



Technology Executive Committee

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**Concept note on the integration of gender in the work of the
Technology Executive Committee**

I. Introduction

A. Background and Context

1. As part of the continuation and enhancement of the Lima work programme on gender, the Conference of the Parties (COP) requested that all constituted bodies include in their regular reports progress made towards the integration of gender perspectives in their respective processes.¹ By the same decision, the COP requested the secretariat to prepare a technical paper identifying entry points for the constituted bodies on how to integrate a gender perspective into their workstreams.² The COP also requested the secretariat to prepare a biennial synthesis report on information contained in the reports of the constituted bodies, with the first synthesis report to be prepared for consideration by the COP at COP 25.

2. The gender action plan established by decision 3/CP.23³ includes two activities that support the constituted bodies in meeting the request from the COP referred to in paragraph 1 above. Under activities C.1 and C.2 of the ‘Coherence’ priority area, the secretariat was requested to organize a dialogue for the Chairs of constituted bodies to discuss the outcomes and recommendations of the technical paper referred to in paragraph 1 above (Dialogue), and to provide capacity-building for the Chairs and members of the constituted bodies, respectively.

3. The TEC participated in the Dialogue⁴ and in a capacity building session during TEC 18. At the same meeting, gender experts from the UNFCCC and the Climate Technology Centre and Network (CTCN) participated in working group sessions on the forthcoming workplan and the TEC decided to integrate gender within its workplan.

4. In addition to the decisions on gender and climate change referred to in paragraphs 1–3 above, there are 19 technology-related mandates under the UNFCCC, including in the Paris Agreement implementation guidelines,⁵ that refer to ‘gender’, ‘women’, ‘social/socially’.

B. Purpose

5. This concept note aims to support the TEC in its deliberations at TEC 19 on how to integrate gender in its rolling workplan 2019–2022.

¹ Decision 21/CP.22. Available at http://unfccc.int/files/gender_and_climate_change/application/pdf/pages_17-20_from_10a02.pdf.

² Document FCCC/TP/2018/1. Available at: <https://unfccc.int/sites/default/files/resource/01.pdf>.

³ Available at <http://unfccc.int/resource/docs/2017/cop23/eng/11a01.pdf>.

⁴ The informal summary report is available at: https://unfccc.int/sites/default/files/resource/sb48_gender_dialogue.pdf.

⁵ 15/CMA.1 available at: https://unfccc.int/tclear/misc_/StaticFiles/gnwoerk_static/tn_meetings/61a8aadf7134442295729d3090ceb67f/502e06bce7b046a8974234413b1ad5a9.pdf and GCC/DRC/2017/1 available at: https://unfccc.int/files/gender_and_climate_change/application/pdf/gcc_drc_2017_1_9may2017.pdf.

C. Structure of the note

6. Section II provides information on the links between gender and technology development and transfer using sectoral examples.

7. Section III provides information on resources and stakeholders working on gender and technology under or relating to the UNFCCC process.

8. Section IV sets out how the TEC could approach the integration of gender into its work, including an approach for mainstreaming gender, an indicative list of examples of how this approach can be applied and concrete recommendations on how the TEC could implement this approach.

II. Links between gender and technology: sectoral examples

9. There is a bidirectional relationship between gender and climate technology. On the one hand, women and men often have different needs and priorities when accessing and using technology, and on the other hand, a technological solution can positively or negatively impact members of a community differently, including due to gender. Therefore, integrating gender considerations and engaging women and men in all stages of the technology cycle can ensure more effective mitigation or adaptation outcomes and ensure that women and men benefit equally from climate action.

10. Gender differences in all aspects of the technology cycle are generally created due to norms, customs, power relations, and socially imposed roles and responsibilities that create differences and, often, biases and inequalities. However, in the technology context, physical or biological differences between women and men can also be significant. During the capacity building session referred to in paragraph 3 above, an example was provided to illustrate this point. In the building services sector, although the use of the metabolic resting rate of the average (white) man had been standard practice since the 1960s, when an accurate representation of thermal demand of all occupants in commercial buildings was applied it led to actual energy consumption predictions and real energy savings of buildings that are designed and operated by buildings services.

11. The links between gender and technology can be illustrated using the transport sector as an example. Studies show that there are differences in mobility needs, modes of transport and patterns of use between female and male transport users. Researchers found that gender is often a more robust determinant than age or income when considering differences in these areas.⁶ Women tend to rely on public transport more than men do and are, in fact, the primary users of public transport worldwide.⁷ Yet many transport systems have not been designed to meet women's transport needs. Due to safety and access concerns in some regions, women face mobility limitations and therefore reduced participation in the labour force or in education services. Investing in sustainable transport technologies and infrastructure that are gender-inclusive ensures that both men and women can equally benefit, allowing them to manage more efficiently their time and opportunities.⁸ Transport technologies and infrastructure solutions that take the specific transport-use requirements of both men and women into account such as time of day, frequency of use, route preferences and restrictions on mobility (e.g. the need for a chaperone, security concerns) can improve inclusivity while also creating enhanced climate outcomes.

12. Another important sector for climate mitigation is the waste management sector. Research indicates that women and men have different perceptions of waste generation and management, mainly due to different intra-household roles. Women are often in charge of the household activities and therefore are more exposed to waste, with the potential impact on their health. Also, women tend to take responsibility for (unpaid) community cleaning when inadequate waste management services are in place.⁹ In the area of recycling, there is evidence that female recyclers and waste-

⁶ "Women's travel patterns are more complex than those of men, with more, mostly short trips (combining domestic roles with income production), using different services, at differing times of the day, often involving children. Thus, transport solutions that suit men - who tend to make few, direct trips at set times and often alone - do not necessarily work for female transport users." <https://www.itf-oecd.org/gender-transport>.

⁷ <https://blogs.worldbank.org/transport/transport-not-gender-neutral>.

⁸ <https://www.adb.org/sites/default/files/institutional-document/33901/files/gender-tool-kit-transport.pdf>.

⁹ <https://www.ctc-n.org/technologies/gender-and-waste-management>.

pickers are likely to be marginalized and it is also common that they segregate and collect lower value material than men. As with the transport sector, opportunities to enhance the effectiveness of climate policies and action will be missed if, for example, the significant informal, unpaid work women perform in the waste management sector is not taken into account when designing technological solutions. In addition, if these differences are not accounted for in design and implementation, existing inequalities and vulnerabilities can persist or be exacerbated by gender-blind solutions.

13. The agricultural sector encompasses both adaptation and mitigation and it is a sector where gender differences are readily apparent. Women constitute approximately half (43%) of the agriculture workforce globally. However, studies show that female farmers often have less access than men to productive resources and opportunities. The gender gap exists for many assets, inputs and services, including land, livestock, labour, education, extension and financial services, and technology.¹⁰ These barriers can impede the adoption of new technologies, including climate-smart technologies. Gender-transformative practices are crucial to reduce vulnerability, enhance food and nutrition security and improve wellbeing of communities.¹¹ They can also unlock opportunities for improved climate outcomes. A project designed to boost the climate-resilience of women in the Sahel took a gender transformative approach. The project focused on building the capacity of women to implement sustainable farming techniques, including leveraging information and communication technologies to provide access to agriculture assets. By promoting both behavioural and structural change, the project supported women's access to land and other means of production. It also enhanced women's access to finance by building stronger financial management and saving skills; it developed group relations to stimulate collective investment in agriculture; and promoted access to markets by improving women's access to information on prices and on product demand. Climate technology in this case also helped to transform structures, perceptions and power relations.

14. At a minimum, the development and transfer of technology to address climate mitigation and adaptation priorities should do no harm in the societies and communities that it's deployed. At its best, technology should empower all community members to fully participate and contribute to addressing climate change. To ensure that this is the case, gender considerations must be taken into account throughout the technology cycle in every sector.

III. Recent resources

15. There is an existing body of work on gender and technology in the UNFCCC context and more broadly in climate policy and action. This section outlines some key resources and stakeholders contributing to this work.

16. The CTCN has made significant progress in integrating gender considerations into its work, including:¹²

(a) Providing technical assistance related to TNAs. In addition to proactively offering support on gender integration to countries seeking technical assistance from the CTCN, at the request of ECOWAS, supported 14 West African countries in mainstreaming gender for a climate resilient energy system.¹³ There are currently nine technical assistant projects that include gender as an approach for the delivery of the TA, ranging from geothermal in Ethiopia to sustainable land transport in Nauru;

- (b) Appointing a gender focal point;
- (c) Developing a gender policy and action plan;
- (d) Allocating a minimum of 1% of technical assistance budget to gender;

¹⁰ IFPRI, FAO <http://www.fao.org/3/i8815en/I8815EN.pdf>.

¹¹ Access at https://www.care.at/wp-content/uploads/2019/07/CARE_Gender-Transformative-Adaptation_Publication_FINAL.pdf.

¹² CTCN 2018 Progress Report - <https://www.ctc-n.org/files/resources/ctcn-ar18-book-final.pdf>.

¹³ There are currently nine technical assistant projects on the CTCN portal that include gender as an approach for the delivery of the technical assistance, ranging from geothermal in Ethiopia to sustainable land transport in Nauru.

- (e) Establishing a gender knowledge hub¹⁴ on the etc-n.org portal;
- (f) Collaborating with the UNFCCC's Women and Gender constituency (WGC)¹⁵ in conducting capacity building events; and
- (g) Collaborating with the DTU Partnership to develop a guideline for gender responsive TNAs¹⁶ that sets out gender concepts in the context of TNAs and provides a practical step by step guide on how to incorporate gender into the TNA process, targeted at TNA teams. The guideline is also referenced and linked under the chapter of the TNA Step by Step guidebook on 'pursuing a gender-responsive approach'.¹⁷

17. The Women and Gender Constituency, in an effort to showcase the relevance of gender dimensions in climate action as well as women's leadership, launched the Gender Just Climate Solutions Award in 2014. Recently the CTCN has supported the WGC by promoting the Gender Just Climate Solutions Award, of which one of the three categories is 'technical climate solutions'. The selection criteria amongst others include: providing equal access, alleviating or not increasing burden to women's workload, empowering women, contribution to climate change mitigation or adaption and scalability. In 2017 and 2018 respectively six and nine projects were awarded in the technology category.¹⁸

18. There are a number of other relevant publications on gender and technology in the context of climate change that could inform current or future work of the, including a capacity-building package on 'Mainstreaming gender in mitigation and technology development and transfer interventions',¹⁹ which was designed for policymakers engaging in action on climate change mitigation and technology transfer. More recent publications include:

- (a) IRENA 2019, *Renewable Energy: A Gender Perspective*.²⁰ In a report that recognizes that the global energy transition "offers the chance to create new jobs and reshape all aspects of how energy is produced and distributed" it also examines the barriers and solutions to women's representation in the renewable energy sector, as well as exploring gender aspects of energy access. For example, the report highlights that "the decentralised nature of off grid renewable energy solutions provides greater opportunities for tailoring energy services to gender-differentiated needs and for engaging women in the development and management of energy infrastructure". In regard to the critical issue of a skilled workforce in the sector, the report acknowledges that "beyond issues of basic fairness to women with regard to job entry, workplace conditions, work-life balance and career advancement, gender imbalances pose a threat to the growth of the renewable energy sector ...skills shortages could be minimized or avoided entirely by training and recruiting women into the sector". The report lists best practices on improved participation in the sector as well as on energy access. Figure 1 below is reproduced from the report and provides an example of gender entry points in the development of renewable energy mini-grids;

¹⁴ Access at <https://www.etc-n.org/technology-sectors/gender>.

¹⁵ More information at <http://womengenderclimate.org/>.

¹⁶ Access at <https://tech-action.unepdtu.org/wp-content/uploads/sites/2/2019/07/web-tna-gender-guidebook-01.pdf>.

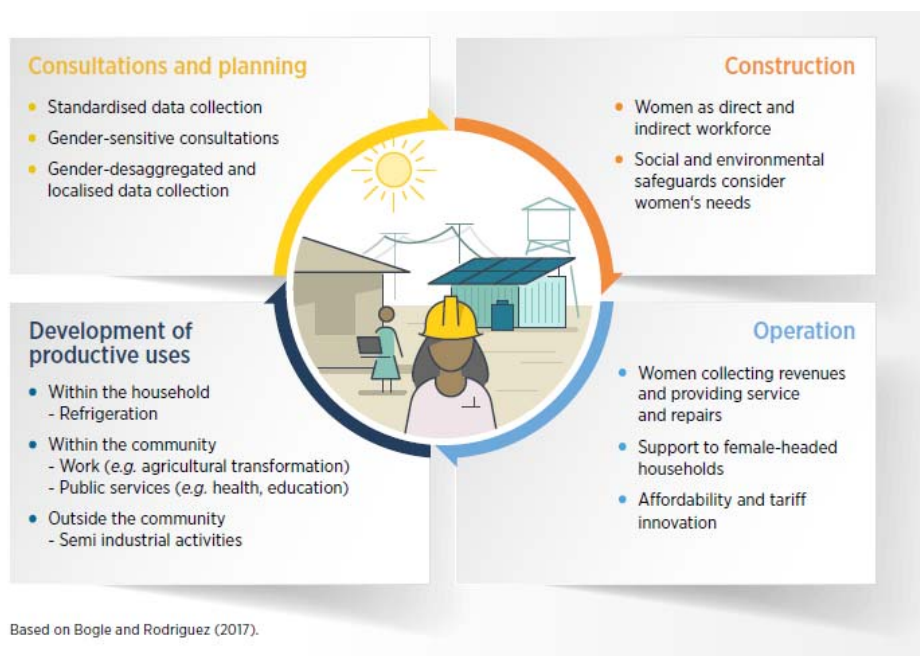
¹⁷ Access at <https://tech-action.unepdtu.org/wp-content/uploads/sites/2/2019/04/2019-02-tna-step-by-step-guide.pdf>.

¹⁸ Access the 2018 report at <http://womengenderclimate.org/wp-content/uploads/2018/12/2018-Gender-Just-Climate-Solutions-English.pdf>; Access the 2017 report at <http://www.wecf.eu/download/2018/08%20August/WGCSolutionsPublicationCOP23ENGFinal.pdf>.

¹⁹ Access at <https://www.undp.org/content/undp/en/home/librarypage/womens-empowerment/mainstreaming-gender-in-mitigation-and-technology.html>.

²⁰ Access at https://irena.org/-/media/Files/IRENA/Agency/Publication/2019/Jan/IRENA_Gender_perspective_2019.pdf.

Figure 1
Gender entry points in the development of renewable energy mini-grids



(b) ENERGIA 2019, *Gender in the transition to sustainable energy for all : From evidence to inclusive policies*.²¹ ENERGIA's report summarizes the findings of a five-year research project including an analysis of the interactions between energy, access and gender in 12 countries. Findings included that comprehensive packages of support for women entrepreneurs in the energy supply chain, including targeted capacity-building on technology, were needed to overcome barriers to their involvement. The report further provides evidence of how perceptions about what women can do in technology-related areas can change;

(c) C40 Women 4 Climate 2019, *Gender Inclusive Climate Action in Cities – How Women's Leadership and expertise can shape sustainable and inclusive cities*.²² The report includes a chapter on women in technology and innovation highlighting not only women's underrepresentation but also that gender bias and sexual harassment are two of the most pervasive challenges faced by women in technology sectors, and these challenges are particularly serious in the context of innovation and financing.

IV. How the TEC could approach undertaking work on gender and technology

19. A significant amount of work and analysis has been carried out on the nexus of gender and climate change. However, policy makers who have not previously been trained on or engaged with gender considerations may struggle to make the links. There remains a need to raise awareness on the links, complement existing resources and support policy makers in accessing and using these resources.

20. The TEC has started to integrate gender into some of their activities and publications, including in:

(a) The TEC brief on 'Energizing entrepreneurs to tackle climate change Addressing climate change through innovation';

²¹ Access at https://www.energia.org/cm2/wp-content/uploads/2019/04/Gender-in-the-transition-to-sustainable-energy-for-all_-From-evidence-to-inclusive-policies_FINAL.pdf.

²² Access at https://w4c.org/sites/default/files/2019-02/W4C_REPORT_Gender%20Inclusive%20Climate%20Action%20in%20Cities_BD.pdf.

(b) The two accompanying documents to the TEC brief on ‘South-south and triangular cooperation’; and

(c) In the paper on ‘climate technology incubators and accelerators’.

21. However, references to gender differences or gender-responsiveness in these documents are limited to affirmations of their importance.

22. As the knowledge and awareness gap on gender and climate technology persists, there are numerous entry points for the TEC to address the issue and ground for mainstreaming gender across its activities.

23. When mainstreaming gender into its work the TEC may wish to consider lessons learned in integrating gender in the work of other constituted bodies, as set out in section A below and agree to apply the general approach outlined in section B. Section C provides illustrative examples of how the general approach could be applied, while section D provides recommendations for specific activities to include in the TEC rolling work plan.

A. Lessons learned on mainstreaming gender in constituted bodies

24. Even though the UNFCCC’s gender action plan was only established at COP 23 in 2017, action is already being taken by a few constituted bodies to mainstream gender in their activities, with other constituted bodies considering what action they will take.

25. The Adaptation Committee (AC) has included an objective to incorporate gender as a cross-cutting consideration into all AC activities in their rolling workplan. To guide them in how to do so, the AC included the preparation of a concept note and development of an action plan on how best to enhance consideration of gender in adaptation action and the AC workplan activities in their workplan. In addition, the AC issued a call for submissions, seeking views on how to mainstream gender considerations into adaptation planning and implementation, and received over twenty submissions.

26. In the report to COP 25 the Paris Committee on Capacity Building will introduce its comprehensive gender mainstreaming standard. This is a living document that may be revised over time and currently includes how to mainstream gender in all activities; at events and meetings; and in information-sharing.

27. The AC, CTCN and Standing Committee on Finance (SCF) have all appointed at least one gender focal point and the PCCB has established a working group on cross-cutting issues including gender.

B. General approach to mainstreaming gender

28. The following is a general approach to integrating gender considerations in TEC work that the TEC may wish to adopt.

1. Mainstreaming gender considerations

29. The TEC could identify how gender considerations apply in the context of topics selected for dialogues and TEC Briefs, papers and events with support from e.g. CTCN’s network and knowledge partners, CTCN and UNFCCC secretariats or experts within the Women and Gender Constituency.

30. The TEC could establish a Gender Focal Point within the TEC to assist the TEC in gender-related matters and appoint a member as the focal point to:

(a) Liaise with other constituted body GFPs, the secretariat, the CTCN and other stakeholders who can support the TEC in implementing the general approach to mainstreaming gender in its work;

(b) Champion the integration of gender in TEC work, including helping to identify entry points in TEC activities and products;

(c) Monitor implementation of the approach to identify and share with the TEC at every TEC meeting the challenges and successes in implementation.

2. Collaboration and stakeholder engagement

31. The TEC could build a network of gender expertise from which to draw support for its work, including by:

(a) Inviting and/or encouraging international entities and observer organizations to nominate gender and technology experts to support TEC policy guidance, meetings or events. This should include the CTCN's network and knowledge partners;

(b) When collaborating with or providing comments to e.g. other constituted bodies, the operating entities of the Financial Mechanism or Technology Facilitation Mechanism, consider synergies with their work on gender and if gender could be further strengthened through the collaboration;

(c) Enhancing collaboration with the CTCN by:

(i) Seeking and providing inputs and comments from and to the CTCN on related work on gender;

(ii) Seeking input from the CTCN on policy guidance that could be provided by the TEC to address needs or gaps related to gender and technology.

3. Monitor its progress and institutionalizing how the TEC integrates gender

32. When setting up its monitoring and evaluation system, the TEC could include indicators that measure gender integration, enabling the TEC to report on the implementation of this mainstreaming approach and to regularly review lessons learned.

4. Communicate on gender and technology and in a gender-sensitive manner

33. When developing a communication and outreach strategy the TEC could include objectives on:

(a) Raising awareness and communicating on the links between gender and technology;

(b) Consistently using non-discriminatory language and communication to enhance inclusiveness.

5. Organize events that are inclusive and substantively address gender

34. The TEC can ensure that for its events, including Technical Expert Meetings:

(a) There are no single-gender panels, that female and male experts are invited to contribute, and that presenters, speakers and resource persons use non-discriminatory language;

(b) Consult with partners and organizers to establish whether resource persons with relevant gender expertise can be identified and included in the event;

(c) Request panellists and experts to highlight relevant gender considerations in their presentations and/or ensure that there are experts who can address the topic of gender and technology.

C. Illustrative examples of how to apply the approach

35. Table 1 below illustrates, through a non-exhaustive list of ideas, how the approach to mainstreaming gender could be applied in the context of the TEC's rolling work plan. The integration of gender considerations would then be reflected in the envisaged outputs. Rationale for why the approach is applicable to the specific activity is also provided where relevant.

Table 1
Illustrative examples of how to apply the approach

Innovation

When identifying, compiling and highlighting best practices, e.g. on NSI or RD&D, best practices on inclusivity and gender fairness could be included and the TEC could communicate the rationale for and benefit of inclusivity in technology and innovation.

When carrying out analyses or promoting, e.g. innovative approaches and or specific climate technologies, the gendered implications of such approaches and technologies can be highlighted as well as how they could potentially improve gender equality or exacerbate existing inequalities

As noted in the C40 report on inclusive cities numerous studies have revealed the significant under-representation and exclusion of women in innovation and start-up/initiation settings. Yet numerous studies and examples show that diverse teams perform better and that technologies can be exclusionary, inefficient or replicate bias when designed by homogenous teams.

Implementation

Any examination of the topic of behavioral change should address how gender and other social factors affect these processes.

Studies show that women and men relate to technologies differently and that this difference is in part caused due to gendered interpretations and behaviour. e.g. meat consumption being associated with masculinity or sustainable choices being associated with femininity lead to men, on average, making more unsustainable choices.

Enabling Environment and capacity building

In the context of enabling environments and capacity-building, elaborate and communicate on the rationale for equal participation and for taking gender into account to improve effectiveness and efficiency of solutions as well as ensuring socially sound climate technology.

When analyzing or mapping enablers or barriers to development and transfer of technologies or to replicability and scalability of technologies, e.g. in a specific sector such as transportation, apply a gender lens and identify and further elaborate the underlying gendered causes of the barriers as well as potential gender-responsive enabling environments for technology diffusion and transfer.

Many climate technologies face multiple barriers in their implementation, such as policy, legal, regulatory, economic, financial, market, technical, social and others. These barriers are gendered, e.g. women face gender-specific difficulties in accessing finance. Addressing these specific barriers experience by women through enabling environments and capacity-building can enhance the overall effectiveness of the implementation of climate technologies.

Collaboration & stakeholder engagement and support

When collaborating with others or providing support, e.g. the WIM Excom on coastal zones, investigate and question the gendered aspects in the respective topic.

Women and men living in coastal zones are differently affected by sudden- and slow-onset events and differently positioned to avert, minimize and address loss and damage. An exploration of the development and use of technology in this context should also encompass a gender perspective.

Monitoring and tracking/evaluation system

Include indicators on the implementation of the approach including gender balance and participation in TEC events, working groups, and when seeking inputs for reports and briefs as well as on mainstreaming gender into substantive work.

Collect data and report on the use of the technical policy and operational guidebook on TNAs to integrate gender perspectives with a view to revising as needed

D. Recommended activities for the TEC work plan

36. The TEC may wish to consider including the activities set out in Table 2 below into its rolling work plan.

Table 2

Recommended activities for the TEC work plan

<i>Activity/Output</i>	<i>Elaboration</i>	<i>Timeline</i>
Adopt the general approach referred to in Section B above for mainstreaming gender in TEC workplan activities		TEC 19
Establish a Gender Focal Point within the TEC	<p>GFP to:</p> <p>Liaise with other constituted body GFPs, the secretariat, the CTCN and other stakeholders who can support the TEC in implementing the approach to mainstreaming gender in their work;</p> <p>Champion the integration of gender in TEC work, including helping to identify entry points in TEC activities and products;</p> <p>Monitor implementation of the general approach to identify and share with the TEC at every meeting the challenges and successes in implementation.</p>	TEC 19
Appoint at least one Gender Focal Point		No later than the first meeting in 2020
Seek inputs and views from the CTCN on policy gaps and needs in the context of gender and technology		No later than the first meeting in 2020