

MENSTRUAL HEALTH AND HYGIENE:

A CROSS-CUTTING
IMPACT OPPORTUNITY



photo: Annie Spratt unsplash.com

Preface

Menstruation is a monthly reality for a quarter of the world's population: women and girls of reproductive age.* It is also a severely overlooked aspect of a woman's experience. Educational settings often fail to both integrate knowledge of menstruation into adolescent curricula, and provide adequate sanitation and hygiene facilities for girls to manage their bleeding. Healthcare research and practice repeatedly neglect the opportunity to explore links between menstruation and a woman's overall health – contraceptive product design is only just starting to take into account bleeding preferences, and changes to bleeding patterns remain understudied in clinical trials. Workplace and public facilities rarely provide adequate accommodations for women to manage their menstruation – from toilets and washing facilities, to free menstrual products. Social norms continue to perpetuate the notion that periods are impure and a sign of weakness.

Menstrual Health and Hygiene (MHH) encompasses the elements that a woman needs to manage her menstruation and to understand its impacts on other aspects of her life. It spans a range of dimensions: access to safe and affordable products (e.g., sanitary pads, tampons, cups); availability of toilets and washing facilities; accurate and timely knowledge about menstruation; healthcare settings and facilities that consider menstruation as integral to a woman's health; positive social norms; and adequate policies and regulatory frameworks. Access to MHH enables women and girls to be fully active in homes, schools, workplaces, and economies and societies, strengthening the foundation for gender equality and inclusive economic development.

This report highlights the cross-cutting impact opportunity of focusing on menstruation. It was developed by Dalberg, with support from the Special Initiative “Decent Work for a Just Transition” (which operates under the brand [Invest for Jobs](#)) of the German Federal Ministry for Economic Cooperation and Development (BMZ), as part of a project to assess the potential of the MHH sector to create good jobs and improve local working conditions across priority countries.

The report frames menstrual products as one entry point to improving overall MHH – though it is crucial to recognise that advancing MHH goes far beyond product provision.

The report draws on the findings of the analysis conducted by Dalberg Advisors in collaboration with Invest for Jobs and WASH United. It seeks to show how a focus on MHH provides a unique opportunity to generate widespread impact across development outcomes, including education, employment, health, environmental sustainability, and gender equality. While the report adopts a global perspective, it primarily focuses on the MHH landscape in Invest for Jobs' focus countries: Côte d'Ivoire, Egypt, Ethiopia, Ghana, Morocco, Rwanda, Senegal and Tunisia.

The views and opinions expressed in this report are those of the authors and do not necessarily reflect the official policies or position of partners, contributing organisations or funders.

*A note on terminology. People who menstruate include those who have MHH needs: girls, women, transgender, non-binary and intersex persons. This report focuses on women and girls' experience with menstruation but recognises that those who menstruate may not only identify as women or girls, and that not all women and girls menstruate.

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Dalberg

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WASH United is a non-profit organisation headquartered in Berlin, Germany, that works to build a world in which all people benefit from safe drinking water, sanitation and hygiene (WASH), including health and menstrual hygiene. A unique crossbreed between an NGO and a creative agency, WASH United focuses on the challenges in advocacy and education where their combination of WASH sector expertise and creative talent can make the biggest difference.



Under the Invest for Jobs brand, the German Federal Ministry for Economic Cooperation and Development (BMZ) has put together a package of measures to support German, European and African companies in investment activities that have a high impact on employment in Africa. The Special Initiative “Decent Work for a Just Transition” – the official title – offers comprehensive advice, contacts and financial support to overcome investment barriers. The development objective is to team up with companies to create good jobs and improve working conditions and social protection in the eight African partner countries. The Special Initiative is implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH among others. Further information is available at www.invest-for-jobs.com.

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Executive Summary

Menstrual health and hygiene (MHH) is a vital need for the 1.9 billion women and girls who menstruate globally.¹

It involves access to a range of menstrual products – including sanitary pads, reusable period underwear, tampons and cups – that women can choose from based on their unique needs and preferences. MHH further entails having appropriate knowledge about menstruation, and its links to health and other aspects of an individual's experience. It also includes access to adequate water and sanitation infrastructure, including safe toilets and handwashing facilities with soap and clean water supply.

However, MHH outcomes are uneven. One in four women and girls worldwide report lacking the resources to manage their menstruation.² In low-income countries, the situation is acute. The majority of women and girls (61%) lack access to adequate menstrual products³ and have low awareness of menstruation, with 55% of adolescent girls in Low- and Middle-Income Countries reporting limited knowledge about menstruation before menarche (their first period).⁴ These gaps are exacerbated by poor sanitation conditions, as 1.8 billion women and girls lack access to adequate sanitation services and over 1.1 billion do not have basic handwashing facilities at home to safely manage their periods.⁵ As a result, poor MHH has a profound impact on women and girls and hinders their active participation in the economy and in society.

Poor MHH is partly driven by the slow growth of the menstrual product sector, whose progress in Lower-Middle-Income countries (LMICs) is limited by several barriers. In under-served markets, the menstrual product sector remains small. For example, in Ethiopia, the total value of menstrual product sales is estimated at \$227 million per annum,⁶ 36% less than sales from toilet paper estimated at \$356 million.⁷ This is driven by challenges related to availability, affordability, acceptability and awareness. Menstrual products are often not available nor affordable due to distribution challenges, high import duties and sales taxes. In Egypt, Ethiopia and Ghana, for instance, women spend an average of 0.85% of their annual income on menstrual products – 14 times more than in a country like Germany.⁸ Even when menstrual products are available, assessing their quality can be a challenge, which limits the number of suppliers that stock a range of products and hinders consumer demand. Specifically, while there are national quality standards for disposable menstrual products across many LMICs, progress on national reusable product standards is slower. These barriers are compounded by a lack of knowledge and awareness of MHH, along with persistent taboos that prevent women from understanding how to adequately manage their menstrual bleeding and how menstruation connects to other aspects of their daily lives.⁹

1. World Health Organisation, [Maternal, Newborn, Child and Adolescent Health and Ageing data](#), 2023

2. FSG, [Improving Sanitation by Exposing Gender Inequities](#), 2018

3. Reproductive Health Supplies Coalition, [Menstrual Hygiene Landscape for selected countries](#), 2021

4. Chandra-Mouli, V. and Patel, S.V., [Mapping the knowledge and understanding of menarche, menstrual hygiene and menstrual health among adolescent girls in low- and middle-income countries](#), 2017

5. Dalberg analysis, 2023: Assumes 50% of population without sanitation & hygiene are female. Source: UNICEF and WHO, [Progress on household drinking water, sanitation and hygiene 2000-2020](#), 2021

6. Reproductive Health Supplies Coalition, [Menstrual Hygiene Landscape for selected countries](#), 2021. Note this figure is based on the quantity of products used multiplied by their unit price at point of sale.

7. Statista, [Toilet Paper Market](#), 2022

8. Dalberg analysis, 2023. Sources: Human Development Reports, [Gender Development Index \(GDI\)](#), 2021

9. Chandra-Mouli, V. and Patel, S.V., [Mapping the knowledge and understanding of menarche, menstrual hygiene and menstrual health among adolescent girls in low- and middle-income countries](#), 2017

Despite these challenges, momentum around MHH is creating opportunities to address gaps and grow the menstrual product sector, as a stepping stone to improving MHH. In the last five years, revenues from menstrual product sales increased by an average of 38% across the study's focus countries (Côte d'Ivoire, Egypt, Ethiopia, Ghana, Morocco, Rwanda, Senegal and Tunisia).¹⁰ Across LMICs, product availability is improving as companies manufacturing or distributing menstrual products locally increase in number and size. In parallel, government reforms to reduce taxes and import duties are lowering costs and making products more affordable. The acceptability of products has also improved as more African countries are implementing quality standards, particularly for reusable products. To date, Ethiopia, Kenya, Malawi, Tanzania, Uganda, South Africa and Zimbabwe have issued standards for reusable sanitary pads,¹¹ which reassure customers, retailers and prospective market entrants. These efforts are underpinned by initiatives to raise awareness around MHH. Public, private and NGO actors are leading the charge on this front. For example, WASH United initiated Menstrual Hygiene Day, the largest global advocacy initiative that unites diverse actors to destigmatise MHH and catalyse action. Other organisations like Grow & Know and Oky are helping individuals learn about menstruation and its links to other aspects of their daily lives. In the private sector, a host of companies are improving knowledge through period-tracking tools, customer education and advertising campaigns. In parallel, the evidence base for MHH is improving. More and better data is collected, and a growing number of studies on MHH highlight the impact opportunities for companies, governments, investors and funders to mobilise around MHH.

Building on this momentum, advancing MHH provides a unique opportunity to multiply progress across impact areas, and in turn progress towards gender equality, for all, everywhere. A focus on MHH can enhance women and girls' understanding of and access to essential menstrual products and services. For example, a reusable pad company, AFRIPads, has educated over 110,900 girls on MHH and reached 5 million women and girls with its menstrual kits since 2010.¹² In turn, improving MHH generates knock-on impacts across development outcomes, namely:



Education: Improving knowledge of MHH and increasing access to menstrual products and services in educational settings can improve girls' school attendance and participation, leading to better education outcomes. This can have long-term impacts on their prospects. In Sub-Saharan Africa, every additional year of schooling is associated with a 13.5% increase in earnings later in life.¹³ In Ethiopia alone, this could translate to \$12 billion in additional economic output, a 5% increase in the country's current output.¹⁴

10. Statista, [Feminine Hygiene Market](#), 2022

11. Reproductive Health Supplies Coalition, [Development and compliance of quality standards for disposable and reusable menstrual health pads in LMICs](#), 2021

12. AFRIPads, [Our impact](#), 2022

13. World Bank, [New comparable dataset finds that investments in education, tertiary in particular, lead to higher earnings](#), 2021

14. Dalberg analysis, 2023. Sources: World Bank, [Population, female](#), 2019; World Bank, [GNI, PPP \(current international \\$\)](#), 2019; UNDP, [Gender Development Index](#), 2019; UNESCO, [Data - Upper secondary completion rate \(female\)](#), 2019



Employment: Improving MHH can also enhance women's work attendance and productivity. For example, a textile factory in Egypt saw a \$4 return for every \$1 invested in improving MHH education and product access.¹⁵ Such interventions can have wider economic impacts. Dalberg estimates suggest that increasing women's work attendance by one day every month could increase gross national income (GNI) by up to \$27 billion across Côte d'Ivoire, Egypt, Ethiopia, Ghana, Morocco, Rwanda, Senegal and Tunisia.¹⁶ Promoting the growth of the menstrual product sector can also lead to new job opportunities in the manufacturing and distribution of menstrual products.



Health: Addressing linkages between MHH and health can also improve women and girls' health outcomes. Improved MHH has been shown to reduce the risk of reproductive and urinary tract infections. It can also reduce health risks associated with menstrual bleeding and irregularities such as fibroids, endometriosis and polycystic ovary syndrome which can impact fertility.¹⁷ Further, greater awareness of MHH and its links to sexual and reproductive health (SRH) can improve women's agency over sex, family planning and broader health decisions.¹⁸



Environment: Finally, supporting the uptake of reusable and biodegradable menstrual products can reduce pollution and waste. Current figures estimate that every person who menstruates will dispose of between 50 to 150 kilograms of pads and tampons in their lifetime. These make up over 6% of sewage-related debris in waterways and beaches,¹⁹ and can take up to 800 years to break down.²⁰

Together, the outcomes linked to improved MHH are vital to advancing gender equality and achieving long-term economic prosperity. Better MHH empowers women and girls with agency and enhances their socioeconomic opportunities, with concrete impacts on Gross Domestic Product (GDP) per capita, which could be 20% higher if gender employment gaps were closed.²¹

To leverage the impact opportunity in advancing the MHH sector and drive scalable impacts, the private sector, governments and funders can play distinct roles.



Across LMICs, **companies** in the MHH space can scale localised production models, promote innovative distribution models and support awareness-building efforts through education and media campaigns. Companies in other sectors can provide menstrual products and services to their employees, thereby stimulating menstrual product sector growth, improving women's work attendance and productivity, and enhancing company performance.

15. Yeager, *HERproject: Health enables returns. The business returns from women's health programs*, 2011

16. Dalberg analysis, 2023. Sources: UNDP, *Gender Development Index*, 2019; ExcellNotes, *2022 Archives*, 2022; World Bank, *Population, female*, 2019; World Bank, *GNI, PPP (current international \$)*, 2019

17. World Bank, *Menstrual Health and Hygiene*, 2022

18. UNFPA, *Technical brief on the integration of menstrual health into SRHR policies and programmes*, 2021

19. WoMena, *What is the environmental impact of menstrual products*, 2019

20. Harrison, *Menstruation: Environmental impact and need for global health equity*, 2022

21. World Bank, *A Gender Employment Gap Index (GEGI): A Simple Measure of the Economic Gains from Closing Gender Employment Gaps, with an Application to the Pacific Islands*, 2022



National **governments** can develop policies that advance MHH, such as integrating menstruation into educational curriculums and healthcare guidelines. They can lower consumer taxes and import duties to improve product affordability and consider providing financial incentives to support the growth of domestic MHH companies. In addition, they can develop and implement quality standards that improve product acceptability, particularly among low-income populations.



Funders and investors can apply an MHH lens to their work to promote gender equity and drive impact across the Sustainable Development Goals. Specifically, they can provide catalytic funding to enable innovative MHH companies to scale and crowd in public and private capital. They can also collaborate to build the capacity of different actors in the MHH ecosystem and improve the enabling environment for the menstrual product sector to thrive at the national level. For example, they can offer technical assistance to improve the business models of domestic small and medium-sized enterprises (SMEs), work with intermediaries to strengthen the value chain for menstrual product inputs (e.g., cotton), and partner with advocacy organisations to dismantle taboos and harmful social norms surrounding menstruation. Funders also have a unique ability to influence how health research and development considers menstruation - from health product development, to trials on how different treatments impact (and are impacted by) menstruation.

Coordinating efforts across companies, governments and donor funders can amplify the impact potential of applying a MHH lens and ultimately shape stronger and more equitable societies.



photo: Karolina Grabowska pexels.com

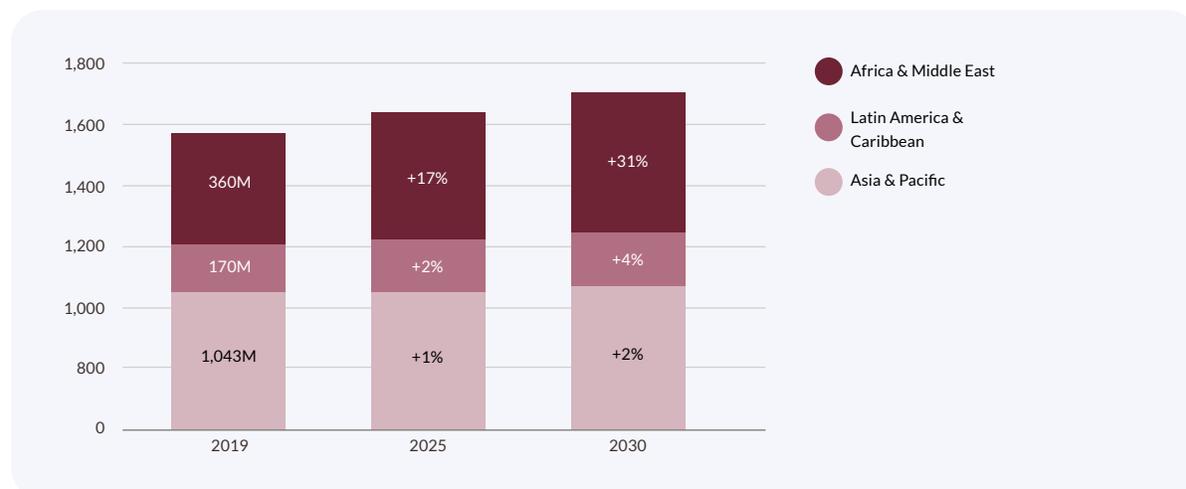
The Challenge

An issue that impacts a quarter of the world's population

Menstrual Health and Hygiene (MHH) is a vital need for the 1.9 billion women and girls who menstruate.²²

Menstruation is a reality faced by a quarter of the global population,²³ and 360 million women and girls in Africa and the Middle East.²⁴ Access to adequate menstrual products, knowledge about menstruation, toilets and handwashing facilities is therefore an essential need for women and girls. MHH affects diverse areas of women and girls' lives, including their educational attainment, employment opportunities, health outcomes and human dignity.²⁵ Improving MHH is made more urgent given that the number of women who menstruate worldwide increased by 6% in the last decade.²⁶ In Africa and the Middle East, this number is projected to grow even faster, by approximately 31% between 2019 and 2030.²⁷

Figure 1: Growth in the number of women and girls who menstruate, 2019 – 2030 (Million)²⁸



Despite this, a quarter of women and girls who menstruate worldwide lack what they need to manage their menstruation.²⁹ In low-income countries, an estimated 61% of women and girls still lack access to safe menstrual products. In Sub-Saharan Africa and South Asia, the figure is 42% and 48% respectively. As a result, women and girls often resort to using non-purpose-made products, such as cloth, rags or cotton wool.³⁰ Awareness of MHH is similarly low, with 55% of adolescent girls surveyed in Low- and Middle-Income Countries reporting limited

22. World Health Organisation, [Maternal, Newborn, Child and Adolescent Health and Ageing data](#), 2023

23. World Health Organisation, [Maternal, Newborn, Child and Adolescent Health and Ageing data](#), 2023; United Nations, [Population](#), 2023

24. Reproductive Health Supplies Coalition, [Menstrual Hygiene Landscape for selected countries](#), 2021

25. UNICEF, [Guidance on Menstrual Health & Hygiene](#), 2019

26. World Health Organisation, [Maternal, Newborn, Child and Adolescent Health and Ageing data](#), 2023

27. Reproductive Health Supplies Coalition, [Menstrual Hygiene Landscape for selected countries](#), 2021

28. Reproductive Health Supplies Coalition, [Menstrual Hygiene Landscape for selected countries](#), 2021

29. FSG, [Improving Sanitation by Exposing Gender Inequities](#), 2018

30. Reproductive Health Supplies Coalition, [Menstrual Hygiene Landscape for selected countries](#), 2021

knowledge about menstruation before menarche (their first period).³¹ Even when women have adequate products and awareness, many lack facilities where they can safely manage their periods. Globally, 1.8 billion women and girls lack access to safely managed sanitation services and over 1.1 billion do not have basic handwashing facilities with soap and water to safely manage their periods at home, hindering progress on MHH.³² These gaps are acute in low-income countries, with 67% of the population in Sub-Saharan Africa lacking access to at least basic sanitation.³³

While MHH gaps are driven by multiple factors, access to menstrual products in particular is hindered by an underdeveloped menstrual product sector relative to similar sectors. In Ethiopia, menstrual product sales generated \$227 million in revenue in 2021,³⁴ 36% less than the estimated \$356 million generated by toilet paper sales.³⁵ Similarly, in Ghana, the menstrual product market is worth \$134 million,³⁶ just over two-thirds of the value of the toilet paper sector.³⁷ In addition to an already limited market, the growth of commercial MHH companies may be further affected by models that provide menstrual products for free, distorting competition in domestic markets and impacting the perception of product quality (see Figure 2).³⁸

Limited sector growth compounds barriers to product access – availability, affordability, acceptability and awareness – and has knock-on effects on broader MHH outcomes. It leads to low availability of different types of menstrual products that women can choose from and a lack of affordable alternatives in the market. It also links to slow progress on increasing acceptability, both of products and of menstruation as a bodily function that should be given strong regulatory importance. Finally, it perpetuates poor knowledge of menstruation and its connections to other aspects of a woman’s life, as well as harmful taboos that prevent women from fully participating in society.

Figure 2: Effects of providing free menstrual products³⁸



31. Chandra-Mouli, V. and Patel, S.V., [Mapping the knowledge and understanding of menarche, menstrual hygiene and menstrual health among adolescent girls in low- and middle-income countries](#), 2017

32. Dalberg analysis, 2023: Assumes 50% of population without sanitation & hygiene are female. Source: UNICEF and WHO, [Progress on household drinking water, sanitation and hygiene 2000-2020](#), 2021

33. UNICEF and WHO, [Progress on household drinking water, sanitation and hygiene 2000-2020](#), 2021

34. Reproductive Health Supplies Coalition, [Menstrual Hygiene Landscape for selected countries](#), 2021

35. Statista, [Toilet Paper Market](#), 2022

36. Reproductive Health Supplies Coalition, [Menstrual Hygiene Landscape for selected countries](#), 2021

37. Statista, [Toilet Paper Market](#), 2022

38. Wydick et al., [Shoing the Children: The Impact of the TOMS Shoe Donation Program in Rural El Salvador](#), 2018; Idris, [Economic Impacts of Humanitarian Aid](#), 2016



AVAILABILITY: Low availability of a range of menstrual products limits women's ability to choose options that best suit their needs and preferences. This is especially prevalent in rural areas, where menstrual products are not widely available. For example, in Ethiopia, 71% of urban populations use disposable pads versus only 23% in rural areas.³⁹ Centralised manufacturing and the high costs of last-mile distribution make it difficult for products to reach rural populations.⁴⁰ Availability is further impacted by limited product choice, as disposable pads dominate the global market. In Ghana and Egypt, disposable products (e.g., pads) constitute 98% of menstrual product sales, whereas reusable products like menstrual cups and reusable pads account for 2%. While the market share of reusables is expected to grow, disposables are likely to continue making up the majority of sales.⁴¹



AFFORDABILITY: Even in areas where products are available, they are often unaffordable. On average, women across Egypt, Ethiopia and Ghana spend 0.85% of their annual income on menstrual products.⁴² For the average woman in Germany, this would amount to spending \$390 a year on menstrual products, compared to the current \$26 spent every year.⁴³ Across LMICs, low affordability is driven by a combination of low incomes and high prices of menstrual products. On the supply side, import duties on raw materials and finished products, along with high production and distribution costs, increase product prices and limit the number of players in the market. In Egypt, the standard import duty on sanitary pads is 60%, increasing the price of products sold by international brands. However, pads imported from the EU and Turkey are exempt from import duties and make up 84% of sanitary pad imports.⁴⁴ Taxes further drive up prices for the end-consumer. In Tunisia and Morocco, menstrual products have a 19% and 20% value-added tax (VAT), respectively, relative to 7% in Germany and 0% in Australia and the UK, where pads and tampons are tax-exempt.⁴⁵



ACCEPTABILITY: MHH is further restricted by the lack of quality standards to regulate what constitutes acceptable menstrual products. In settings where women use non-purpose made menstrual products like cloths or rags, affordable products tend to be of lower quality and counterfeits undercut higher-quality products from local or international manufacturers.⁴⁶ Poor product quality is largely driven by a lack of regulated standards that set minimum requirements for menstrual products. In South Asia and South East Asia, few countries have disposable sanitary pad standards. While the African Organisation for Standardisation (ARSO) and East African Community (EAC) have issued regional standards for disposable and reusable sanitary pads, they are challenging to enforce at a national level. National standards boards often do not receive implementation guidelines and information on standards is often difficult to access, making it costly and difficult for businesses to certify their products. In particular, standards for reusables lag behind, as many LMICs have not issued national quality standards for reusable products. In Asia, only India has released standards for reusable pads.⁴⁷

39. PMA, Ethiopia 2017 dataset, 2020 (paywalled)

40. FSG, [Advancing Gender Equity by Improving Menstrual Health](#), 2018

41. Reproductive Health Supplies Coalition, [Menstrual Hygiene Landscape for selected countries](#), 2021

42. Dalberg analysis, 2023: Weighted average adjusted for relative size of population of people who menstruate. Sources: Dalberg and WASH United Analysis, 2022; Reproductive Health Supplies Coalition, [Menstrual Hygiene Landscape for selected countries](#), 2021

43. Dalberg analysis, 2023: 0.85% x per capita GNI (female) for Germany. Sources: Dalberg and WASH United Analysis, 2022; UNDP, [Gender Development Index](#), 2021

44. World Trade Organisation, [WTO Trade Analysis Online \(TAO\) tool - tariff line report for Egypt HS Code 9619](#), 2020

45. Period Tax, [Tax and campaign database](#), 2022

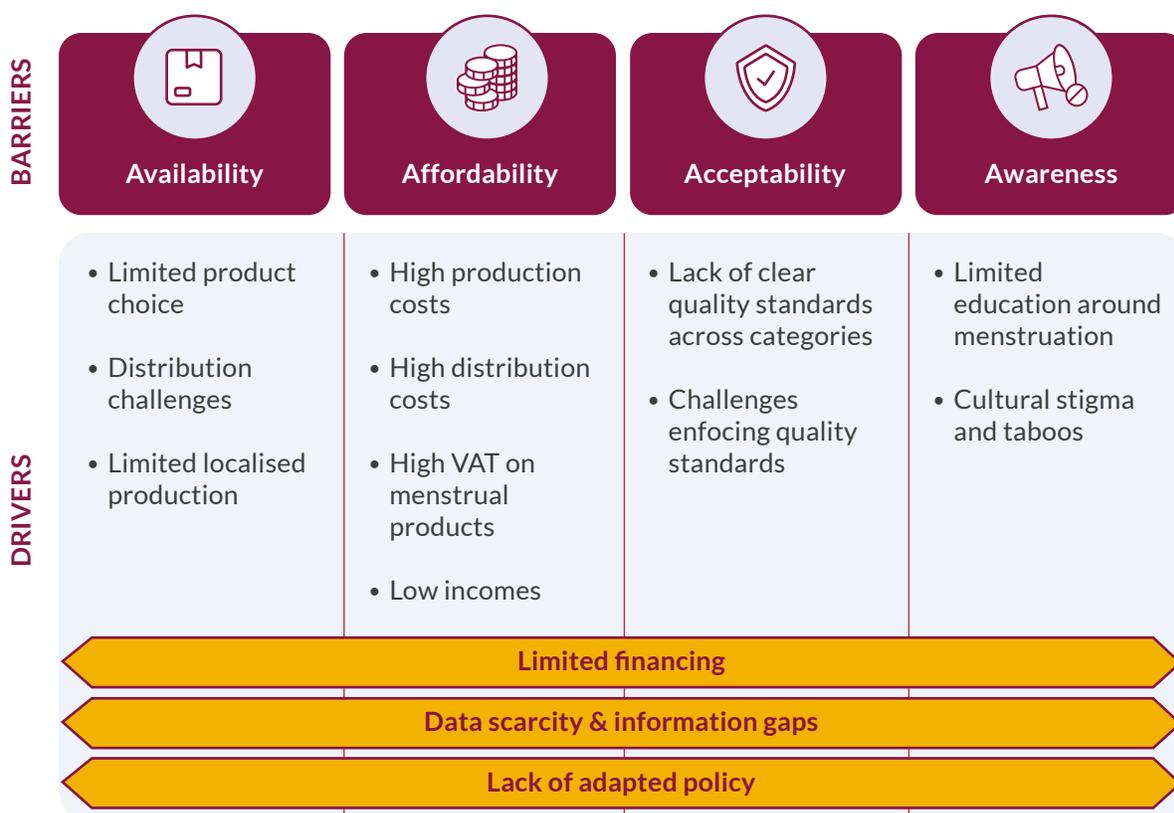
46. FSG, [Advancing Gender Equity by Improving Menstrual Health](#), 2018

47. Reproductive Health Supplies Coalition, [Development and compliance of quality standards for disposable and reusable menstrual health pads in LMICs](#), 2021



AWARENESS: Underpinning the above challenges is the lack of knowledge and awareness around menstruation. A cross-country study found that girls lack awareness of the origins of menstrual blood, with only 3% of girls in rural Rajasthan (India) being aware of menstruation before menarche (their first period).⁴⁸ This impacts the agency that women or girls have over allocating household resources towards menstrual needs, thus curtailing demand for menstrual products. This information gap is rooted in persistent stigma and taboos around periods. In Ethiopia, for example, 69% of girls report that embarrassment stops them from discussing menstruation with others.⁴⁹ In Indonesia, 54% of adolescent girls feel they should keep menstruation secret and 38% feel ashamed of their body during menstruation.⁵⁰ Prevailing stigma limits awareness-building efforts. And crucially, the lack of knowledge disempowers women and limits their bodily autonomy in how they engage with other aspects of their daily lives.

Figure 3: Key barriers to MHH access



48. Chandra-Mouli, V. and Patel, S.V., *Mapping the knowledge and understanding of menarche, menstrual hygiene and menstrual health among adolescent girls in low- and middle-income countries*, 2017

49. UNICEF, *Menstrual Hygiene Management In Ethiopia*, 2017

50. UGM Center for Reproductive Health, *Early Adolescent's Health in Indonesia: Evidence Base from GEAS-Indonesia: Baseline*, 2019

As a result, poor MHH affects women's education, employment, health and environmental outcomes, with knock-on effects for society at large. Namely:



Education: The availability of menstrual products and facilities in schools, affects women and girls' education outcomes. In Ethiopia, approximately 1 in 10 girls miss school during their period, affecting their academic achievements.⁵¹ This equates to 1.3 million girls missing school each month. In Rwanda, a study found that 20% of schoolgirls miss approximately a quarter of the school year due to a variety of factors, including poor MHH. These absences represent a potential GDP loss of \$115 million each year.⁵² Poor MHH is also linked to school dropouts, which have long-term impacts. Girls who leave school have limited employment opportunities, typically marry early and begin bearing children at younger ages, further reducing their ability to earn an income.⁵³



Employment: In the workplace, access to MHH significantly impacts women's employment outcomes. It can affect their work attendance, performance, advancement, and earnings.⁵⁴ For example in Rwanda, 23% of employed women report missing work as a direct consequence of not having access to menstrual products.⁵⁵ As a result, absenteeism due to menstruation can result in lost wages. In Dakar, Senegal, female market vendors report that they risk losing between \$34–70 from missed work during their periods. In the formal sector, women who were paid on a daily basis, miss an average of 2.5 days of work per month because of menstruation-related challenges.⁵⁶



Health: Menstruation is connected to other aspects of women and girls' health, particularly their sexual and reproductive health (SRH). Stigma and limited awareness of menstruation are linked with low levels of knowledge and agency over reproduction and family planning, which can result in poor SRH outcomes. Further, the use of unhygienic sanitation products may make women and girls susceptible to reproductive and urinary tract infections, which in turn may lead to infertility, birth complications and maternal mortality.⁵⁷ In addition to the deep health impacts for women, this has serious economic consequences. For instance, maternal mortality is linked with a total productivity loss of over \$5 billion in Africa. In Ethiopia alone, the economic cost of maternal mortality is estimated at \$240 million.⁵⁸

51. UNICEF, [Menstrual Hygiene Management in Ethiopia](#), 2017

52. UNFPA, [Menstrual health & hygiene: Why there is still more to be done](#), 2022

53. World Bank, [Menstrual Health and Hygiene](#), 2022

54. USAID, [WASHPaLS Menstrual Hygiene Management in the Workplace Action Research – Final Activity Report](#), 2022

55. Women Economic Empowerment Advisory Trust (WEEAT) and WaterAid Rwanda, [Feasibility Study of Reusable Sanitary Pads Development in Rwanda](#), 2022

56. Speak Up Africa, [Knowledge, attitudes and practices pertaining to menstrual hygiene management in suburban areas in the Dakar Region: Case study of the Departments of Pikine and Guediawaye](#), 2017

57. UNFPA, [Technical brief on the integration of menstrual health into SRHR policies and programmes](#), 2021

58. WHO, [Addressing the Challenge of Women's Health in Africa: Report of the Commission on Women's Health in the African Region](#), 2012, p. 50



Environment: Limited choice of menstrual products and poor access to disposal facilities can be detrimental to the environment. Pads are typically composed of up to 90% plastic. In the absence of adequate waste management systems, they end up in landfills, where it takes 500-800 years for them to break down.⁵⁹ This can have compounded environmental impacts, as the average woman uses and disposes of between 5,000 and 15,000 pads and tampons throughout her lifetime,⁶⁰ producing 50 to 150 kilograms of waste.⁶¹ For comparison, the average person discards approximately 300 toothbrushes in their lifetime,⁶² producing only 6 kilograms of waste.⁶³ Reusable menstrual products or those with biodegradable components can play an important role in supporting access without leading to environmental degradation.

Given its interconnections with multiple impact areas, a focus on MHH can improve women's opportunities, agency, and economic empowerment.



photo: Titiksha Rout pexels.com

59. Harrison, [Menstruation: Environmental impact and need for global health equity](#), 2022

60. Harrison, [Menstruation: Environmental impact and need for global health equity](#), 2022

61. Dalberg analysis, 2023. Sources: Harrison, [Menstruation: Environmental impact and need for global health equity](#), 2022; Blair et al., [An exploratory study of the impact and potential of menstrual hygiene management waste in the UK](#), 2022

62. National Geographic, [Your plastic toothbrush is a bigger problem than you realize](#), 2019

63. Dalberg analysis, 2023. Sources: Dental Tribune, [The history of plastic toothbrushes and how they pollute our planet](#), 2019; National Geographic, [Your plastic toothbrush is a bigger problem than you realize](#), 2019

Growing Momentum

Promising signs of progress on MHH

Despite the challenges, the menstrual product sector is growing - supporting this trend can improve MHH for millions of women and girls who lack it. Revenues from menstrual product sales worldwide amount to \$47.2 billion (compared to \$18.1 billion from global paper tissue sales)⁶⁴ and have increased by 8.4% in the last year.⁶⁵ In LMICs, the market is growing at an even faster rate. In the last five years, revenues from menstrual product sales increased by an average of 38% across Côte d'Ivoire, Egypt, Ethiopia, Ghana, Morocco, Rwanda, Senegal and Tunisia.⁶⁶ This growth is driven by rising demand amongst the large addressable market of women and girls of reproductive age that lack access to menstrual products, combined with rising incomes and growing awareness of MHH.

AVAILABILITY of a range of suitable menstrual products is improving, with the rise of innovative companies that provide a range of products and services. Local and international companies are increasingly producing and selling menstrual products designed for and catering to customers in LMICs, enhancing women's product choice. Companies such as AFRIPads leverage localised production to sell affordable and sustainable products – reusable pads, and period underwear – to customers across Africa.⁶⁷ Daye, a UK-based company, develops bio-degradable and pain-relieving pads and tampons. Another group of enterprises are addressing the challenge of last-mile distribution for menstrual products, making them more widely and consistently available.⁶⁸ For example, Kasha and Healthy Entrepreneurs deploy networks of agents to sell and distribute health and personal care products and services, including menstrual products, to customers in communities across East and West Africa. By using a decentralised delivery model, they can navigate infrastructure challenges, reduce transportation costs and bring products directly to communities, thereby reducing costs for end-consumers.⁶⁹ In India, Saral Designs combines local production and distribution to sell menstrual products in rural areas. It has designed automated machines that can manufacture sanitary pads at a decentralised scale and provide these to women in rural communities.⁷⁰ The rise of these solutions has promoted growing investment opportunities in the menstrual product sector that catalytic funders and investors can help scale (see Table 1).

64. Statista, [Paper Tissue Market](#), 2022

65. Statista, [Feminine Hygiene Market](#), 2022

66. Statista, [Feminine Hygiene Market](#), 2022

67. Be Girl, [2022 Annual Impact Report](#), 2022; AFRIPads, [Our impact](#), 2022

68. Dalberg analysis, Interviews and review of company websites, 2022-2023

69. Dalberg analysis, Interviews and review of company websites, 2022-2023

70. Saral Designs, [Saral Designs - Home](#), Accessed 03.2023

Table 1: Overview of innovative MHH companies (non-exhaustive)  <100 employees  100-200  200-500  500+

Category	Name	Geography	Description	Funding level ⁷¹	# of Staff ⁷²
Disposable menstrual product producers		India	Social enterprise that enables women to produce and distribute affordable, high-quality and compostable sanitary pads within their communities by providing the necessary technology, training, supply chains and raw materials.	Raised \$435,000 from Grand Challenges Canada; among other investments.	
		UK, US	Company producing innovative menstrual products, including tampons that are plastic-free, biodegradable and pain-relieving.	Raised \$17.1 million ⁷³ from multiple investors, including Cross-Border Impact Ventures.	
		India	Company that develops automated machines that produce sanitary pads automatically and at a decentralised scale, facilitating domestic production and distribution.	Raised investments from individual angel investors in 2016; support from Millennium Alliance (USAID, DFID, FICCI).	
		Bangladesh	Manufacturer of Joya disposable sanitary pads (among other products), which are more affordable than many other products in the market.	Track record of backing from USAID.	
		Kenya	Social enterprise producing disposable menstrual products; also runs non-profit programmes in Kenya to provide adolescent girls with sanitary pads and health education.	Received a \$2.6 million grant from BMGF, Grand Challenges Canada in 2016, ⁷⁴ among others.	
Reusable menstrual product producers		Uganda	Social enterprise that produces affordable, reusable and quality-certified menstrual kits in Uganda, and sells them across a range of LMICs.	Raised impact investments from Opes Impact Fund (\$200,000) and The Case for Her; individual angel investment (\$50,000).	

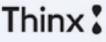
71. Dalberg analysis, Interviews and review of company websites, 2022-2023

72. Dalberg analysis, Interviews and review of company websites, 2022-2023

73. Crunchbase, [Daye - Crunchbase Company Profile & Funding](#), Accessed 03.2022

74. Forbes, [How One Woman Is Starting A Menstrual Revolution In Kenya](#), 2018

(Continues)

Category	Name	Geography	Description	Funding level	# of Staff
Reusable menstrual product producers		Ghana, Kenya, Mozambique	Women-led social enterprise that produces reusable menstrual products (menstrual kits, period underwear, reusable pads) and supports educational initiatives in partnership with governments, NGOs, and international organisations.	Raised over \$1.5 million from impact investors; additional market development grant from Grand Challenges Canada. ⁷⁵	
		Afghanistan, Bangladesh, India, Malawi Nepal, South Africa, Uganda, Zambia	Danish social enterprise that designs, develops and supplies relief items including reusable antimicrobial pads ('Safepads') across Africa and Asia, through partnerships with in-country manufacturers.	Raised \$80,000 investment from the Topsø family and received \$85,000 in grant funding from DANIDA & The World Bank.	
		Germany, Kenya, Malawi, Nepal, Spain, UK, Uganda	Social enterprise that sells and donates menstrual cups through partnerships with NGOs. Every Ruby Cup purchased includes the donation of another cup to someone without access to safe period products.	<i>Funding information unavailable.</i>	
		US	Company that produces and distributes reusable menstruation underwear, focused primarily on high-income markets.	Raised \$26.5 million, with majority stake acquired by Kimberly-Clark. ⁷⁶	
		India	Online store that provides a broad range of high-quality, certified products including sanitary pads, tampons, menstrual cups and reusable period underwear.	Raised \$16.9 million. ⁷⁷	
		India	Manufacturer and retailer of personal hygiene products, including sanitary pads and menstrual cups. It is one of the fastest-growing personal hygiene companies in India.	Raised \$21 million from the Development Finance Corporation (DFC) and existing investors. ⁷⁸	
		Burundi, Kenya, Tanzania, Uganda	Innovative last-mile distribution business that sells health products (including menstrual products) and provides health education to predominantly rural communities in Africa via a workforce of 15,000 trained sales agents across 5 African countries.	Raised \$11 million in investments from the Phillips Foundation, DGGF and Madiro, in its latest funding round, and \$5 million in grant funding from donors including the Phillips Foundation.	

75. Forbes, [Be Girl's Climb To Win Over Investors For Its 'Period Panties'](#), 2022

76. Crunchbase, [Thinx - Crunchbase Company Profile & Funding](#), Accessed 03.2023

77. Crunchbase, [Sirona Hygiene - Crunchbase Company Profile & Funding](#), Accessed 03.2023

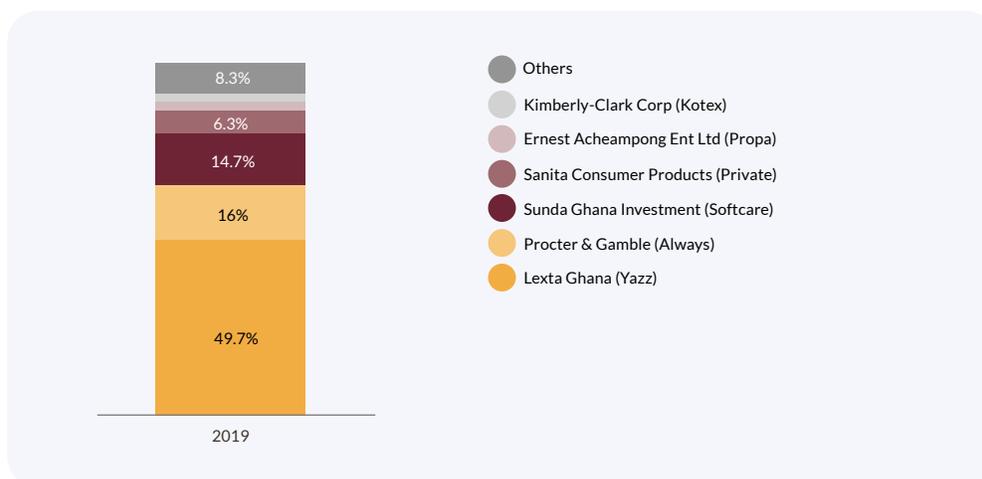
78. Mint, [US FDC, others back Soothe Healthcare in bridge round](#), Accessed 06.2023

(Continues)

Category	Name	Geography	Description	Funding level	# of Staff
Reusable menstrual product producers	 	Kenya, Rwanda	Last-mile distribution platform for access to women's health, personal care and beauty products (including menstrual products) to consumers and retailers via sales agents.	Raised funding from a variety of public donors and private investors.	

AFFORDABILITY of menstrual products is growing for women and girls in LMICs, due to localised production and conducive government reforms. The rise of local manufacturing is making menstrual products more affordable, by reducing import and distribution costs. It also provides consumers with alternatives to international brands, which are typically more expensive than local ones.⁷⁹ In Ghana, a single P&G Always pad is nearly double the price of a pad from local producer Yazz.⁸⁰ Local manufacturing contributes to this trend.

Figure 4: Manufacturer (brand) shares of disposable menstrual products sold in Ghana (2021)⁸¹



Ghana has a strong presence of local brands, with Yazz (by Lexta Ghana) making up nearly half of the domestic market share (see Figure 4).⁸² Similarly, Egypt has a strong domestic manufacturing sector and is the largest exporter of sanitary pads in Africa.⁸³ This allows consumers to choose products at different price-points and enables high access to menstrual products - 80-90% of Egyptian women use menstrual products, compared to lower levels in countries such as Ethiopia (40-45%), Rwanda (30-40%) and Senegal (50-60%).⁸⁴ In Rwanda, companies like Kosmotive are looking to address affordability challenges by producing reusable pads locally at a lower cost and creating production jobs for women. While a pack of their pads is more expensive than disposable

79. Euromonitor International, [Tissue and hygiene in Ghana](#), 2022; Euromonitor International, [Tissue and hygiene in Ethiopia](#), 2022

80. Dalberg analysis, 2022: Averages of product prices found through desk research. Sources: Market Express, [marketexpress.com.gh](#), 2022; Ghana Fruit, [ghfruit.com](#), 2022; Health Online, [healthonlineghana.com](#), 2022

81. Euromonitor International, [Tissue and hygiene in Ghana](#), 2022

82. Euromonitor International, [Tissue and hygiene in Ghana](#), 2022

83. International Trade Centre, [Trade Map - List of exported products for the selected product \(HS Code 9619\)](#), 2021

84. Dalberg and WASH United Analysis, 2022; Reproductive Health Supplies Coalition, [Menstrual Hygiene Landscape for selected countries](#), 2021

pads, they are cheaper in the long run and could save women 40%-80% of their annual spending on menstrual products.⁸⁵ Conducive government policies further improve product affordability. Many African countries have recently removed or lowered VAT on menstrual products. In Rwanda, Kenya and South Africa sanitary pads are exempt from VAT.⁸⁶ Ethiopia applies a lower VAT rate (10%) for menstrual products relative to the standard tax rate of 15%.⁸⁷ In Rwanda, the government has also removed import duties on inputs for menstrual products, which incentivises local production and reduces manufacturing costs.⁸⁸ This landscape presents an opportunity for local manufacturers to grow, and creates incentives for international companies to enter markets that were previously out of scope.

ACCEPTABILITY of menstrual products has also improved as more countries are implementing quality standards, particularly for reusables. Many African countries have quality standards for disposable sanitary products, which define the quality requirements products must meet. Although progress on reusable menstrual products has been slow, a growing number of African countries have issued standards for this category in recent years. This includes Ethiopia, Kenya, Malawi, South Africa, Tanzania, Uganda, and Zimbabwe.⁸⁹ The introduction of national quality standards – tailored to local contexts – for reusables is a crucial step to enable manufacturers to sell their products at scale. Institutional clients (retailers, multilaterals, NGOs) typically require products to be certified before selling and distributing them, and customers are more likely to trust products that are certified by government-approved standards. The existence of standards can also combat counterfeits and reduce the negative experiences that women may have with substandard menstrual products. Efforts at the national level are complemented by the introduction of standards at the regional level, for example, by the East African Standards Committee for both disposable and reusable sanitary pads.⁹⁰ At the global level, the International Standards Organisation (ISO) voted in January 2022 to establish a new technical committee to define standards for menstrual products globally.⁹¹ Supporting this progress, governments can adopt regional or international standards at a national level, and develop implementation guidelines to help manufacturers comply with new standards and enable regulatory bodies to vet products appropriately. In turn, standards can help increase the supply of a range of menstrual products, lower product costs and strengthen national menstrual product sectors.⁹²

85. Women Economic Empowerment Advisory Trust (WEEAT) and WaterAid Rwanda, Feasibility Study of Reusable Sanitary Pads Development in Rwanda, 2022

86. UK Aid, [Taxes and duties for sanitary products in Africa](#), 2020; Euromonitor International, [Sanitary Protection in Egypt](#), 2022

87. Period Tax, [Tax and campaign database](#), 2022

88. EY Tax News, [Rwanda announces requirements for VAT exemption applications](#), 2020

89. Reproductive Health Supplies Coalition, [Development and compliance of quality standards for disposable and reusable menstrual health pads in LMICs](#), 2021

90. Reproductive Health Supplies Coalition, [Development and compliance of quality standards for disposable and reusable menstrual health pads in LMICs](#), 2021

91. Reproductive Health Supplies Coalition, [ISO acts on calls to define standards for menstrual products](#), 2022

92. UNICEF West and Central Africa, [Assessing the Landscape for Menstrual Products Standards in West and Central Africa](#), 2023

AWARENESS around MHH is improving, enhancing women's bodily literacy regarding menstruation and its links to other aspects of their lives. This is largely driven by efforts from a range of public, NGO and private-sector actors. Governments are actively incorporating MHH into policy and promoting MHH education. In West Africa for example, Côte d'Ivoire, Ghana and Nigeria have stand-alone MHH national policy documents.⁹³ In Ghana specifically, the government introduced a five-year plan to promote effective MHH management in schools, enhance awareness of MHH and help girls better manage their periods.⁹⁴ NGOs and advocacy organisations are also contributing to these efforts (see Table 2 below). [WASH United](#), for example, initiated [Menstrual Hygiene Day](#), a global advocacy effort that unites organisations to destigmatise MHH and reaches hundreds of millions of people every year. In 2022, WASH United launched the Menstrual Hygiene Day Action Cycle, an annual commitment mechanism to catalyse MHH action and funding, where 93 organisations made public commitments to advance MHH.⁹⁵ Other organisations provide information on MHH. For example, Grow & Know develops illustrated books to educate children on puberty and menstruation, that are tailored to different country contexts and translated into local languages.

These efforts are complemented by private-sector initiatives that help women understand their menstruation and improve their knowledge of MHH. Several innovative apps such as Clue and Flo, enable women to track their periods and provide comprehensive, reliable information on menstruation and related aspects of women's health, such as SRH. In addition, several producers of menstrual products are complementing their sales with efforts to raise awareness around MHH. For example, AFRipads runs campaigns that have educated over 110,900 girls on MHH and trained 32,500 NGO staff, teachers and community health workers on MHH since 2010.⁹⁶ ZanaAfrica disseminates educational materials in comics and magazines,⁹⁷ while Be Girl offers learning tools and training-of-trainers education services and supported Mozambique's government to develop a national curriculum on MHH.⁹⁸ In 2015, Thinx, a US-based period underwear company, gained media attention when they were granted permission to advertise in the New York subway after their campaign was originally deemed too "suggestive" for alluding to female reproductive parts.⁹⁹ Learning from these initiatives, organisations across sectors can reinforce efforts to break down stigma and taboos by integrating programming that improves MHH knowledge into their ongoing work. For governments and NGOs, this represents an important impact opportunity; for companies, this is a critical driver of increasing menstrual product demand.

93. UNICEF West and Central Africa, [Assessing the Landscape for Menstrual Products Standards in West and Central Africa](#), 2023

94. allAfrica, [Menstrual Hygiene Management Plan Launched in Accra](#), 2021

95. Menstrual Hygiene Day, [About Menstrual Hygiene Day](#), 2022

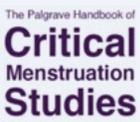
96. AFRipads, [Our impact](#), 2022

97. ZanaAfrica, [Foundation Homepage](#), 2022

98. Be Girl, [2022 Annual Impact Report](#), 2022

99. Cosmopolitan, [New York City will allow period ads on the subway after all](#), 2015

Table 2: Overview of initiatives that improve MHH awareness (non-exhaustive)

Category	Name	Geography	Description
Advocacy & networking	 Global Menstrual Collective	Global	Platform that brings together stakeholders from the public and private sectors to drive and guide investment in MHH through evidence-based advocacy. It includes representatives from international organisations, academia, government, funders, the private sector, advocacy groups and independent consultants.
	 the pad project.	Global	Non-profit behind the Academy Award-winning documentary Period. End of Sentence. focused on eliminating the stigma around menstruation. It partners with organisations to fund pad machines, implement pad programs and run workshops on SRH.
	 PERIOD. THE MENSTRUAL MOVEMENT	Global	Non-profit focused on eradicating period poverty and stigma through education and advocacy. It distributes menstrual products, supports a network of youth-led organisations and advocates for menstrual equity policies.
	 WASH United	Global	A mix between an advocacy NGO and a creative agency. Among its advocacy activities, it leads Menstrual Hygiene Day, the global movement to end period stigma, and Making Rights Real, an initiative to promote access to WASH services. WASH United also offers a free MHH Education Guide that has been used by more than 200 organisations, and reached over 1.8 million girls. The guide is available across regions in over 20 languages.
	 MH hub	Global	The world's first digital networking and knowledge platform for individuals and organisations working on MHH and female health. It provides an online space for the menstrual community and free access to a database of menstrual health resources.
	 Reproductive Health SUPPLIES COALITION	Global	A global partnership of public, private, and non-governmental organisations dedicated to ensuring that all people in LMICs can access and use affordable, high-quality supplies to ensure their better reproductive health. The Menstrual Health workstream focuses on quality standards and market analysis.
MHH education	 GROW & KNOW	Cambodia, Ethiopia, Ghana, Kenya, Laos, Madagascar, Pakistan, Sierra Leone, Tanzania, US	Organisation that develops books to educate children about puberty and periods, for a range of countries translated to local languages. They conduct participatory research and field testing, hire local artists/publishers, and work with governments to distribute their books.
	 The Palgrave Handbook of Critical Menstruation Studies	Global	Open-access handbook that provides a comprehensive and multidisciplinary view of the cultural, psychological, political and social aspects of menstruation. It is a unique resource used by a range of stakeholders including researchers, policymakers and activists.

(Continues)

Category	Name	Geography	Description
Menstrual health tracking	 	Global	Period-tracking app and resource on menstrual and reproductive health, that provides evidence-based content relevant to the link between menstruation and other aspects of women's health written by healthcare clinicians and science writers.
	 	Global	Period and ovulation tracker app, fertility calendar and pregnancy assistant with over 250 million users worldwide. It also provides insights, tips and a private community for women to discuss health topics including periods, sexuality, pregnancy and parenting.
	 	Global	Battery-powered digital watch that tracks menstrual cycles without the need for an app. Recently launched a trial with 300 adolescent girls and young women in Burkina Faso and Moldova, in partnership with UNFPA.
	 	Global	The world's first period tracker app for girls (age 10+) that provides age-appropriate information about menstruation, in a way that is engaging and personalised.



photo: Luis German pexels.com

In parallel, the evidence base for MHH has grown. Substantial advances have been made in data collection efforts to track ongoing progress on MHH and identify existing gaps. The Landscape and Projection of Reproductive Health Supply Needs (LEAP), for example, recently estimated the future use and costs of reproductive health supplies including MHH.¹⁰⁰ In 2020, the Performance Monitoring for Action (PMA) project created the first survey platform that collects comprehensive data on how and where MHH is managed, and how this differs across age and wealth groups.¹⁰¹ Furthermore, the WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP), a leading source of comparable WASH estimates, recently expanded its database to incorporate harmonised MHH indicators.¹⁰² In addition to MHH data, a growing number of MHH reports have been released. In 2018, FSG published a comprehensive study on the state of MHH.¹⁰³ Since then, Mann Global Health and the Reproductive Health Supplies Coalition released a landscaping report on the supply-side drivers of menstrual product access,¹⁰⁴ and USAID released a technical brief on the links between MHH and other programming areas, including reproductive health, WASH, education and women's economic empowerment.¹⁰⁵ In 2023, Hystra published a report shedding light on the menstrual product market across the Global South, and WASH United is set to release a series of thematic briefs on how menstruation is interconnected to other development areas. Building on these efforts, the Global Menstrual Collective seeks to increase evidence-based advocacy and collaboration, by bringing together representatives from UN organisations, academia, government, funders, the private sector and advocacy groups.¹⁰⁶

Growing momentum is encouraging investors to step up and mobilise around MHH. The growth of the menstrual product sector and the rise of innovative solutions has attracted more funders that are looking to harness the market and impact opportunity in the space. For example, The Case for Her, an impact investor focused on MHH and female sexual health and pleasure, has funded MHH interventions and menstrual product companies for several years, including Be Girl, AFRIPads, and the period tracker app Clue.¹⁰⁷ Another impact investor focused on transformative women's health technology solutions, Cross-Border Impact Ventures, recently invested \$3 million in Daye.¹⁰⁸ Overall, four leading menstrual product startups alone have raised a collective total of \$75 million in funding over the past decade, and MHH product multinationals are actively looking to grow the space.¹⁰⁹

The rise in private investments is coupled with increased funding from donors. The Bill & Melinda Gates Foundation (BMGF) has supported a series of MHH-related grants, while USAID funds the provision of menstrual products across communities, schools and workplaces, implements programmes to reduce stigma around MHH and contributes to ongoing research efforts.¹¹⁰ Its recently released [2023 Gender Equality and Women's Empowerment Policy](#) recognises MHH as vital to advancing gender equality in education, humanitarian emergencies and WASH.¹¹¹ The Agence Française de Développement (AFD) has also started to explore MHH opportunities in Africa and designed a Development Impact Bond to fund MHH programmes in Ethiopia.¹¹² Grand Challenges Canada has also invested

100. Reproductive Health Supplies Coalition, [Menstrual Hygiene Landscape for selected countries](#), 2021

101. Performance Monitoring for Action (PMA), [Menstrual Hygiene Management](#), 2022

102. WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP), [Menstrual Health](#), 2021

103. FSG, [Advancing Gender Equity by Improving Menstrual Health](#), 2018

104. Mann Global Health & Reproductive Health Supplies Coalition, [Landscaping supply side factors to menstrual health access](#), 2021

105. USAID, [Menstrual Health and Hygiene Technical Brief](#), 2022

106. Global Menstrual Collective, [Who We Are](#), 2022

107. Dalberg analysis, Interviews and review of company websites, 2022-2023

108. Dalberg analysis, Interviews and review of company websites, 2022-2023

109. Dalberg analysis, Interviews and review of company websites, 2022-2023

110. USAID, [Six Ways USAID is Committing to Menstrual Health and Hygiene](#), 2022

111. USAID, [2023 Gender Equality and Women's Empowerment Policy](#), 2023

112. Agence Française de Développement, [One way to reduce gender inequality? Menstruation education](#), 2022

in SMEs, including AFRIpads and ZanaAfrica, to support the design of menstrual products that meet the needs of individuals across LMICs.¹¹³ Building on this momentum, the UN's recently established Sanitation and Hygiene Fund (SHF) is dedicated to achieving universal access to sanitation, hygiene and menstrual health through market-based approaches. SHF works with LMICs to build robust sanitation economies and MHH marketplaces across Africa and Asia. They do this by working in partnership with governments, development finance institutions and the private sector to tackle barriers to inclusive growth in this space. As traction continues to grow, other funders are likely to find compelling arguments to mobilise around the issue.

Figure 5: Case Study on the Sanitation and Hygiene Fund¹¹⁴

	
Description	<p>The Sanitation & Hygiene Fund (SHF), a UN hosted fund, is dedicated to achieving universal access to sanitation and hygiene, including MHH through the development of sanitation economies and menstrual hygiene marketplaces.</p>
Objectives	<ul style="list-style-type: none"> ● Catalyse investment into sanitation, hygiene and MHH through tailored technical advice on enabling environments & pipeline development ● Engage MBDs, DFIs and institutional investors to increase MHH financing ● Unleash and capitalise the economic power of women, securing their voice and place in the value chain to improve outcomes for themselves and business
Impact	<ul style="list-style-type: none"> ● More individuals provided with inclusive sustainable access to improved sanitation, hygiene and MHH ● Increased investments in the sanitation economy, including the MHH sector

113. Grand Challenges Canada, [Empowering Women and Girls by Investing in Menstrual Health](#), 2016

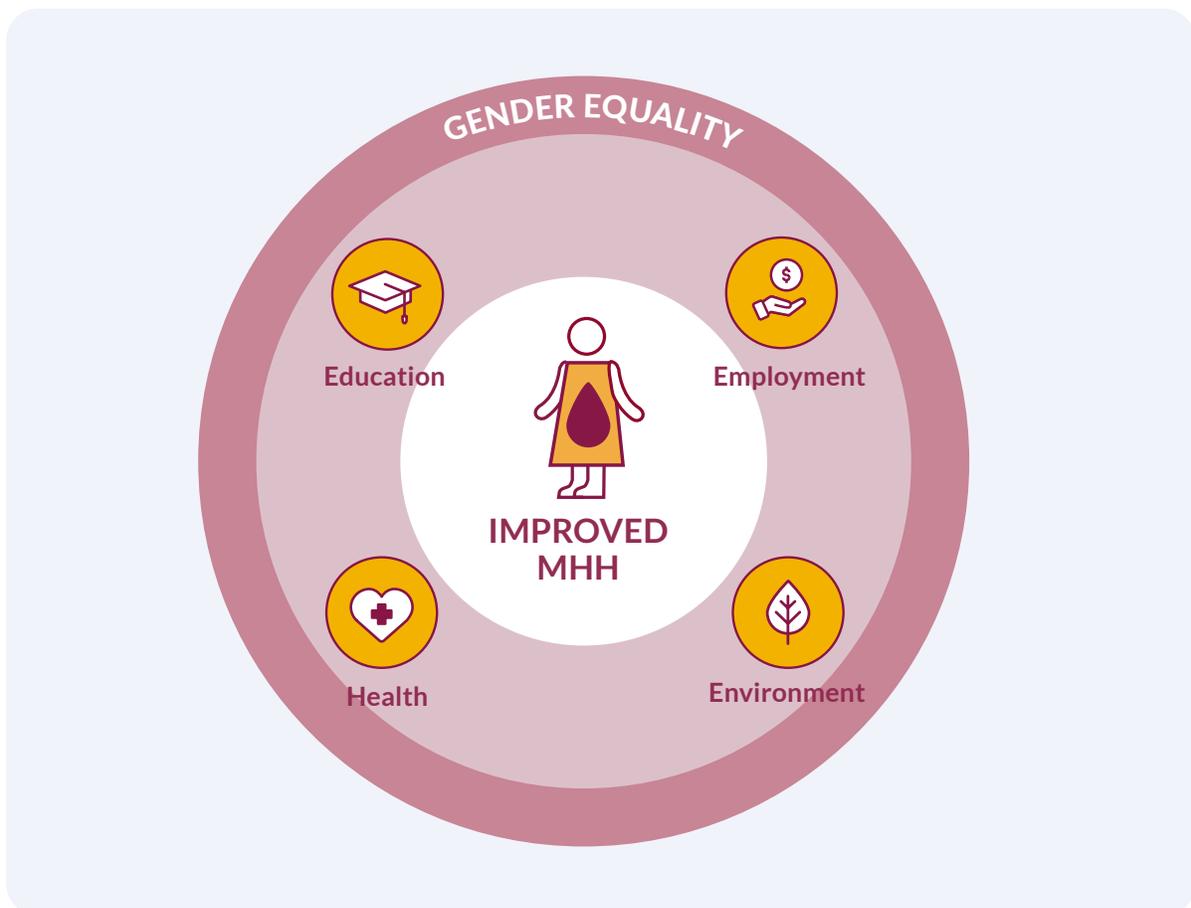
114. Dalberg analysis, Interviews and review of company websites, 2022-2023

The Opportunity

Driving cross-cutting impact by adopting an MHH lens

Building on this momentum, a focus on MHH represents a unique opportunity to catalyse impact across development areas and advance gender equality. Increasing funding and investment towards MHH can generate layers of impact. Firstly, it can enhance women's knowledge of menstruation and access to menstrual products and services. This can then generate cascading impacts on women's education, employment and health outcomes, and has the potential to improve environmental sustainability. In advancing these outcomes, MHH can play a pivotal role in promoting female empowerment and gender equality and fostering widespread benefits for nations and society.

Figure 6: Cross-cutting impacts of a MHH lens



MENSTRUAL PRODUCT ACCESS

Investing in and partnering with innovative menstrual product manufacturers could amplify existing efforts to increase women’s awareness of and access to a wider variety of affordable products. Several companies are producing more sustainable and affordable sanitary products to universalise access. Through its automated machines, India-based Saral Designs has produced and sold more than 17 million sanitary pads,¹¹⁵ while Uganda-based AFRIPads has reached 5 million women and girls with their reusable menstrual kits since 2010.¹¹⁶ Other SMEs, such as Kasha (see Figure 7), are enhancing access to affordable menstrual products through innovative distribution models that deploy a workforce of sales agents to sell products in local communities. These efforts to scale product access are complemented by campaigns from companies – including AFRIPads, ZanaAfrica and Be Girl – to educate women and girls about menstruation, increasing their body literacy and awareness of the range of product options available to them. Providing financial support (e.g., innovative grants, equity, concessional debt) and technical assistance can play a pivotal role in scaling these business models and expanding the number of women with access to suitable menstrual products.

Figure 7: Case Study on Kasha and its impact on menstrual product access¹¹⁷

	
Description	<p>Kasha is a last-mile distribution platform that provides access to women’s health, personal care and beauty products (including menstrual products) to consumers and traditional retailers (e.g., pharmacies) via sales agents. Approximately 5-10% of their revenue is accounted for by menstrual products.</p>
Impact	<p>Increased access to menstrual products</p> <ul style="list-style-type: none"> ● Women and girls are given access to a greater range of menstrual products that are discreetly packaged and more affordable than those provided via traditional retailers ● There is improved awareness of MHH, given Kasha’s commitment to train agents on MHH education and sales

115. Saral Designs, [Impact Projects](#), 2022
 116. AFRIPads, [Our impact](#), 2022
 117. Dalberg analysis, Interviews and review of company websites, 2022-2023



EDUCATION

Increasing access to MHH also presents an opportunity to improve education outcomes for girls. School attendance can be strengthened through the provision of adequate menstrual products, education around menstruation alongside sanitation and hygiene facilities for girls and boys. A two-year research trial conducted by the School of Oriental and African Studies (SOAS) in partnership with Plan International Uganda showed that better reproductive health education and access to sanitary products – in this case, reusable pads produced by AFRIPads – increased girls’ school attendance by 17% across eight schools in Uganda.¹¹⁸ Be Girl, a producer of reusable menstrual products, similarly combines its products with educational material and campaigns (see Figure 8). In addition, access to safe, clean toilets and handwashing facilities is an equally important element of MHH and affects girls’ ability to manage their menstruation and learning outcomes. In Bangladesh, a randomised control trial in schools showed that a comprehensive MHH programme that provided sanitation facilities, MHH education and support in schools significantly reduced absence rates and the likelihood of girls dropping out of school before grade 8.¹¹⁹ Increased educational attainment, in turn, generates better employment opportunities for women later in life. In Sub-Saharan Africa, an additional year of schooling is estimated to generate a 13.5% increase in future earnings for women.¹²⁰ In Ethiopia, this would translate into \$12 billion in additional economic output, an increase of 5%, assuming that the 84% of girls who do not complete secondary education in Ethiopia were in school for another year.¹²¹

Figure 8: Case Study on Be Girl and its impact on education¹²²

	
Description	Be Girl is a Mozambique-based, women-led social enterprise that produces and distributes reusable menstrual products. Through partnerships with governments, NGOs, and international organisations, they have distributed over 500,000 such products, and reached over 300,000 boys and girls with their MHH related educational services and materials.
Impact	<p>Improved educational outcomes</p> <ul style="list-style-type: none"> ● School girls benefit from improved reproductive and menstrual health knowledge and reduced gender-based discrimination, through MHH learning materials and qualified MHH educators ● Girls’ school attendance and education outcomes are improved, through access to reusable menstrual pads, improving girls’ mobility

118. Dolan & Tofaris, [Keeping African girls in school with better sanitary care](#), 2018

119. Sol et al., [Breaking down menstrual barriers in Bangladesh: Cluster RCT evidence on the school attendance and wellbeing of adolescent girls](#), 2021

120. World Bank, [New comparable dataset finds that investments in education, tertiary in particular, lead to higher earnings](#), 2021

121. Dalberg analysis, 2023. Sources: World Bank, [Population, female](#), 2019; World Bank, [GNI, PPP \(current international \\$\)](#), 2019; UNDP, [Gender Development Index](#), 2019; UNESCO, [Data - Upper secondary completion rate \(female\)](#), 2019

122. Dalberg analysis, Interviews and review of company websites, 2022-2023



EMPLOYMENT

Improving MHH at the workplace can increase women's attendance and productivity, contributing to economic growth. By providing access to menstrual products and sanitation and hygiene facilities – adequate, lockable toilets and handwashing facilities – in the workplace, companies can increase women's workforce participation and productivity. In Egypt, a Business for Social Responsibility (BSR) intervention to improve general- and menstrual-health management for female employees in a textile factory showed a return of \$4 for each \$1 invested in MHH education and product access in the workplace.¹²³ Savings resulted primarily from reduced turnover and absenteeism among female employees, while factory managers also noted a drop in the rate of production errors. Similarly, a USAID intervention to improve workplace MHH management in Kenya reported a return of \$1.5 for each \$1 invested, finding that the number of female employees that missed part of their workday for menstruation-related reasons dropped by 89%.¹²⁴ It also increased the number of female employees that reported improvements in their job satisfaction from 59% to 98%.¹²⁵ Across Côte d'Ivoire, Egypt, Ethiopia, Ghana, Morocco, Rwanda, Senegal and Tunisia, improving MHH conditions and consequently increasing women's work attendance by one day every month could increase GNI by \$27 billion.¹²⁶

Applying an MHH lens also presents an opportunity to create job opportunities in the menstrual product sector, particularly for women. For example, Soothe Healthcare, a manufacturer and retailer of menstrual products in India, employs over 1,000 people¹²⁷ and Real Relief, a social enterprise that designs, develops and supplies reusable antimicrobial pads ('Safepads'), helps employ approximately 300 production and operations staff across 8 locations in Africa and Asia.¹²⁸ Beyond manufacturing, supporting the expansion of a distributor of menstrual products could create between 500-2,000 jobs in a single country such as Côte d'Ivoire within two years.¹²⁹ For example, Healthy Entrepreneurs, a last-mile distribution business that sells health products (including menstrual products) currently employs 15,000 sales agents to serve customers in rural communities across East Africa (see Figure 9). Through this work, agents reported that their incomes doubled, self-esteem increased and skills improved. In 2022, they launched operations in Burundi in collaboration with the Dutch embassy and are on track to hire over 2,500 sales agents by the end of 2023. This follows a similar trajectory to their operations in Uganda, where they currently employ over 11,000 agents.¹³⁰ Kasha, another last-mile distribution SME that focuses on women's health personal care and beauty products, currently employs over 1,000 staff in Rwanda and Kenya alone, with plans to further expand their operations and agent workforce.¹³¹

123. Yeager, [HERproject: Health enables returns. The business returns from women's health programs](#), 2011

124. USAID & Iris Group, [Menstrual Hygiene Management in the Workplace](#), 2022

125. USAID & Iris Group, [Menstrual Hygiene Management in the Workplace](#), 2022

126. Dalberg analysis, 2023. Sources: UNDP, [Gender Development Index](#), 2019; ExcelNotes, [2022 Archives](#), 2022; World Bank, [Population, female](#), 2019; World Bank, [GNI, PPP \(current international \\$\)](#), 2019

127. [Soothe Healthcare](#), Accessed 06.2023

128. Dalberg analysis and Interviews, 2022-2023

129. Dalberg analysis and Interviews, 2022-2023

130. Dalberg analysis and Interviews, 2022-2023

131. Dalberg analysis and Interviews, 2022-2023

Figure 9: Case Study on Healthy Entrepreneurs and its impact on job opportunities¹³²

	
Description	Healthy Entrepreneurs is a Dutch innovative distribution business that sells health products (including menstrual products) and provides health education to predominantly rural communities in Africa via a workforce of sales agents. Approximately 5-10% of their sales are menstrual products.
Impact	Increased job creation and improved working conditions <ul style="list-style-type: none">• Healthy Entrepreneurs have the potential to create between 500 - 2,000 jobs within two years for sales agents by expanding into a new market• Workers get access to affordable healthcare and are subject to decent work standards• Workers receive training on business skills and financial management and access to credit



photo: Allan Watsworth unsplash.com

132. Dalberg analysis, Interviews and review of company websites, 2022-2023

Improved MHH is also closely linked to better health outcomes for women, including those related to SRH and pain management. Enhanced access to suitable menstrual products reduces the risk of adverse health outcomes, including reproductive and urinary tract infections that can lead to future infertility and birth complications.¹³³ Similarly, MHH affects maternal health, as heavy menstrual bleeding is linked to anaemia – a leading contributor to maternal morbidity in LMICs. MHH is also an important outcome and enabler of SRH and family planning outcomes. Irregularities and disorders associated with menstruation, such as fibroids, endometriosis and polycystic ovary syndrome can impact fertility, while abnormal bleeding can point to underlying health issues. Contraceptive products designed to take into account women’s bleeding preferences can have greater uptake and continued use. Beyond biology, there are also clear social linkages. Improved knowledge about MHH and the reproductive cycle, alongside efforts to tackle stigma and taboos, can improve women and girls’ agency over reproduction, family-planning decisions and contraceptive use.¹³⁴ In light of this trend, companies are emerging that provide a comprehensive basket of products to tackle women’s health needs. Kasha, for example, not only sells a range of menstrual products but also distributes pharmaceuticals, contraceptives and fertility supplements. A number of innovators are breaking barriers further by tackling menstrual pain management. One prominent example is Daye (see Figure 10), which has produced reusable tampons that are coated in CBD¹³⁵ oil to reduce period cramps.

Figure 10: Case Study on Daye and its impact on health¹³⁶

Daye	
Description	Daye is a UK-based designer and distributor of innovative sustainable sanitary products, such as biodegradable sanitary pads and tampons. They offer product lines that provide pad- and tampon-based menstrual pain management as well as at-home vaginal microbiome screening.
Impact	<p>Improved health outcomes</p> <ul style="list-style-type: none"> ● Reproductive health improves and risk of infection is reduced, due to convenient at home screening for vaginal bacteria and microbes ● Women and girls have greater access to menstrual pain management, through Daye tampons coated in CBD oil that reduces period cramps

133. World Bank, Menstrual Health and Hygiene, 2022

134. UNFPA, [Technical brief on the integration of menstrual health into SRHR policies and programmes](#), 2021

135. Cannabidiol (CBD) oil is a compound found in the cannabis plant, with pain-relieving and anti-inflammatory properties

136. Dalberg analysis, Interviews and review of company websites, 2022-2023



ENVIRONMENT

Finally, innovation in the menstrual product sector offers a pathway for improved environmental sustainability.

Increased adoption of reusable and biodegradable menstrual products can help reduce the existing environmental footprint of disposable products. Disposable menstrual products contribute more than 6% of the sewage-related debris around waterways and beaches.¹³⁷ Although most sanitary pads are not flushable and consist of 90% plastic,¹³⁸ studies among schoolgirls in Ethiopia find that 69-78% of them dispose of sanitary pads in latrines.¹³⁹ In India alone, an estimated 121 million women and girls use an average of eight disposable, non-compostable pads per month, generating 113,000 metric tons of annual menstrual waste.¹⁴⁰ Real Relief and AFRIPads, for example, are tackling this problem by manufacturing high-quality, reusable sanitary pads that directly contribute to reduced material use, plastic pollution and waste generation.¹⁴¹ Another company, Daye, packages biodegradable tampons in renewable sugarcane applicators and has developed the world's first flushable tampon wrappers.¹⁴²

Figure 11: Case Study on Real Relief and its impact on environmental sustainability¹⁴³



137. WoMena, [What is the environmental impact of menstrual products](#), 2019

138. Harrison, [Menstruation: Environmental impact and need for global health equity](#), 2022

139. Elledge et al., [Menstrual Hygiene Management and Waste Disposal in Low and Middle Income Countries—A Review of the Literature](#), 2018

140. PATH, [Management of Menstrual Waste](#), 2017; WaterAid, [menstrual-waste-management in India](#), 2019

141. Real Relief, [Menstrual health and hygiene](#), 2022; AFRIPads, [Our impact](#), 2022

142. Daye, [Organic & Period Friendly Tampons](#), 2023

143. Dalberg analysis, Interviews and review of company websites, 2022-2023

GENDER EQUALITY

Across these areas, improving MHH can advance gender equality, with cascading impacts on economies and societies. Access to adequate MHH resources, coupled with increased awareness, education and de-stigmatisation of MHH, reduces the risk of harassment and gender-based violence and enables women and girls to move freely during their periods. Through greater availability and affordability of high-quality menstrual products, women have more agency to choose the products that best suit their needs. Ultimately, improved MHH has the potential to increase women's social and economic participation, in turn resulting in greater empowerment and gender equality. A World Bank study estimates that in 2022, GDP per capita would be 20% higher if gender employment gaps were closed.¹⁴⁴ A forward-looking study published by the 2X Challenge further forecasts that closing the gender labour gap could add 26% to annual global GDP in 2025.¹⁴⁵

144. World Bank, [A Gender Employment Gap Index \(GEGI\): A Simple Measure of the Economic Gains from Closing Gender Employment Gaps, with an Application to the Pacific Islands](#), 2022

145. 2xGlobal, [2X Challenge](#), Accessed 03.2023

The Way Forward

Guidance for companies, governments, funders and investors

Although the challenge is significant to improve MHH for the 500 million women and girls that lack it, current momentum presents an opportunity for stakeholders across sectors to step up their support.¹⁴⁶ To promote further sector growth and catalyse impact in the private sector, national governments, funders and investors must work together to bolster MHH efforts. Each stakeholder group can play a vital role.



Private companies looking to enter the menstrual product sector in LMICs can focus on scaling local production models to help build domestic capacity, de-centralise manufacturing, and reduce production costs. They can also leverage innovative distribution models to reach customers in rural areas at a lower cost and integrate awareness-building efforts as part of their model to stimulate demand. Companies in other sectors can purchase and provide local menstrual products and services to their employees, thereby improving women's work attendance and productivity, alongside boosting company performance.



National governments can drive reforms around taxes, import duties and quality standards for menstrual products. Recognising that reusable products are both more environmentally friendly and longer-term affordable for users, governments should pay special attention to supporting this category. They can do so by introducing national quality standards that local manufacturers can certify their products with. Governments can also consider providing financial incentives to support the growth of MHH companies and strengthen domestic menstrual product sectors. Further, governments can develop MHH policies and incorporate MHH considerations across policy domains such as education, health and WASH, in collaboration with actors in the MHH space. For example, governments could mandate the supply of menstrual products in all public toilets where toilet paper is available, including government buildings. Finally, governments can play a vital role in raising awareness around menstruation as well as breaking down stigmas and taboos, by working with NGOs and companies to run education campaigns in schools, workplaces and through public platforms.

146. FSG, [Advancing Gender Equity by Improving Menstrual Health](#), 2018



Funders and investors can layer their support and add significant value by providing funding and investment capital to help set up and scale MHH companies catering to consumers in LMICs, thereby crowding-in additional finance in the space. In particular, they can support actors that focus on localised production, innovative distribution and awareness-raising, to improve consumer agency, choice and overall product access. Funders in and adjacent to the MHH space can also coordinate efforts to strengthen the capacities of different actors focusing on MHH and improve the enabling environment for the menstrual product sector to thrive at the national level. For example, they can support SMEs operating in the menstrual product sector to develop and refine their commercial strategies and navigate regulatory requirements. In addition, they can work to build the evidence base for MHH through collaborative data-collection efforts and research to identify specific barriers and solutions to MHH. Funders also have a unique ability to influence how health research and development considers menstruation – from health product development, to trials on how different treatments impact (and are impacted by) menstruation.

Across the public and private sectors, it is essential that these actors intentionally connect with others working in the MHH space to coordinate activities, deepen impact and amplify reach. **The imperative is clear: momentum has grown and now is the time to double down to accelerate progress on menstrual health and hygiene.** The actions of different stakeholders across the ecosystem can make a tangible impact in achieving a step-change in improving the reality of menstruation for millions of women and girls around the world.



photo: Sharon Christina Rorvik unsplash.com

Annex

DEFINITIONS

Menarche: is the onset of menstruation, the time when a girl has her first menstrual period.¹⁴⁷

Menstruation: is the natural bodily process of releasing blood and associated matter from the uterus through the vagina as part of the menstrual cycle.¹⁴⁸

Menstrual hygiene management (MHM): refers to the management of hygiene associated with the menstrual process. It involves: i) using a clean menstrual management material to absorb or collect menstrual blood, that can be changed in privacy as often as necessary for the duration of a menstrual period, using soap and water for washing the body as required ii) having access to safe and convenient facilities to dispose of used menstrual management materials, and iii) being aware of the basic facts linked to the menstrual cycle and how to manage it with dignity and without discomfort or fear.¹⁴⁹

Menstrual Health and Hygiene (MHH): encompasses both MHM and the broader systemic factors that link menstruation with health, well-being, gender equality, education, equality, empowerment, and rights. These systematic factors include accurate and timely knowledge, available, safe, and affordable materials, informed and comfortable professionals, referral and access to health services, sanitation and washing facilities, positive social norms, safe and hygienic disposal and advocacy and policy.¹⁵⁰

Menstrual products: are products used to catch menstrual flow, such as pads, tampons or cups.¹⁵¹

People who menstruate: these are those who menstruate and therefore have MHH needs – including girls, women, transgender, non-binary and intersex persons. While the report focuses on women and girls' experience with menstruation, it recognises that those who menstruate may not only identify as women or girls, and that not all women and girls menstruate.¹⁵²

147. UNICEF, [Guidance on Menstrual Health & Hygiene](#), 2019

148. UNICEF, [Guidance on Menstrual Health & Hygiene](#), 2019

149. WHO/UNICEF, [Consultation on draft long list of goal, target and indicator options for future global monitoring of water, sanitation and hygiene](#), 2012

150. UNICEF, [Guidance on Menstrual Health & Hygiene](#), 2019

151. UNICEF, [Guidance on Menstrual Health & Hygiene](#), 2019

152. FSG, [Advancing Gender Equity by Improving Menstrual Health](#), 2018

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METHODOLOGY

To calculate certain figures in the report, we used the following methodologies:

- **Menstrual product purchases as a % of annual income per capita (female):** The price of 180 pads / annual income per capita (female). 180 pads is the approximate number of pads someone uses in a year.
- **Estimated GNI gain from increased earnings associated with an additional year of schooling:** Annual GNI per capita (female) x total female population x (1+ % income gained from additional year of schooling) x (1 – female upper secondary education completion rate) / total GNI for percentage growth value. Calculation assumes that the share of girls who did not complete secondary education remained in school for one more year.
- **Estimated annual GNI gain from increasing women's work attendance by one day a month:** (Annual GNI per capita (female) / annual working days) x 12 days x total female population. GNI per capita (female) is derived from the ratio of female to male wages, female and male shares of economically active population and gross national income (in 2017 purchasing power parity terms). Assumes that women in target countries miss work for one day every month, a conservative estimate based on a study which found that women who were paid on a daily basis miss an average of 2.5 days of work every month due to menstruation-related challenges.¹⁵³
- **Total kilograms of waste from sanitary pads produced by a woman in her lifetime:** Estimated # of pads used by a woman in her lifetime x 10g per sanitary pad.
- **Total kilograms of waste from toothbrushes produced by a person in their lifetime:** Estimated # of toothbrushes used by a person in their lifetimes x 20g per toothbrush.

153. Speak Up Africa, [Knowledge, attitudes and practices pertaining to menstrual hygiene management in suburban areas in the Dakar Region: Case study of the Departments of Pikine and Guediawaye](#), 2017