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Women's participation in Science, Technology, and Innovation as drivers of Sustainable Development

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Women's participation in STI as drivers of Sustainable Development: why?

- Brings positive change → broader perspectives and better outcomes for everyone. Some examples:
  - In scientific research: heart disease, a leading cause of death, considered a male condition, so clinical research focussed on men. Result= women were wrongly diagnosed. Osteoporosis = a female condition, but nearly 1/3 of hip fractures are from men after 75 !
  - In technology : cars were designed around men's physiques. For ex. seatbelt design poses threats to women, with motor vehicle accidents are the leading cause of fetal death related to maternal trauma. If we do not pay attention to gender dimension of STI, we can create unintended harm.
  - Today: consequences of data biases in AIs (ChatGPT4 replies, recruiting AIs bi-passing women, inaccuracies in facial recognition).

So, if the talent pool of researchers & engineers is expanded to include more women + the vision is broadened for more gendered analysis and innovations = this will expand creativity in S&T, make it work for everyone, and bring safety, well-being and satisfaction to all.

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Women's participation in STI for SD: a gender approach

1

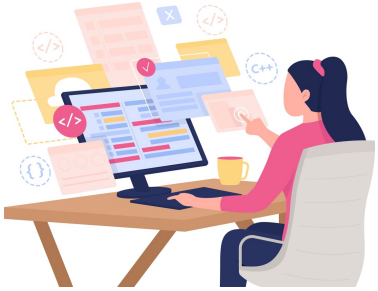
Promote gender equality in science, technology and engineering education, careers and leadership.

= **Promote Women in Science & Tech**

2

Develop science and technology which support women's development and livelihoods

= **Develop Science & Tech for Women**



3

Encourage and support the role of women in innovation systems at national and grassroots levels.

= **Support Women in Innovation**

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Women in science: gender diversity in STEM fields for sustainable development

- The international community has recognized that fully engaging women in all aspects of social and economic life is crucial for SD: UN CSTD WG Gender 1993, Beijing+25, CSW67 and SDG 5.

- Yet, progress is far from ideal : GEI 2022 reveals an increase of 0.3% from last year to this year, far more than 100 years will take for gender parity (WEF 2023 says 169 yrs/132 yrs in 2022, UN Global Compact, European Institute for Gender Equality 2022).

- Estimates indicate significant economic gains of gender parity in the workforce could be up to $12-14 trillion globally by 2025 (IMF, McKinsey, Bloomberg, WEF 2023). We lose $ & trillion each year.

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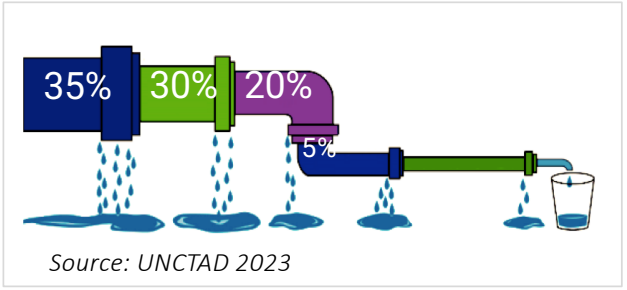
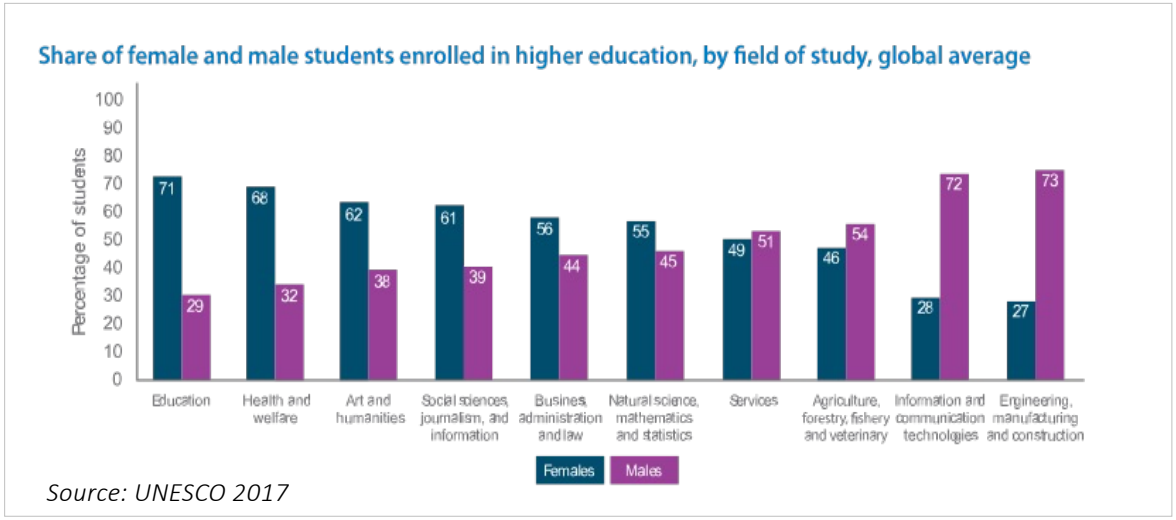
But the gender gap persists in STEM

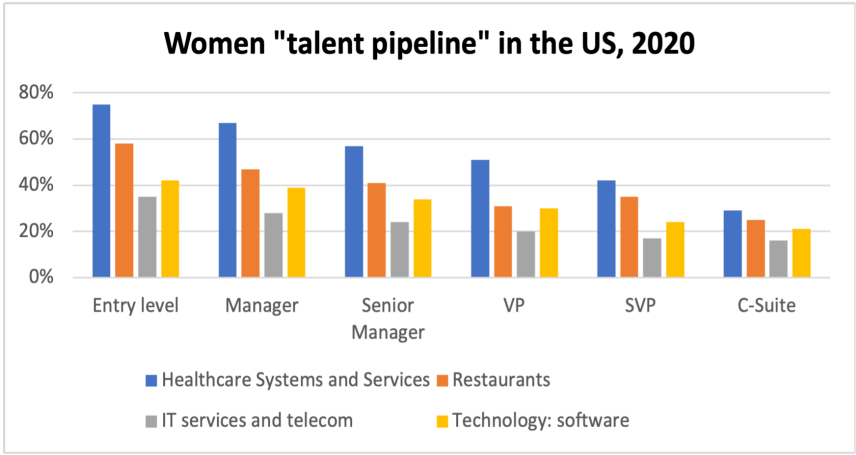
- Women are about 35 % of the world's STEM graduates, they make up only 30 % of the world's researchers, falling below 20 % at the position of heads of research institutions (UNESCO 2022).
- In the private sector, some reports indicate women represent as little as 5.3 % of Board Chair positions (Deloitte, 2019).



Source: UNCTAD 2023



Source: UNESCO 2017



Source: Leanin.org & McKinsey & Co., 2020

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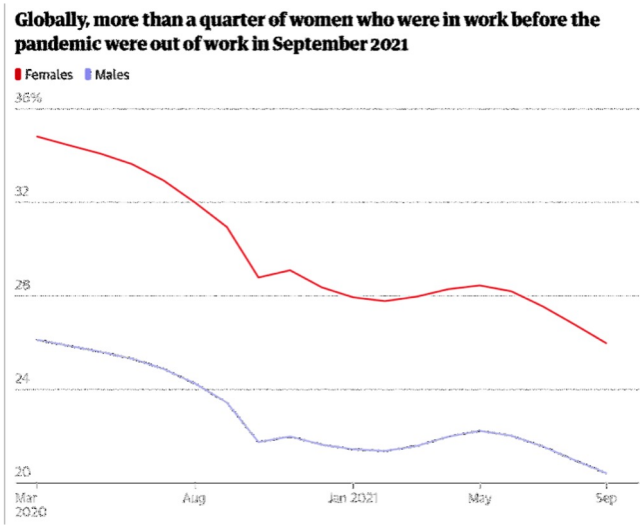
Overcoming challenges and barriers

- Gender stereotypes: in early education (girls), biased perception of women's capabilities in STEM may impact confidence and advancement.
- Underrepresentation : lack of role models.
- Lack of support and mentorship.
- Unequal access to opportunities : education, training, funding and networking.
- Work-life balance: difficult choices and career interruptions.
- Hostile work environments: discrimination, harrassment in male-dominated work environments (48% experience harrassment, 22% considering leaving).
- Bias in hiring and promotion (52 women in every 100 men, McKinsey 2023).
- Unconcious bias in research: study design, analysis, interpretation of gender-specific needs.



Source: The Lancet, March 2022

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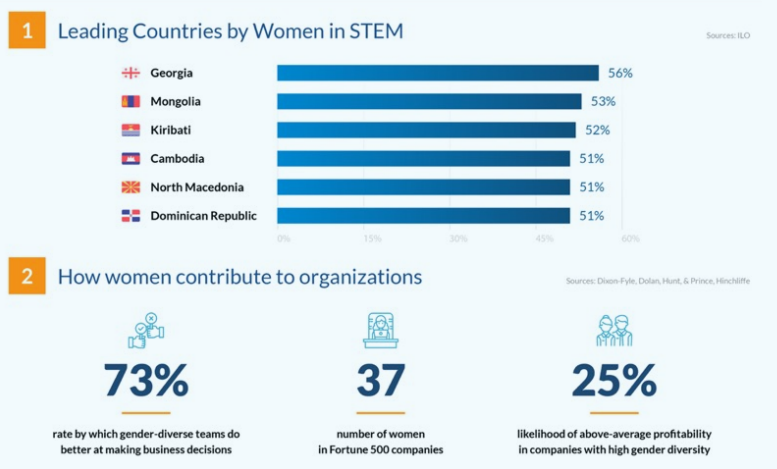
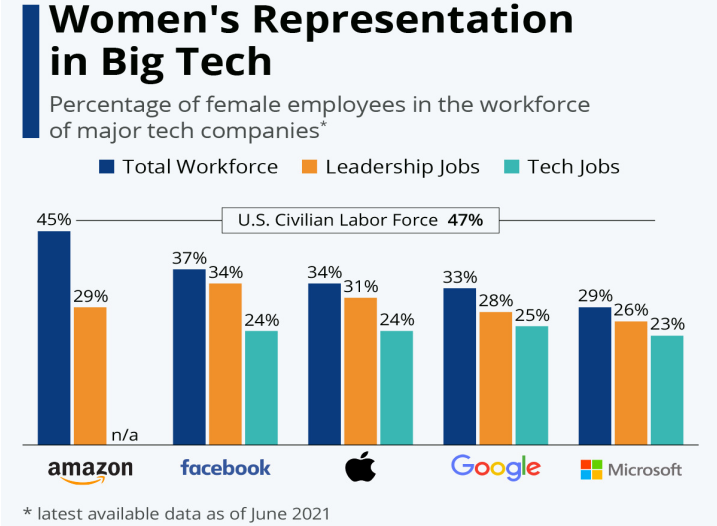
Women in Tech: not surprising tech often does not serve women

- Companies high in gender diversity on executive teams : 25 % more likely to have above-average profitability (FinancesOnline Research 2022, Statista & US business surveys 2021).
- The world's largest tech companies Google, Apple, Facebook, Amazon and Microsoft (GAFAM) : 13 % of the value of the S&P 500. In 2021: women are 45 % (Amazon) to 29 % (Microsoft) of the total workforce (Statista 2023).
- Digital access gaps = more women produce less data. Women are 22% of AI workers & 133 AI systems show 44.2 % display gender bias (UN Women 2023). It is critical to include women in advancement of AI.
- A major challenge is retaining women in the tech industry. Reasons why women leave these jobs: weak management support, lack of opportunities & lack of work-life balance (UNESCO 2021, CapitalOne 2023, Forbes 2023).





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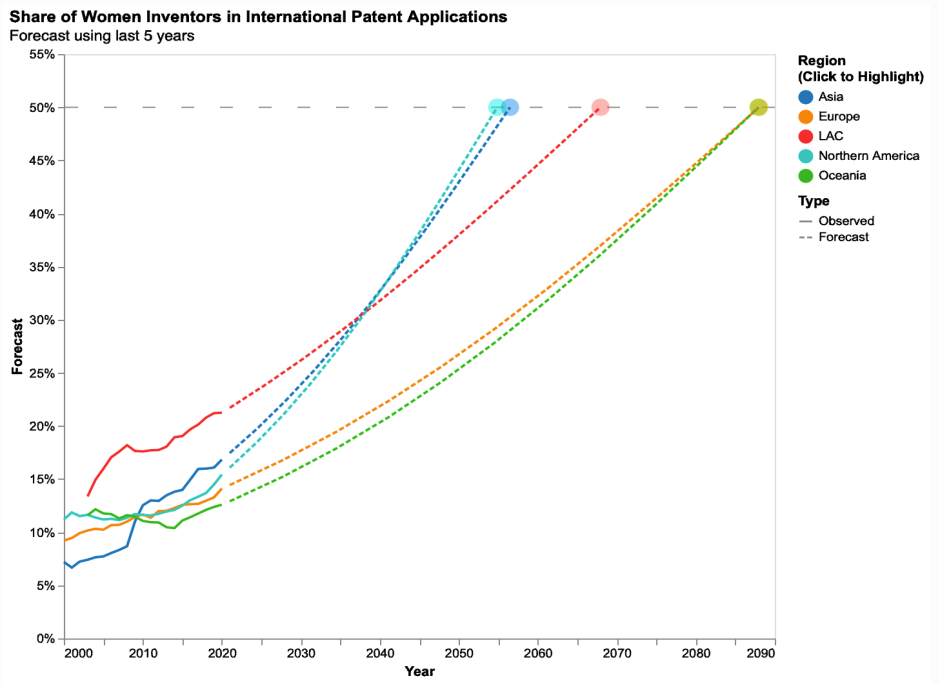
Women in innovation: we have a long way to go

- Women's lack of childhood exposure to female inventors: if girls were exposed to female inventors as boys are to male inventors, the gender gap in innovation would reduce by as much as half (Bell et al., 2019).
- A lower labour force participation reduces the available female talent pool.
- Women's limited access to resources and other gender challenges in the IP process, such as a lack of understanding of the importance of IP registration and potential gender bias in IP law.



- WIPO estimates that at the current pace, we will close the gender gap in international patenting by 2061, i.e. patent applications worldwide is forecasted to reach parity in 38 years (2023).

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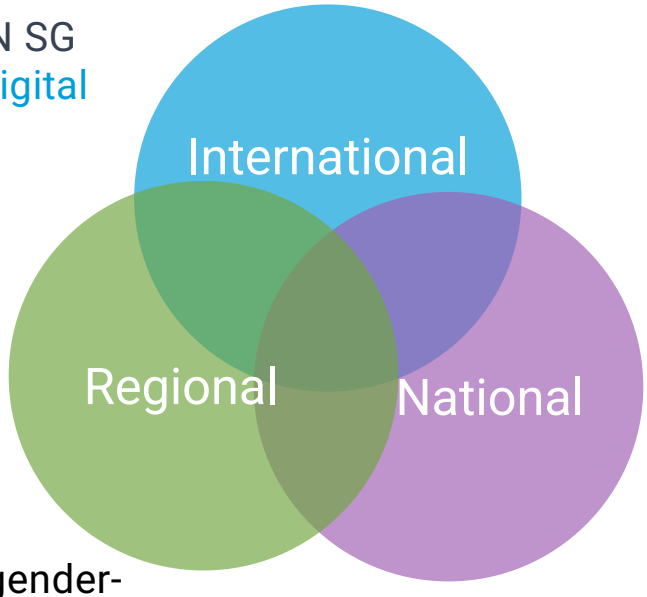
Promoting female participation for a sustainable future:
a call for action at the global, regional and national levels

The Summit of the Future and *The Global Digital Compact*: builds on the UN SG *Our Common Agenda* with four main recommendations for re-imagining digital cooperation (2022) :

- Addressing the gender dimensions of digital inequality.
- Embedding gender in digital technologies.
- Building inclusive innovation ecosystems.
- Making digital spaces safe.



UNCTAD serves the UN CSTD and the Gender Advisory Board :

- Explores the gender dimensions of STI, by contributing inputs on gender-related matters at CSTD.
- Facilitates sharing of country experiences, highlights best practices, and suggests policy recommendations that support the work of the CSTD.
- Provides up-to-date information on opportunities and challenges women and girls in STI are facing, and explore cooperation within the mandate of CSTD.

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Why we are here : female participation & the BCG Model

Converging at International + regional + national levels: the side event on BCG at the 25th CSTD, the Government of Thailand expressed interest to share the model and sought cooperation with UNCTAD.

Objectives : a platform for female researchers to learn from Thailand's expertise in implementing the BCG model, to share best practices in technology and innovation for BCG growth, and to network.

Expectations

- To train, share knowledge for leadership & policy-making;
- To obtain feedback from you;
- To build a community, and share stories with us;
- We want to see the impact in time : let's keep in touch !

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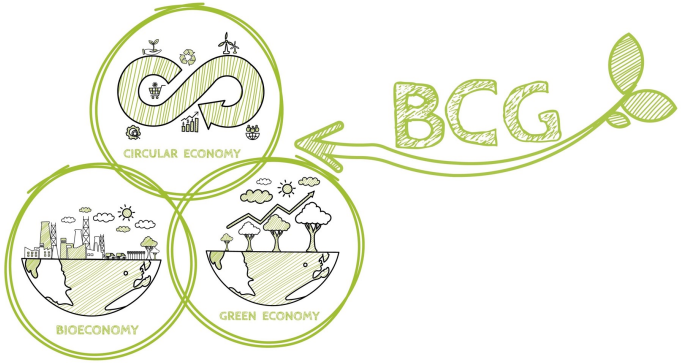

Thank you very much

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