

Gender Equity In The Biotechnology Field

“Gender equality is more than a moral issue; it is a vital economic issue. For the global economy to reach its potential, we need to create conditions in which all women can reach their potential.”

— Former IMF Economic Counsellor Maurice Obstfeld, March 23, 2017 ([IMF 2017](#))

Women continue to be underrepresented in the STEM fields of science, technology, engineering, and mathematics, despite a variety of initiatives to promote gender equity. According to [Eurostat](#), globally, there are more male graduates in computer and communication technologies than women. There are also many more male graduates in engineering, manufacturing, and construction-related sectors, among all tertiary education graduates, than women.

Only [21% of scientists and engineers](#) in the manufacturing sector are women. Furthermore, the [European Institute for Gender Equality \(EIGE\)](#) estimates that only 17% of ICT (Information and Communications Technology) specialists are women. So why is gender equity in the biotechnology field essential?



Why is gender equity in the biotechnology field essential?

Source: <https://pixabay.com/>

Defining gender equity

Gender equity is, most importantly, a human right. It indicates that people of all sexes, genders, classes, and races are treated equally and given the same importance. Humankind should have equal access to available resources, liberties, and opportunities.

However, despite the fact that there are more women than ever in the workforce, some fields still experience significant inequities. Women are commonly denied the same employment rights as men. The disparate distribution of unpaid care, [domestic work](#), sexual abuse, [exploitation](#), and prejudice in public service continue to be major obstacles. Women and children continue to be disproportionately affected by migration, conflict, and natural catastrophes.

Giving women equitable access to land, property, sexual and reproductive health, as well as to technology and the internet, is crucial. Although there are already more women than ever holding public office, encouraging more women to lead will contribute to greater gender equity ([UNDP.Org](#)).

how to support gender Equity in the biotechnology field

Over the past few years, the topic of gender equity in biotech has received more and more attention. A large portion of it has been constructive. Now, we observe a great gender balance in the workplace in many industrialised nations. Between 40 and 50 percent of [staff at biotech businesses](#) in the UK, the US, and Europe are women.

In fields connected to biotech, there are often more female graduates from colleges than male graduates. However, when we start looking at [C-suite roles](#) (CSO, CFO, CEO, etc.), the figures show that this ratio reduces significantly, hovering around 20% in these same locations over the past few years. Even more concerning are the rarities of female founders of startups and their representation as non-executive directors on the boards of biotech enterprises. According to a [report](#) from 2020, only one in four US firms have a female founder. In the same study, 40% of boards of directors had at least one woman on them, and 42% of senior positions were held by women.

challenges

The standard defence is that there aren't enough qualified candidates. This is untrue now. The pool of candidates is large, with nearly equal numbers of those applying for lower positions or having graduated from college. It is more realistic that women are less likely to apply for "[stretch](#)" roles—that is, roles that don't quite fulfil every need listed in a job description. Men are far more likely to apply for jobs even if they just partially satisfy the requirements. Additionally, men are more prone to request and anticipate regular promotions.

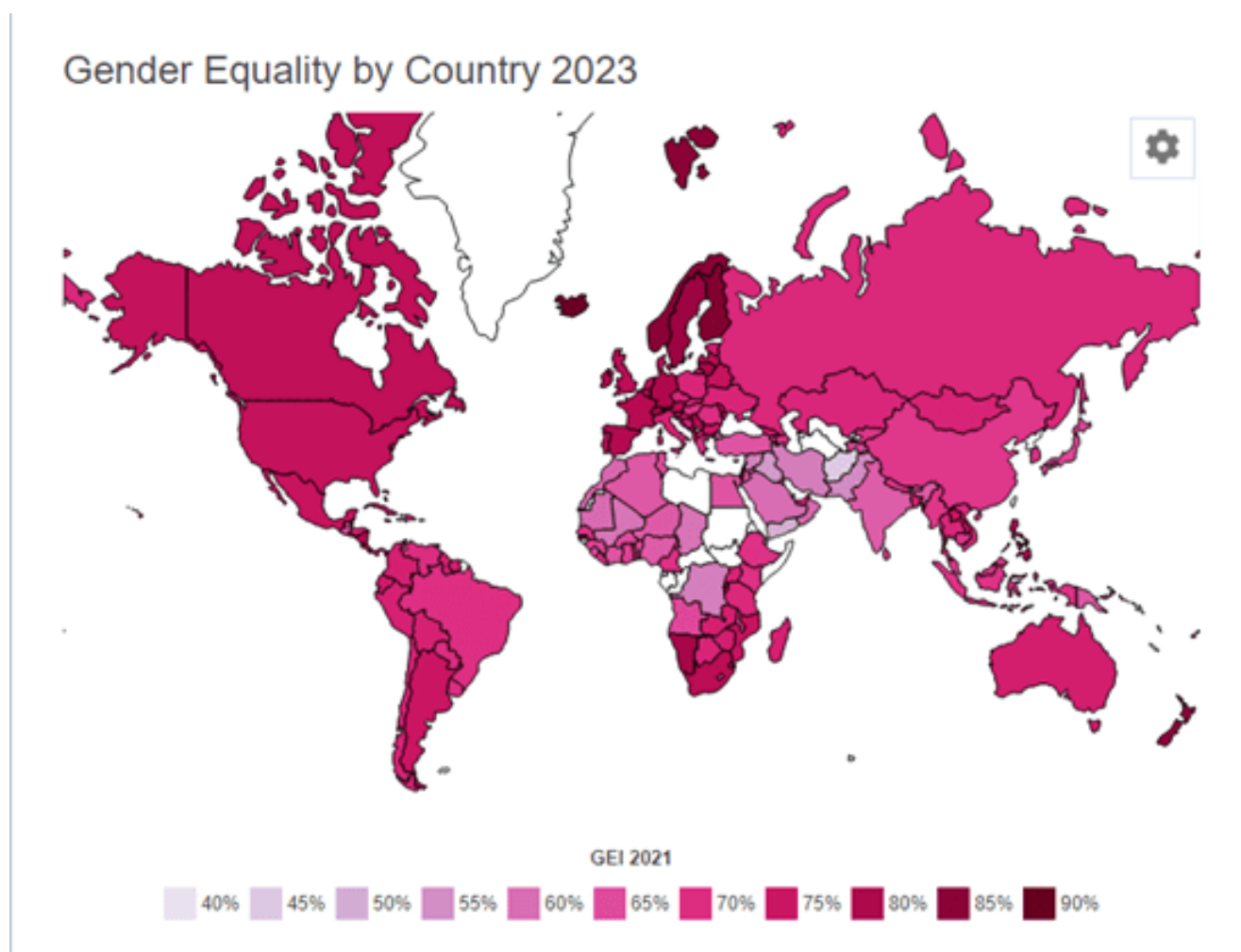
gender equity strategies

The Council of Europe's [Gender Equality Strategy](#) was adopted in 2018, featuring a huge body of legal and policy precedents. The Council of Europe has established a strategy for gender equity. It connects them to the broad bureaucratic aims of the organisation, as well as the current economic environment and political clout within the Council of Europe. The new Strategy defines the Council of Europe's

aims and targets for [gender equality](#) for the years 2018-2023, highlighting key partners and methods of operation, as well as the steps necessary to make results more visible.

countries that have taken the initiative to move towards gender equity

The way forward is being paved by initiatives like the [UK's Investing in Women Code](#). This is a voluntary pledge by the UK government to increase financial services for female entrepreneurs. Since its inception in 2019, it has featured signatures from some of the biggest banks in the nation. The number of applications for the [Women in Innovation Awards](#) from Innovate UK has increased by 70%, since the competition's 2016 inception. Similar projects are funded throughout the European Union through the [EU Prize for Women Innovators](#).



Global Gender Gap Report, demonstrating extreme lack of equity in most nations.
Source:

<https://worldpopulationreview.com/country-rankings/gender-equality-by-country>

Opportunities

Communities that encourage women in careers are thriving. In addition to these awards and governmental programs, [BioBeat](#) organises a summit in the UK to raise awareness of start-up biotech enterprises to bring together business owners and influential biotechnologists. The biotech company 'o2h' has been hosting a [Women in Science and Technology Open Day](#) in India since 2006. This event introduces female graduates to careers in science and technology.

The goal is to foster the next generation of Indian female scientists by connecting graduates with female role models. The 'She Forges' initiative was recently introduced by the biotech company [Forge Biologics](#) in the US, to help retain and grow female employees.

biotechnology Career Progression

There are methods that organisations can use to support female transitions to leadership positions. These involve improving the gender balance and boosting chances for women to advance into senior positions. Other organisations should take action to enhance [career progression](#) for women. Certain measures exist to ensure that our biotechnology hiring procedures are bias-free:

- A return to work program that leads the industry
- More female sponsorship, mentorship, and development programs
- A variety of active supports for working parents
- Active monitoring of the female talent pipeline.

moving forward

Numerous programs are available to draw in, obtain, and develop young, diligent women and prepare them for careers in the biological sciences. The UK's [rule](#) on wage gap reporting provides initiatives for employers. STEM programs are all constructive measures toward resolving the gender equity issue.

The WISE Campaign has a goal to bring another million women into the STEM profession in the UK, and is an initiative to recognise [notable achievements](#) made by women in [science](#) and [technology](#). According to the [House of Commons 2016](#)

[report](#), there are a number of government programs to encourage girls to pursue STEM-related fields of study, including support for the Stimulating Physics Network.

Why must we focus on gender equity in the biotechnology Field?

The countless studies, publications, and statistics reveal a massive gender imbalance in general in the life sciences. Women hold [50% of entry-level roles](#), just 10% of boards and 20% of leadership teams are made up of women. [Female employees occupy 52% of entry-level](#) roles in the pharmaceutical and medical product industries, but only 22% of C-suite positions.

Life sciences and biotechnology, energy and technology sectors had one of the [UK's greatest pay discrepancies in 2016](#). Women are more likely than men to depart the life sciences at every level of the career ladder.



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Source: <https://pixabay.com/>

According to the World Economic Forum's "[Global Gender Gap Report 2018](#)" it will take 108 years to achieve gender parity around the world, in the [workplace](#), if things continue as they are. Due to the incredibly poor growth shown in 2018, this is an increase of eight years from the estimate of last year's edition. Women make up [49% of the world's workforce](#) in the life sciences, a larger proportion than in other STEM fields.

Biotechnology and Artificial Intelligence: Equity in motion

[Artificial intelligence in biotech](#) is developing swiftly. There are still too few women working in subjects like chemistry, engineering, and computer science. It will take work to push more women into these disciplines, especially at college level. To find the best applicants for a senior management position, recruiters will have to put in more effort. Additionally, investment firms need to attract more female investors. Biotech firms should pay attention to programs like the [She Forges program](#), demonstrating how recently founded businesses can get a head start on fostering gender diversity. It is also evident that government-backed financial incentives can be effective in boosting diversity among all minority groups.



Brain biology using machine learning.

Source: <https://pixabay.com/>

Gender Equity in Biotechnology: Framework

In order to incorporate gender considerations at all phases of projects, gender-based frameworks have also been established. However, we were unable to locate any organised framework for analysing gender differences in health biotechnology in the developing world. We outline important sex and gender concerns at five crucial stages of health biotechnology research and development: priority setting, technology design, clinical trials, commercialisation, and provision of healthcare services ([WHO, Gender Analysis in Health](#)).

A Summary of Biotechnology Gender Frameworks

1. Prioritise funding for science that addresses the health needs of females.
2. Devise gender-responsive technology.

3. Ensure gender equity in clinical trial design.
4. Employ a range of commercialisation strategies appropriate for females.

achieving the United Nations Sustainable Development Goals (SDGs)

In addition to being a fundamental human right, eliminating all forms of discrimination against women and girls is essential for a sustainable future. It has been demonstrated that empowering women and girls promotes economic growth and development.

In the past 20 years, thanks to [UNDP's commitment to gender equality](#), there has been a notable advancement in this area. Compared to 15 years ago, there are more girls enrolled in school now, and gender equity in primary education has been achieved in the majority of regions.

SDG5: Gender equality Targets

1. Put an end to all types of prejudice against women and girls worldwide. Eliminate trafficking, sexual exploitation, and all other forms of violence against women and girls in both the public and private domains.
2. Eliminate all harmful practices, such as female genital mutilation, early childbearing, and forced marriage.
3. Recognise and value unpaid caregiving and household work through the provision of governmental services, infrastructure, and social protection laws. As well as by fostering shared responsibility within the home and family as is culturally acceptable.
4. Make sure that women have equal opportunities for leadership at all levels of decision-making in the political, [economic](#), and public spheres.
5. Never again should there be any type of prejudice towards women or girls. Ensure that everyone has access to reproductive rights and sexual and reproductive health.
6. Make changes in conformity with national legislation to grant women equal access to economic resources, including ownership and control over land. This includes property, financial services, inheritance, and natural

resources.

7. Enhance the promotion of women's empowerment through the use of enabling technology, particularly information and communications technology.
8. Adopt and reinforce sensible laws and policies that will promote gender equity and women's and girls' empowerment at all levels.



Gender equity in the biotechnology field is essential.

Source: <https://www.pexels.com/>

A Thrivable Framework

The use of health biotechnology in underdeveloped nations is influenced by science, ethics, commerce, and politics ([Singer et al., 2007](#)). All these forces can, in turn, be influenced by gender. Priority setting, product development, clinical trials, commercialisation, and distribution are the five essential process stages. By applying a systematic gendered framework to these stages, one may take the first step toward enabling women in poor nations to take advantage of the potential presented by this promising research.

At its core, sustainability simply indicates the ability to continue to survive.

[‘Thrivability’](#), by contrast, is the next step, beyond sustainability. THRIVE believes that humanity can do better with the knowledge currently available to us. We want to instill the idea that sustainable solutions not only prevent disaster, and restore equity in everyday life, but offer the potential for societies that flourish.

THRIVE Framework examines issues and evaluates potential solutions in relation to this overarching goal of thrivability. It is about making predictive analyses using modern technology that supports environmental and social sustainability transformations.

We recognise that human [happiness](#) can sometimes compete with environmental well-being, which is why we use our Ciambella chart to illustrate the ‘thrivable zone’. This is the area between a ‘social floor’ (the minimum required for people to live happy lives) and an ‘environmental ceiling’ (the maximum damage that we can do to the environment before it becomes unsustainable).

THRIVE Project

THRIVE invests interest in issues fundamental to the integrity of our society. Apart from sustainability, this also means examining issues related to [gender equity](#) in the biotechnology field. Safeguarding [human well-being](#) in all domains is paramount to THRIVE’s mission.

To learn more about how [The THRIVE Project](#) is researching, educating and advocating for gender equity in the future beyond sustainability, visit our [website](#). You can follow our informative, diverse blog and [podcast series](#) and learn about our regular live [webinars](#) featuring expert guests in the field. [Sign up for our newsletter](#) to receive regular updates.