where-my-ladies-at> (link as of 29/7/20).
- 69 Consider not only gender but diverse women and men, including people with disabilities, older and younger persons, those with differing income, educations levels and religious and ethnic backgrounds, both rural and urban.
- 70 Committee of Advertising Practice, “Advertising Guidance on Depicting Gender Stereotypes Likely to Cause Harm or Serious or Widespread Offence”.
- 71 There are several examples of excellent gender-specific reports from, for example, Women Engage for a Common Future and the GA Circular/Ocean Conservancy.

- 72 An important example is the United Nations Industrial Development Organization's "Guide on Gender Mainstreaming Environmental Management Projects", 2015, https://www.unido.org/sites/default/files/2015-02/Gender_Environmental_Management_Projects_0.pdf (link as of 29/7/20). This resource includes a step-by-step process for mainstreaming, as well as templates for conducting regional-, country- and sector-level gender analysis plus model codes of conduct, trainings and terms of reference for gender experts.
- 73 See, for example, this gender analysis tool from the European Institute for Gender Equality: <https://eige.europa.eu/gender-mainstreaming/methods-tools/gender-analysis>; and the guide from the United Nations Development Programme, "How To Conduct A Gender Analysis: Guidance Note for UNDP Staff" (for staff but applicable to a wider audience), https://info.undp.org/sites/bpps/SES_Toolkit/SES%20Document%20Library/Uploaded%20October%202016/UNDP%20Guidance%20Note%20how%20to%20conduct%20a%20gender%20analysis.pdf; Annex III and IV of the "Guide On Gender Mainstreaming Environmental Management Projects" from the United Nations Industrial Development Organization, https://www.unido.org/sites/default/files/2015-02/Gender_Environmental_Management_Projects_0.pdf (links as of 29/7/20).
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- 78 Morsy, H. and Youssef, H., "Access to Finance – Mind the Gender Gap", European Bank for Reconstruction and Development, 2017, <https://www.ebrd.com/documents/oce/access-to-finance-mind-the-gender-gap.pdf> (link as of 29/7/20).
- 79 Compiled and adapted from: Swedish Secretariat for Gender Research, "Gender Mainstreaming of the Allocation of Grants", 2014, <https://www.includegender.org/wp-content/uploads/2015/06/Gender-mainstreaming-of-the-allocation-of-grants-pdf.pdf> (link as of 29/7/20).
- 80 As discussed previously, gender equality goes beyond the concepts of women and men. The most privileged women in society may be more represented than the least privileged men in society. It is important to ensure that diverse women and men, particularly from historically marginalized communities, are proportionately represented.
- 81 Identity factors such as ethnicity, age, disability, religion, sexual orientation, etc.
- 82 Government of Canada, "Gender-Based Analysis Plus, GBA+".
- 83 The list is adapted from the GBA+ Research Checklist from the Canadian government, "Gender Based Analysis Plus, GBA+".



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