



Gender Responsive Standards

Guidance for ISO and IEC
technical committees

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1. General

On 19 May 2019, ISO and IEC signed the UNECE [Declaration on Gender Responsive Standards and Standards Development](#), pledging to make the standards they develop and the standards development process they use gender responsive. The UNECE Declaration recognizes that women are not currently as well-served by standards as men. The declaration encourages standards development organizations of all types to create gender responsive standards (GRS) and achieve gender balance in their standards development environments. The Declaration and its implementation aim to provide a practical framework for standards bodies and standards developers seeking to make the standards they develop, and the standards development process they follow, gender responsive.

The Declaration is part of the [UNECE Gender Responsive Standards Initiative \(UNECE GRSI\)](#). Established in 2016, the Initiative has the threefold “objectives of: (i) strengthening the use of standards and technical regulations as powerful tools to attain SDG 5 (Achieve Gender Equality and Empower all Women and Girls); (ii) integrating a gender lens in the development of both standards and technical regulations; and (iii) elaborating gender indicators and criteria that could be used in standards development.”¹

In response to the UNECE Declaration, and as part of ISO and IEC’s respective gender action and diversity plans, both organizations partnered under the stewardship of the Joint Strategic Advisory Group (JSAG) to develop guidance to help technical committees ensure they are developing GRS.

¹ UNECE Gender Responsive Standards Declaration, https://unece.org/DAM/trade/wp6/AreasOfWork/GenderInitiative/UNECEGenderDeclaration_English.pdf

This guidance document aims to provide standards developers and all technical committee (TC, SC, PC, SyC) and working group (WG) participants with important considerations and questions to aid them in ensuring the standards they are developing are gender responsive. Given the breadth and depth of standardization, there is no singular solution to ensuring that a standard is gender responsive. As such, this guidance is intended to be the first in a series of joint ISO-IEC communications, training and technical policy products on GRS.

While not mandatory, the use of this guidance document and the attached gender responsive standards assessment form is strongly recommended for all standards that involve interactions with humans.

2. What are gender responsive standards (GRS)?

Gender responsive standards are developed with consideration of how gender impacts the content, requirements, and application of standards. They ensure that both women's and men's needs, experiences, and concerns are an integral dimension in the design and performance of the product, process, or service undergoing standardization. In sum, a gender responsive **standard is a standard that reflects an understanding of physical differences and gender roles, and equally addresses the needs of women and men.**

GRS encompasses both sex and gender. There are biological realities that standards developers need to consider, as well as social and cultural constructs defining roles / expectations for women and men. Both the biological and social / cultural dimensions have implications for standards that must be addressed.

As noted in the UNECE guidelines for developing GRS “to understand how gender and sex can impact a standard, we can consider the example of cookstoves. In 2018, ISO released new guidance on cookstoves. ISO collaborated with the [Global Alliance for Clean Cookstoves](#) to improve safety and efficiency.² Cookstoves fueled by solid fuels (i.e. coal, dung, etc.) and kerosene are a major contributor to indoor pollution. Indoor pollution is estimated to be responsible for 3.8 million premature deaths annually.³ Women – and children – are disproportionately impacted by household pollution.⁴ Due to gendered cultural norms women often spend more time on food preparation, increasing their exposure to harmful pollution. Moreover,

2 ISO, [New Guidance in the Cookstoves Series](#), 2018

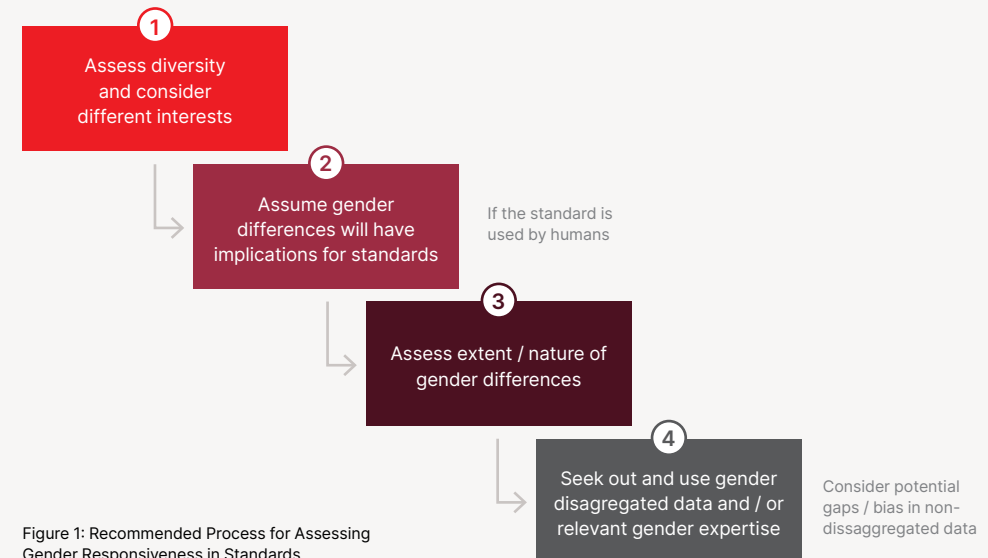
3 WHO, [Household air pollution and health](#), 2018

4 WHO, [Household air pollution and health](#), 2018

research has shown that due to biological differences pollution poses a greater health threat to women than men.⁵ In the case of cookstoves, sex and gender differences put women at greater risk”.⁶

3. What is your role as a standards developer in GRS?

Collectively TC / SC / PC / SyC / WG leadership teams have an important role in shaping the direction / scope of standards and guiding the development process and this have a particularly important role to play in ensuring that standards are thus gender responsive, but ultimately, all participants in the process have a role to play by considering questions of gender responsiveness throughout the standards development process. An early assessment at the proposal stage using the attached form and ongoing assessment of a standard's differential impact on women and men throughout the standards development and review process, ideally informed by sex-disaggregated data, can promote more equal benefits from standardization for women and men.



5 Clougherty J. E. (2010). A growing role for gender analysis in air pollution epidemiology. *Environmental health perspectives*, 118(2), 167–176. <https://doi.org/10.1289/ehp.0900994>

6 https://unece.org/sites/default/files/2022-01/Guidelines%20on%20developing%20gender%20responsive%20standards%20Advanced%20Copy%20v0_1%20220119.pdf

FIRST, assess the diversity of thought in the TC / SC / PC / SyC / WG, consider the different interests within the drafting group

SECOND, assume there ARE implications because of gender differences

To ensure standards are gender responsive, it is essential to start with the early premise that there are gender differences and that this will inherently have implications for the standard under development. This premise is essential in determining whether a standard functions, performs, and / or differentially impacts women and men. By understanding potential gender differences in a standard at the proposal stage, the content of the standard throughout the working draft, committee and enquiry stages can proactively account for these differences to ensure equivalent safety and efficacy for women and men.

Some of the most common physical or physiological differences between men and women that would merit consideration by standards developers include:

- Grip strength
- Physical dimensions / body size
- Hormones
- Skin thickness
- Percentage body fat
- Body fat percentage
- Voice recognition
- Centre of gravity
- Pregnancy
- Facial recognition
- Gender differences in ageing

Beyond the physical characteristics, standards developers should also consider differences between women and men because of socially constructed roles / expectations such as:

- Power / authority dynamics in the home and public domains (i.e. who is most likely to be seen as / be the decision-maker; who is most likely to be / be seen as the decision-maker; who is most likely to have / be seen to have control... etc.)

- Work environments (i.e. who is most likely to be occupying more junior roles, are there roles typically seen as women's or men's roles, gender inequalities in leadership, promotion, recruitment, will the structure / terms and conditions of work equally enable access to work for both men and women etc.)
- Behavioural / cultural differences, (i.e. dress codes, access to certain services such as banking / financial or education, freedom of movement, etc.)
- Social responsibilities (i.e. elder care, child care, etc.)

Socially constructed roles and expectations will vary within and between countries, regions, socio-economic groups, religious groups, etc. Standards developers should strive to identify and understand the implications of these types of gender differences which are based on culture, geography, etc., while maintaining a global relevance perspective by seeking relevant knowledge or expertise and / or ensuring the committee / group membership is sufficiently diverse.

By considering the questions below and the characteristics above, standards developers can assess and determine how to equitably address the implications of gender differences across product, process and service standards.

- **Question 1:** Is the product, process or service that is the subject of standardization going to be used by people and / or impact people either directly or indirectly?
- **Question 2:** Is the product, process or service that is the subject of standardization identified to be used in another standard?
- **Question 3:** If yes to question 2, does that standard have a product, process or service that will be used by humans?

If YES to question 1, or YES to question 2 and question 3, the standard in question has potential gender implications.

THIRD, consider the potential gender implications, accounting for both the different physical and social aspects of gender and determine whether, for the standard in question, the gender implications require:

<p>Significant action to ensure the standard under development is gender responsive.</p>	<p><i>There are significant gender differences which may have relevance and implications to the standard under development and will require concerted action to ensure equitable outcomes for women and men</i></p> <p><i>Examples: personal protective equipment, voice recognition software</i></p>
<p>Some action to ensure the standard under development is gender responsive.</p>	<p><i>There are some gender differences which may have relevance and implications to the standard under development and will require some action to ensure equitable outcomes for women and men.</i></p> <p><i>Examples: machine safety, financial services</i></p>
<p>Minimal action to ensure the standard under development is gender responsive.</p>	<p><i>There are limited gender differences which may have relevance and implications to the standard under development and will require minimal action to ensure equitable outcomes for women and men</i></p> <p><i>Examples: laboratory equipment, plastics</i></p>

What is to be avoided is gender blindness, which is the failure to consider the implications of the physical and/or social differences between women and men.

FOURTH, seek out and employ sex disaggregated data

A vast amount of “data,” in the most general sense of the word, is used in the development of standards. The data can come in the form of knowledge, statistics, research, illustrations, etc. Data is critical in the standards development process. Standards developers need to be aware that data can contain gaps and biases. It is imperative for committee members to understand the data they are using and its limitations.

Sex-disaggregated data is collected and tabulated separately for women and men. It allows for the measurement of differences between women and men on various dimensions (i.e. social, economic, physical, etc.) and is one of the requirements in obtaining gender statistics. However, gender statistics are more than data disaggregated by sex. Having data by sex does not guarantee, for example, that concepts, definitions and methods used in data production are conceived to reflect gender roles, relations and inequalities in society.

By considering the questions below, standards developers can assess the data and develop strategies to critically analyze the required data to ensure its appropriate use and any potential limitations.

- **Question 4:** Is there sufficient data to understand the gender differences of end users of the standard under development?
- **Question 5:** If no, what data is missing and how will the TC / SC / PC / SyC/ WG access such data?

Sex-disaggregated data may need to be further disaggregated: Women and men are not homogenous groups. When considering sex, it is important to note if other variables need to be considered. For example, while on average men are taller than women, the average height of women and men varies across ethnicities. Similarly, while on average smoking rates are higher for men than women, women of low socioeconomic status (SES) have higher smoking rates than men with high SES.⁷ By ignoring other relevant factors sex-disaggregated data can be misleading.

⁷ See for example: https://www.cdc.gov/pcd/issues/2019/18_0553.htm

4. What needs to be considered when using sex-disaggregated data?

4.1 General

It is important to note that it can be a challenge to find sex-disaggregated data. There are sources that will include population level data that is also sex-disaggregated (i.e., World Bank, OECD, WHO, national statistical agencies). Population data is valuable since it gives a more complete picture of what is happening, however, when population data is not available or not specific enough for the needs of the standard being developed then alternative sources of data / knowledge will need to be included in the process.

When using data, including gender data, it is important to understand the quality (validity and reliability) of the data.⁸ This is impacted by how it was collected, measured, and presented. Data quality will have implications for the usability of the data. In using data to inform standards development the following should be considered:

4.2 Processing/analysis validity and quality

Who processed and or analyzed the data and how? Did they have certain expected results in mind or were they objective when processing the data? Who processes and analyzes data can have implications not only on its quality and validity but also on whether or not accurate, unbiased conclusions or decisions can be made using the data.

4.3 Source

Refers to where the data comes from and who collected it. Key considerations are how and where the data was collected. If data came from an online survey, this will impact who was surveyed, as respondents would need to have internet access, there might be other characteristics that would distinguish the type of person that would respond to an online survey (i.e. age, education, income, etc.). Who collected the data? Are they considered a “neutral” party, or could they be seen as “partisan”? For example, during elections news organizations as well as political action parties collect data, it is recognized that the data can be biased, depending on the source.

⁸ For a more thorough review of data quality please see for example: DAMA-UK (2013). The six primary dimensions for data quality assessment. October 2013 or Black, A. & van Nederpelt, P. (2020). Dimensions of Data Quality (DDQ). DAMA NL Foundation.

4.4 Face validity

Does the data measure what it is purported to measure? In other words, is it obvious that what is measured is capturing what it is intended to measure? This is an important consideration because at times something can be measured in multiple ways, for example when measuring education level of a population, options include, but are not limited to, average years of schooling, proportion of the population with post-secondary education. At times a choice needs to be made about which indicator to use and that requires consideration of the research question and data availability.

4.5 Sample size

The number of data points collected. A key consideration when determining the appropriateness of the sample size is comparing it to the relevant population size. In general, the larger the total population the larger the sample size should be. In general, it is risky to draw conclusions based on small sample sizes since they are less likely to be representative of the population as a whole.

4.6 Representativeness of the sample

Related to sample size, the sample must also be representative of diversity within the population of study. If the reference population from which the sample is drawn has specific characteristics those should be represented in the sample. For example, if the population of interest varies by age then it is important to ensure that that is reflected in the sample.

4.7 Timeliness

It is important to know when the data was collected since this may impact usability. For example, relying on Body Mass Index (BMI) data from 50 years ago would be inappropriate since obesity rates have increased over the time frame. The data would not give a good picture of the current reality.

4.8 Data has limitations

Understanding those limitations is important to effectively using the data and making sure that assumptions or data gaps / biases are identified to determine if / how the data should be used. For example, if the data was collected on a sample of young adults however, it is intended to be used to in a standard which impacts seniors as well as young adults, however it is intended consideration would need to be given to how age differences might need to be addressed differently and if more data will be required. Any limitations in addressing differences because of age should be clearly disclosed along with any recommended mitigation strategy.

5 What if sex-disaggregated data is not available?

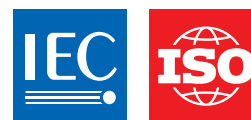
Given the specificity and limited scope of individual standards, it is highly probable that sex-disaggregated data may not be available. When that is the case, standards developers can consider the following options:

- Collect sex disaggregated data

If possible, the ideal solution would be to collect sex disaggregated data to inform the standards.

- Use data that is not sex-disaggregated

If additional data collection is not an option, then standards developers can use existing data considering the limitations of the data. If data is only available for men, then consider how the data would likely differ for women (i.e. if it involves physical strength, or distance between objects that individuals need to reach, how would this differ for women?). Where no sex-disaggregated data or no data about women exists, it is strongly recommended that committees/groups seek input from organizations or individuals with relevant knowledge or expertise or even lived experience related to the subject of standardization. This could be achieved by seeking representation from relevant women's organizations (i.e. professional bodies, trade associations, charities etc. which represent and/or serve women), identifying academics, research organizations, etc. studying the subject with a specific focus on gender or by bringing in a general gender expert who could guide and support more informed analysis of the potential implications of gender differences. When using data that is not sex-disaggregated it is essential to understand and acknowledge the limits of the data and specify any assumptions made so that the end user can make informed decisions on the applicability of the standard to women and men.



Assessment form – gender responsive standards

The completion of this form will support standards developers to assess how gender differences may impact new and revised standards and enable them to develop gender responsive standards that equitably benefit women and men.

Standards developers are strongly encouraged to complete this form and attach it to NWIP proposals and to update it as required throughout the development process.

Committee	
Document Number	
Document Title	
Process (new work item, revision)	

Assessment Questions:		
1) Is the product, process or service that is the subject of standardization going to be used by people and / or impact people either directly or indirectly?	yes	no
2) Is the product, process or service that is the subject of standardization going to be used in another standard?	yes	no
3) If yes to question 2, does that standard have a product, process or service that will be used by people?	yes	no
If yes to question 1, or yes to question 2 and 3, the standard in question has potential gender implications.		

Describe potential gender implications, accounting for both the different physical and social aspects of gender as outlined in the Gender Responsive Standards Guidance

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Based on the above assessment, the standard is deemed to require:

Significant action to ensure a GRS

There are significant gender differences which may have relevance and implications to the standard and will require concerted action to ensure equitable outcomes for women and men.

Some action to ensure a GRS

There are some gender differences which may have relevance and implications to the standard and will require some action to ensure equitable outcomes for women and men.

Minimal action to ensure GRS

There are minimal gender differences which may have minimal relevance and implications to the standard and will require minimal action to ensure equitable outcomes for women and men.

While it may be determined that there are no specific gender needs in the standard, careful consideration should still be made and documented on this form before making a final determination whether gender should be considered. What is to be avoided is gender blindness where the differences between women and men and the implications on the standard are overlooked and ignored.

Assess:

4) Is there sufficient sex-disaggregated data to support the standard?	yes	no
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If no, what data is missing and how will the committee members find and access data to determine gender differences?

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