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Beyond parity:

The impact of women leaders in science and technology

Women are increasingly assuming leadership roles, driving innovation and spearheading ground-breaking research. This is thanks to a seismic shift in recent years in attitudes and perceptions surrounding gender roles in science, technology, engineering and mathematics (STEM) fields. This shift is not just about achieving parity; it is about recognising the unique perspectives, talents and insights that women bring to the table. It is about harnessing the full potential of our collective intellect to confront the formidable challenges facing our planet, chief among them, the imperative of sustainability.

According to the World Economic Forum (WEF) 2024 Global Gender Gap Report, women's representation in Science, Technology, Engineering and Mathematics (STEM) and non-STEM workforces has increased since 2016. Yet, women remain underrepresented in STEM roles, comprising only 28.2% of the STEM workforce compared to 47.3% in non-STEM sectors.

The 'drop to the top' from entry-level to C-suite positions is more pronounced in STEM occupations than in non-STEM roles.

Women make up over half of the workforce base in non-STEM roles, compared to only a third in STEM. In turn, they make up a fourth of non-STEM leaders, and only over one-tenth in STEM. This gives women a double disadvantage with regard to technological and workforce transitions, as they continue to occupy the lower-growth, lower-paying jobs that are likely to be negatively affected in the short term.

The challenge of empowering women in science leadership for sustainability is further exacerbated by the digital divide and the advent of artificial intelligence

(AI). While technology has the potential to be a powerful equaliser as it provides access to information and opportunities regardless of geographic location or socio-economic status, the reality is often far from equitable.

The digital divide and sustainability

The digital divide, characterised by disparities in access to and proficiency with technology, disproportionately affects women in many parts of the world. This limits their ability to fully participate in the digital economy and take advantage of the opportunities it offers.

Sustainability lies at the heart of our shared vision for a better world – a world where economic prosperity is inextricably linked with environmental stewardship and social equity – and underpinned by equal access to opportunities and tools to tap into the internet of things. This interconnectedness emphasises the importance of inclusive technological advancement. It ensures that no one is left behind in our journey towards a more sustainable future.

In this endeavour, women are in the vanguard, catalysing transformative change through their pioneering research, visionary leadership and unwavering commitment to creating a more just and sustainable future for all. In the pursuit of sustainability, women's leadership encompasses various dimensions, including economic participation and opportunity, educational attainment, health and survival, and political empowerment. These pillars are fundamental to achieving gender equality and fostering sustainable development.

When women are empowered in these areas, they not only contribute to the advancement of society but also play a critical role in shaping policies and practices that promote sustainability at local, national and global levels. Thus, by prioritising the empowerment of women across these domains, we lay the groundwork for a more resilient, equitable and sustainable future for generations to come.

Standing on the shoulders of giants


As we celebrate the achievements of women in science leadership, let us not forget the countless trailblazers who paved the way and whose valiant efforts will always be remembered. This includes the late Didi Lekganyane, listed as one of the 50 most inspiring women in South Africa, who tragically passed away as a victim of gender-based violence. Their legacy inspires us to strive



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for excellence, defy convention and break barriers with unyielding resolve to challenge the status quo, and to champion inclusivity in all its forms across all platforms.

The theme of this year's International Women's Day — Women in Science Leadership: A New Era for Sustainability — embodies both our aspirations and our responsibilities. It calls upon us to harness the power of science and innovation as catalysts for positive change, to embrace diversity as a source of strength, and to forge a path towards a more sustainable and equitable future.

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