LANDSCAPE OF MENSTRUAL PRODUCTS

IN INDIA

UNFPA

WaterAid

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The United Nations Population Fund (UNFPA) is the United Nations sexual and reproductive health agency. The organization is guided by the mission to deliver a world where every pregnancy is wanted, every childbirth is safe and every young person's potential is fulfilled. UNFPA calls for the realization of reproductive rights for all and supports access to a wide range of sexual and reproductive health services – including voluntary family planning, maternal health care and comprehensive sexuality education.

WaterAid India (Jal Seva Charitable Foundation) is part of the global WaterAid network which seeks to improve access to clean water, decent toilets and good hygiene for everyone, everywhere.

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Abbreviations

BIS	Bureau of Indian Standards
CSR	Corporate Social Responsibility
EU	European Union
FLW	Frontline Worker
FMCG	Fast-moving consumer goods
GeM	Government e-Marketplace
GoTS	Global Organic Textile Standard
GST	Goods and Services Tax
GMP	Good Manufacturing Practices
IDI	In-depth interview
ISO	International Standards Organization
LEDP	Livelihoods and Enterprise Development Program
MHM	Menstrual hygiene management
MNC	Multi-National Companies
NABARD	National Bank for Agriculture and Rural Development's- subsidiary NAB Foundation
NABL	National Accreditation Board for Testing and Calibration Laboratories
NGO	Non-Governmental Organization
OEM	Original Equipment Manufacturer
PE	Polyethylene
PhEur	European Pharmacopeia
PUL	Poly-urethane laminate
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RKSK	Rashtriya Kishor Swasthya Karyakram
SAP	Super Absorbent Polymer
SHG	Self-help group
SME	Small and Mid-sized Entrepreneurs
SRLM	State Rural Livelihoods Mission
SVHC	Substances of Very High Concern
UNFPA	United Nations Population's Fund
UNGM	United Nations Global Marketplace
US FDA	United States Food and Drugs Administration
USP	United States Pharmacopeia
WCD	Women and Child Development

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Introduction and purpose of the study

Sanitary pads are more available to adolescent girls today than ever before. The National Family Health Survey (NFHS) 4 (IIPS, 2015-2016) showed that 57.6% of young women ages 15-24 years were using a hygienic method of protection. The NFHS-5, conducted five years later in 2019-2020, found marked increased in the use of hygienic materials – 77.3% of young women were now using safe materials, mostly sanitary pads (IIPS, 2019-2020). This increased uptake of sanitary pads were a result of multiple factors, including:

- Greater market penetration of multinational companies (MNC) accompanied by aspirational brand marketing and school based menstrual health education focused initiatives
- Availability of new price competitive and aspirational brands – domestically manufactured and imported from China and other South East Asian countries[1]
- State Government initiatives for menstrual hygiene management (MHM) focused on free distribution of low-cost pads and subsidized sales (e.g., Bihar, Odisha, Rajasthan, Maharashtra, Chhattisgarh, West Bengal) combined with awareness generation activities
- Central Government initiatives including incentive-based sales of sanitary pads through ASHAs as part of the erstwhile Menstrual Hygiene Scheme and the Rashtriya Kishore Swasthya Karyakram (by the Ministry of Health and Family Welfare); National Guidelines on MHM issued by the erstwhile Ministry of Drinking Water and Sanitation encouraging awareness and education for menstrual products uptake and installation of incinerators, and; more recently, availability of subsidized oxo-degradable sanitary pads through the Government *Jan Aushadhi* Centers
- Establishment of local manufacturing units supported by State Rural Livelihood Missions, donors and social enterprises engaged in production of manufacturing units
- Increasing mainstream media attention towards menstrual hygiene with narratives focused on sanitary pad adoption, and public support for sanitary pads by high level Government officials including the Honourable Prime Minister and film personalities

Menstrual hygiene in India has become synonymous with disposable sanitary pads because of supportive policy initiatives, market evolution, and the positioning of these products as the most hygienic and safest option. Yet, the increasing market size has not been accompanied by product development investments as market players focused on saturating existing demand with a particular range of sanitary pads (e.g., regular pads, and ultra-thin pads). Further, the diverse needs of menstruators in different geographic and socio-cultural contexts received less attention to trigger greater product development.

Anecdotal and research[2] evidence suggests that consumers received poor quality products through private, Government and NGO channels. This may be partially driven by manufacturers and suppliers

[1] *Data on country-specific import share is not available, as this is currently unregulated/ not monitored*

[2] *The supply chain study found that some products were not considered to be of good quality, hence resulted in low uptake*

offering low-cost, low-quality products in a competitive industry with shrinking margins, and a lack of understanding of 'quality' of sanitary pads amongst buying or procuring agencies, as stated by large, mid-sized and small manufacturers who have been witness to these trends. Increasing sanitary pads use has also brought to light concerns about disposal and management of menstrual waste.

Innovations in and availability of alternative menstrual hygiene products, including reusable pads made of different textiles and menstrual cups have led to increased uptake of other safe and hygienic products. However, their market share is highly limited. Uptake and use of these materials requires adequate information to potential users. Category promotions are also limited to small awareness drives conducted by marketeers and NGOs promoting these products. Further, alternative products compete with the popular and aspirational sanitary pads. A combination of the aforesaid factors has limited the reach of alternative products for adolescent girls and women across socio-economic strata.

As national ministries and state governments commit to and invest in programs for increasing access to menstrual hygiene products, accessible information about the fast-evolving product landscape is sparse. It is important to understand both the categories of products available in the Indian market and relative advantages and disadvantages for inclusion in Government programs. Procurement stakeholders also need information on appropriate criteria for procurement and methods of ensuring product quality. The abovementioned conditions are necessary to ensure that menstruators have continuous access to affordable and quality menstrual products which fulfil their needs for hygienic management of menstruation.

To address this gap in knowledge, Development Solutions and WaterAid India conducted this study to map the landscape of menstrual hygiene products in India. The study has incorporated the perspective of supply chain stakeholders to understand the barriers and facilitators for availability of good quality and affordable menstrual hygiene products. The study was supported by the United Nations Population Fund (UNFPA) as part of a larger engagement on improving the menstrual health and hygiene of adolescent girls in six States. Government stakeholders can be supported to make informed decisions about large scale programs for distribution of menstrual hygiene products with this comprehensive overview of the product landscape in the country. Government agencies and development partners can also use this information to inform procurement process as well as program design.

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Methodology

The purpose of this study was to:

- Present an overview of the menstrual hygiene product landscape in India
- Capture menstrual hygiene product supplier perspectives (across major product categories)

The product landscaping captured the supplier side perspectives, and was undertaken using qualitative methods. In-depth interviews (IDIs) were conducted with manufacturers and distributors of disposable sanitary pads, reusable sanitary pads and menstrual cups between November 2020 and March 2021. IDIs with other key stakeholders who implemented programs associated with menstrual products were also conducted. The sample details are given below:

A detailed list of respondents is included as Annexure I.

The primary data collection was supplemented with a secondary review of online retail platforms to gather additional understanding of products available in the Indian market.

A summary of various state situated menstrual health production units is enlisted as Annexure II.

Data collection was based on desk research and informed by some of the IDIs with key stakeholders. Details of each program was collated from official websites, official digital handles and credible news sources.

Stakeholder type	Number of respondents
Disposable sanitary pads manufacturers/distributors	11
Reusable sanitary pads manufacturers/distributors	8
Menstrual cups manufacturers/distributors	7
Implementing organizations/NGOs	5

3

Study Findings

The study mapped the supply side aspects associated with each category of menstrual hygiene products including disposable sanitary pads, reusable sanitary pads and period panties, and menstrual cups. The findings are presented under the following descriptive categories:

a. Product structure and materials – For each product category, the primary raw materials and product structure are elaborated. This understanding was necessary to shed light on factors contributing to the cost of the final products, supply chain challenges and dependencies (for instance, where raw materials are imported or where the supplier market is oligopolistic in nature). Information on the product structure in this document draws on primary interviews with key informants.
b. Quality assurance – Menstrual products must meet certain quality criteria as this directly impacts the health and hygiene of users. Absorbency and other performance criteria ensure that the product is *fit* for the intended purpose (i.e., absorption or collection of menstrual blood), while user guidance and quality criteria around microbiological burden and raw material safety ensure that the product is safe for use. Additional criteria around compostability and disposal guidance ensure that the product is safe for the environment when disposed (RHSC, 2021). The paper presents secondary information on quality standards of menstrual products, other quality assurance documents, and insights on compliance from primary interviews with key informants.
c. Market structure – The availability and affordability of products is intimately linked to the overall market structure including size of the market, number of players and their inter-relationships. The study sheds light on these aspects using data from secondary sources and details shared by key informants.

This paper also includes recommendations on enhancing quality compliance for all products as it was identified as a key gap from key interviews.

3.1 Disposable Sanitary Pads

3.1.1 Product structure and materials

The base product for sanitary pads is largely standardized with the following structural components:

- ***Top sheet*** is made of non-woven hydrophobic materials. While cotton and rayon can also be used for the top sheet, these materials require

more sophisticated technology and are hence not used in many products, particularly low-cost products. While non-woven materials are easily available in India, they are available in many grades (for instance, those used for disposable bags). Non-woven materials for sanitary pads should be higher grade and appropriate to use as they are in direct contact with skin.

- ***Absorbent core*** is made of wood pulp. Fluff-based pulp is used for thick sanitary pads, while air laid paper, which is highly processed wood pulp in the form of sheets, is used for ultra-thin pads. Hygiene grade wood pulp is available from four oligopolistic suppliers from Canada and the United States of America. Recycled wood pulp treated with titanium dioxide is also often used in India, but is not appropriate for use in hygiene products like sanitary pads. However, this material is cheaper and widely available through traders in India. Air laid paper is expensive and good quality material is typically imported from China.
- ***Impermeable bottom sheet*** is made of polyethylene (PE). PE is widely available in India, however, just like for non-woven materials, the PE grade used varies. Ideally, only that grade that is appropriate for use in a personal hygiene product with close skin contact should be used.
- ***Super absorbent polymers (SAP)*** are polymeric substances (typically made of sodium polyacrylate) with high absorption capacity compared to their weight. SAP is usually available in the form of gel-based sheets which are included in ultra-thin sanitary pads to enhance their absorbency manifold. SAP sheets are also mainly imported from China and procured directly by manufacturers or through importers.
- Some ultra-thin products also have an additional layer with therapeutic properties for menstrual cramp relief which include materials like graphene and Chinese herbal or Ayurvedic substances. Anion strips are also added for the same effect. However, the safety and health impact of these materials is unknown and regulations have not yet addressed these materials for use in hygiene products.
- ***Glue and release paper*** are additional raw materials, which are easily available in India. However, they should be appropriate for use with a hygiene product which not all products comply with.
- ***Packaging*** - Ultra thin, winged sanitary napkins come with a product wrapper (for each sanitary pad) whereas regular sanitary pads, and low-end varieties do not come with individual wrappers despite Solid Waste Management guidelines 2016 specifying the same. Only one of eleven respondents had introduced a resealable packet for secure storage, and oxo-degradable disposal bags as an add on.
- ***Information and Education Material*** - Market standards for information, education communication (IEC) materials have been set by large manufacturers, and are followed by many market players. Commercially available sanitary pad packets have messages that discourage disposal of products in toilets/flushing of products, encouraging the disposal of products wrapped in paper/colored paper, and promoting disposal of products in dustbins. Many packets have these instructions in text and in graphical form.

Supporting material, including extra materials for disposal are in addition to the base product and are usually provided with relief packages. Two of the 11 respondents provide a 3-fold IEC flyer in their pack.

The Bureau of Indian Standards (BIS) IS 5405:2019 also provides generic guidance for the materials as well as sizes for consumer identification purposes and most products in the market are compliant with these.

Given the current market demand for existing products, manufacturers offer variants with enhanced absorption, softness, comfort, and with odour removal or scented additives. Lower prices variants are available as fluff pads while mid to high-priced variants are ultra-thin with higher absorption owing to addition of SAP. Raw material grades may also differ across price variants. Adhesive wings have been added for use with underwear replacing the earlier belted variations that could be used without underwear. Beyond these cosmetic changes, there have not been significant changes in the raw materials used, and in the basic design and structure of the product.

3.1.2 Quality Assurance

The erstwhile BIS standard for disposable sanitary pads and the revised IS 5405:2019 provide clear quality control requirements for the product. While the BIS standard exists, it is not mandatory to follow or enforced by the Government of India. The United Nations Global Marketplace (UNGM) procurement specifications also outline quality control requirements for disposable sanitary pads that can be a reference for procurement considerations.

The study found the following with regard to compliance with specific standards and controls:

- Only seven of the 11 respondents stated that they were aware of the standard and its components, and only four reported complying with the revised standards published in 2019
- All 11 organizations complied with size requirements (fairly standardized criteria in the sanitary pad market)
- All 11 organizations conduct in-house testing for quality control
- BIS and UNGM require product pH to be within certain specified limits to minimize interference with the natural vaginal pH. BIS requires this to be done for each product batch manufactured. Ten respondents tested for pH internally (in their own laboratories), either batch-wise or at one time when raw materials are finalized. One respondent tested batches for new raw materials' pH at an external laboratory.
- Only six organizations tested for absorbency at in-house facilities, which is one of the key performance parameters under BIS and UNGM requirements. One organization relied on supplier reports on raw material for the same, which is inadequate.
- BIS and UNGM specifications both require batch-wise testing for fungal and bacterial bio-burden. Only five organizations had ever tested for this at an external lab and only one conducted this test for every batch. One reported conducting such tests annually, and just one used bio-burden tests for raw materials as an alternative.
- BIS requires products to be tested for biocompatibility against ISO 10993 once or every time the raw material is changed. Two respondents had this certification and two received the same from raw material suppliers, which is also acceptable to BIS.
- For those claiming compostability, the product needs to be certified against ISO 17088 – three respondents had this certification from an external laboratory and one ensured that raw materials were compostable.
- Five organizations had good manufacturing practice (GMP) certification for the manufacturing facility. BIS provides guidance for GMP for small scale manufacturing facilities, that none of the small manufacturers currently implement, due to poor awareness of the existing guidance and limited support to implement GMP.

The volume of products being imported from South East Asian countries and China has increased in India, though details of the quantity and quality of these products is unknown. While some of these products may meet the standards established in the country where they are manufactured, they may not necessarily comply with the BIS requirements in India. Additionally, many of the ultra-thin products have multiple layers of raw materials, including indigenous strips of medication for menstrual cramp relief intended for vaginal absorption. There is lack of clarity on the nature and safety of the materials included in these products. Critically, evidence on this front is grossly lacking.

3.1.3 Compostable materials and products

Only one organization had conducted research and development on their product and the manufacturing process to create a fully compostable product. This organization was innovating to develop a compostable plant-based SAP and was exploring the use of local materials for the absorbent core to minimize dependence on imported wood pulp. Manufacturers in the Indian market use oxo-degradable materials for the bottom sheet. However, oxo-degradable materials are not compostable, and degrade into micro-plastics when acted upon by sunlight, heat or mechanical stress. These microplastics then enter the soil and water.

Products can be tested against the ISO 17088 to ascertain compostability. A limitation, however, is that the criteria only ensures compostability under

industrial composting facilities, which do not exist in India. Some implementers have noted that while compostable products may offer a solution, they also need to be included in interventions and pad distribution schemes. The inclusion of these products need to be accompanied by segregation, collection and composting solutions to effectively management this waste. Decentralized solutions have been pilot tested with home-composting using matka composters and vermi-composting solutions. Institutional and community level deep burial solutions are also currently underway by WaterAid India in two sites (Kanker in Chhattisgarh and Dindori in Madhya Pradesh) to understand whether these are feasible waste management solutions for sanitary pads. Results from these solutions will be available with WaterAid India in August 2022.

3.1.4 Market Structure

The disposable sanitary pad market was estimated to be valued at more than INR 2800 crores, despite the market having shrunk by about 10-12% during 2020 due to COVID19. The Government procurement market was estimated to add another INR 250-300 crore worth of product procurement annually (based on budgetary allocations of State Governments for sanitary pads). While 85-89% consumer market share was held by the large MNCs (Johnson and Johnson, Procter and Gamble and Unicharm), there were more than 50 mid-tier manufacturers and many more branded and unbranded resellers who accounted for the balance of the pie[3]. For the mid-tier manufacturers, their own sales and distribution was limited, and they often supplied to multiple branded resellers. There were 5-6 regional brands having their own manufacturing, and also served as resellers. Such players were gaining market share owing to their investments in providing distribution incentives[3]. Some mid-tier manufacturers and MNCs were losing market share to these growing brands. Three key informants (large and mid-sized manufacturers) shared that despite the enormous value and growth potential of this market, profits margins were shrinking due to heavy competition from local and imported products. Such competition was leading to lower prices and also compromised quality of products.

There were over 50 brands of disposable sanitary pads operating at scale in India and countless others that are being manufactured and sold by small enterprises. Large MNCs have standardized price for the market. Regular or fluff sanitary pads were typically available in small pack sizes of 6-8 pads at INR 25-30 per pack, with each pad costing INR 3-5. Ultra-thin pads (with SAP) were available in varying pack sizes with a median of 15 pads per pack. Some MNCs had pack sizes of as many as 45-50 pads per pack targeted at higher end consumers. Ultra-thin pads were priced in the range of INR 6-10 per pad and offered higher margins to all players across the supply chain. Fluff pads priced at INR 3-5 per pad offered limited and constrained margins across the supply chain, especially for manufacturers and re-sellers (Mann Global Health, 2021) [4].

3.1.5 Manufacturing

Ten respondents reported manufacturing their own products, one of which was transitioning to external vendors. Another manufacturer imported products from China, and at the time of the interview, was exploring options from South Korea. For those respondents who manufactured their own products, manufacturing capacity varied greatly between 40,000-40,00,00,000 units per month, depending on their scale of operations. Six organizations were small scale manufacturers with decentralized units producing less than 25 lakh products every month. While the study included many small-scale manufacturers, they constituted only a fraction of the overall production capacity available in India. They had limited capacity, low price competitiveness and limited economies of scale. However, their advantage was their strong last mile reach and community networks. Four respondents had centralized industrial manufacturing units, and had their own brand(s) or were contract manufacturers for other brands. Respondents shared that there were 40-50 original

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[3] *Based on a key informant interview wherein information was shared from a paid market report and a live panel dataset accessed by the informant. The market report was developed by IMARC Group. The live panel market dataset is maintained by Nielson IQ, and has sales data for the past three years (2018, 2019, 2020). Discussions with the Nielson IQ team by WAI revealed that access to this dataset costs between INR 5 – 30 lacs depending on the details required by manufacturers and other stakeholders.*

[4] *Information from the report by Mann Global Health has been supplemented with information shared by key informants*

Increasing raw material prices and high distribution costs key drivers of shrinking margins for disposable sanitary pads

Raw material costs, especially wood pulp, is one of the key cost drivers for disposable sanitary pads. For fluff pads, raw materials account for approximately 25 percent of total price of which 35-40 percent is solely due to wood pulp. For the higher priced ultra, thin pads, air laid paper (combination of wood pulp and non-woven fibers) that forms the absorbent core is only about 15 percent of raw material cost. Hence, low-cost fluff pads are more dependent on the price of wood pulp, which is sourced from 3-4 oligopolistic suppliers globally. Additionally, over 28 percent of the retail price is contributed by distribution and retailer margins which are relatively much higher for sanitary pads due to the bulky nature of the product and promotional incentives required in a highly competitive market.

equipment manufacturers (OEM) manufacturers in India that supplied to multiple private labels, and emphasized the many distributors who imported products from China and other Southeast Asian countries for sale in India. Import had increasingly become more viable due to increasing demand and decreasing margins on local production owing to:

- Increasing price competitiveness
- Increasing cost of raw material and supply chain logistics
- Unfavourable taxation as a result of the zero GST on sanitary pads that limits manufacturers' ability to claim input tax credit
- Favourable taxation for imports
- Assured quality of products from only a few trusted suppliers

3.1.6 Sales and Distribution

Seven of the eleven respondents shared that they had some distribution reach in rural markets while the remaining respondents focused on peri-urban locations and tier 1 cities.

Six respondents had existing presence in Madhya Pradesh, Odisha, Rajasthan, Bihar, Chhattisgarh and Telangana[5], and another three were willing to supply to these states to meet demand.

Five respondents who directly sold the products they manufactured to users, had commercial sales and distribution programs funded by donors, Corporate Social Responsibility (CSR) initiatives , crowdfunding campaigns and others. For commercial sales:

- Two respondents sold exclusively through e-commerce platforms
- One OEM manufacturer sold through business-to-business (B2B) channels including online platforms like Alibaba, Indiamart
- Seven respondents (all small-scale manufacturers) sold door to door through community women networks
- Two respondents sold through traditional FMCG trade channels such as super-stockists and stockists
- Seven respondents also had institutional sales including sales to State Government programs, NGOs and CSOs

Six respondents were unaware of the Government e-marketplace (GeM) portal that facilitates Government procurement of goods and services. Of the remaining five that were aware GeM, four respondents were registered on the portal, and highlighted that they found the process challenging. Three of these organizations had previously supplied to Government programs, and two had set up small scale manufacturing units under Government programs. A respondent who exclusively supplied compostable products was advocating for creating a category for compostable products within GeM. Only one organization that was aware of GeM had not registered due to a mismatch in product sizes.

[5] *These six States are the focus of the UNFPA support work on improving menstrual health and hygiene among adolescent girls undertaken by WaterAid India (2020-2022)*

3.2 Reusable Sanitary Pads and Period Panties

3.2.1 Product structure and materials

Reusable sanitary pads and period panties (also known as menstrual underwear), have a similar overall structure as disposable sanitary pads, comprising three layers:

- ***Top layer*** which cames in direct contact with the vulvar region – five of eight manufacturers in this category used cotton, of which only one used Global Organic Textile Standard (GOTS) certified organic cotton. Others used fleece, polyester, viscose and other blended fabrics. The materials varied widely in terms of price and comfort to the user (particularly in terms of material softness, bunching, heat generation)
- ***Absorbent layer*** was made with non-woven viscose, highly absorbent microfibers, cotton, fleece and a variety of blended materials for enhancing absorption. Some designs allowed absorbent layers to be added on top to provide additional protection to absorb heavy flow, while other designs had multiple layers between the top and bottom sheets
- ***Bottom layer*** for most products was made with poly-urethane laminate (PUL), which was available from industrial suppliers. One manufacturer had an additional treated fabric for allowing better grip and one other used only cotton in order to have a completely compostable product.
- ***Packaging*** – Four organizations provided a bag for storage and disposal; two provided a plastic Ziplock bag while the other two provided cloth bags. The provision of a storage bag was increasingly considered an important product add-on to aid users to store soiled reusable pads for later washing
- ***Information and Education Material*** - All eight respondents in the reusable category included detailed IEC on product usage, storage and washing with their products, with most offering vernacular versions basis their region of operation. One organization had developed a mobile application to support village level entrepreneurs with continuing IEC. For community-based projects, all manufacturers provided hands-on training to trainers and/or beneficiaries

Innovations for reusable products were seen in the types of fabrics used to make the product, placement or construction of layers, chemical and mechanical anti-microbial treatment (by at least three manufacturers in India) and some design innovations like labia pads. Period underwear was a further significant development among reusable fabric-based products, made of the same materials as cloth pads, but designed as a wearable product with either a belted option or in the form of a traditional underwear.

3.2.2 Quality Assurance

The BIS has guidance on materials and sizes for both reusable sanitary pads and period underwear through the recently published IS 17514:2021. Further, UNGM procurement specifications also provide guidance. The study found the following with regard to respondent compliance with quality assurance criteria:

- Three respondents complied with sizing guidance provided by BIS, which are similar to UNGM specifications
- While the pH requirements as per BIS and UNGM are same as for disposable sanitary pads, only two of the 8 respondents had ever done this test
- Three respondents tested for absorbency, one using their own laboratory, and two through external laboratory facilities

- BIS and UNGM both require that each batch is tested for colour fastness, to ensure that the product does not leach colour when worn next to the vulva. Six respondents conducted the color fastness test on their products through external laboratories
- Despite being a reusable product, both BIS and UNGM require testing for bio-burden before product packaging to facilitate manufacturer accountability towards user health and hygiene. Four respondents had subjected their products to this test at least once. However, interviews were not able to clearly elicit if this was done for every batch. A few stakeholders expressed concerns over the necessity of bio-burden testing for a reusable product, as user practices were likely to influence the product bio-burden
- Two respondents had certifications for the raw materials being tested for biocompatibility against ISO 10993, while there was limited knowledge of this amongst others
- Only one respondent had a GMP certified manufacturing facility while another had internal quality control procedures. Most reusable sanitary pad manufacturers operated at small to medium-scale, hence this was a constraint.

3.2.3 Market Structure

The reusables sanitary pads and period panties market was characterized by approximately 15-20 small to mid-sized players with monthly production in the range of 4000-35,00,000 per month, as shared by key informants. While the respondents included in the study manufactured only reusable sanitary pads or both pads and period panties, secondary research revealed that there were some additional niche players who produced only period panties. However, this number was very limited (about five), most likely due to the limited economies of scope offered by only one product.

Most respondents stated that they either manufactured their own products or procured products through contract manufacturers for wearable textile products. Three respondents manufactured their own product through women's groups, and four through centralized production units. The remaining one entity procured their product from a contract manufacturer who also produced for a national underwear brand and had good quality control measures. This allowed them to cut production costs in a business characterized by high consumer acquisition costs. Another respondent was considering moving to this model for greater efficiencies. Production lead time was typically high (around 3-4 weeks).

Three out of eight respondents had a decentralized production model with limited production capacity. In this model, procurement of raw material, first round of quality checks and cutting was done at a central location. Women employees then took this material to their homes and local self-help groups for stitching the pad. Finally packing and dispatching of finished product took place at the central facility. Five out of eight respondents had a centralized production model with higher production capacities (more than 10 lakh units per month).

Reusable pad were sold in pack sizes of 1-4 pads with most having a single stock-keeping unit of 4 pads of different absorbent capacities. Price per pack varied between INR 180-600 with price per pad between INR 90-250. Higher value packs were available for larger sizes (including maternity pads) and greater number of pads per pack. Period panties were available in the price range of INR 500-1200 in single packs.

3.2.4 Sales and Distribution

All the respondents had presence in rural markets, and five of the eight also catered to urban markets. They noted that demand is much lower in urban markets. All respondents had presence in at least one of the projects states and were open to supplying to all the locations as required.

Five of eight respondents had both sales and free distribution through donor funded programs or as pilot programs for increasing awareness of the product. For commercial sales:

- Three respondents sold on e-commerce platforms like Amazon
- All respondents had institutional buyers like CSRs, NGOs
- Two respondents sold in the international market, sometimes combined with a cross-

subsidy program for parallel free distribution to Indian low-income menstruators
- Two respondents had their own network of village level entrepreneurs for community sales

Some players had actively advocated for the creation of a category for reusable pads on the GeM portal, three were registered on the portal (at the time of the interview), and one was considering registration. However, only one respondent (Project Baala) had directly supplied to State Government Departments (Bihar, Madhya Pradesh, Rajasthan, Jharkhand and New Delhi) while two (Jatan Sansthan and Ecofemme) had helped set up cloth pad production units under Government programs in the North East (Meghalaya and Arunachal Pradesh).

Period panties were retailed primarily through online platforms to urban consumers. Livinguard was the only player who had ventured into the rural market with a product designed for menstruators who were not habituated to wearing underwear or had limited access to underwear. Sales and distribution was done through partnerships with last mile CSOs.

3.3 Reusable Menstrual Cups

3.3.1 Product structure and materials

The menstrual cup is a bell-shaped receptacle intended for insertion in the vagina for collecting menstrual blood. The modern menstrual cup has existed in its current form and shape since the 1930s in the developed world, and versions have existed since the 1860s. Menstrual cups have seen limited innovation due to limited research on user experience and needs with regard to this product.

- ***Material*** - All the menstrual cups available in India were made of inert medical grade silicone. The grade of silicone was not disclosed, and was poorly understood for appropriateness of use for vaginal insertion
- ***Packaging*** - All seven products featured in this study were packaged inside a cloth bag (jute/cotton). One of seven respondents ensured sterilization of the product first, followed by packing in a sealed plastic bag. Three respondents reported that the cloth bag was then placed inside a recycled paper tube box. The bag and the tube box provided a safer storage mechanism for users between uses
- ***Information and Education Material*** - All menstrual cup manufacturers provided directions for use, cleaning and storage in the form of leaflets or digital manuals. Three of the seven respondents had an exclusive online support group, video library or helpline for users, as menstrual cup usage required handholding for ensuring appropriate and continued use. Two of the seven respondents offered additional products such as cup washing liquids (detergents) to support regular cleaning. However, there was little evidence to support the need for such cleansing solutions for cups. The general guidance on menstrual cups recommends washing of the product with water and mild soap during use, followed by hot water sterilization before and after the menstrual cycle.

Design innovations for menstrual cups were limited to variations in size (small, medium, large), smoothness, firmness of the walls and rim of cup, type and length of stem for removal, placement of air flow holes etc. Menstrual cups came in a variety of colours, however, the color content was usually not disclosed.

3.3.2 Quality assurance

The BIS does not have standards for menstrual cups (as of December 2021). Clinical data on the safety of menstrual cups are required for India to facilitate the development of standards. While data on safety of menstrual cups is not available in the Indian context, studies have shown acceptability of the cup among women in India, with few reports of adverse experiences. A study conducted at Gujarat Medical Education and Research Society, Medical College and Hospital, Dharpur, Patan with women between the ages of 20 and 50 years, found that menstrual cups had no significant health risks and were acceptable to many women (Kakani & Bhatt, 2017). Another study by the University of Liverpool and Development Solutions in 2021 with unmarried and married girls and women between 18 to 50 years across socio-economic contexts, found that 53.8 percent of participants who were given a menstrual cup along with information, were using the cup after 4-6 menstrual cycles. Further, thirteen percent of those who were only given information at the beginning of the study (but not given a cup) had procured a menstrual cup themselves, and were using it by the end of the study period (Garikapati & Mahajan, 2021). These studies indicated acceptability of menstrual cups amongst Indian menstruators when sufficient information and support was provided for use.

A randomised feasibility pilot conducted among schoolgirls (aged 14–16 years) in Kenya comparing menstrual cups, sanitary pads, and usual practice (cloths, pads, tissue, or other makeshift materials) has provided critical information on safety of menstrual cups in low-and-middle income country settings (Juma, Nyothach, Laserson et al., 2017). The study showed no difference in the prevalence of Staphylococcus aureus (S.aureus) or candidiasis among cup users as compared to users of sanitary pads and local materials. In fact, lower prevalence of bacterial infections was found among cup users than among users of tampons and sanitary pads. This trial highlighted the potential of menstrual cups as a safe and acceptable menstrual management option.

Given the potential acceptability of cups in India, demonstrated safety in other countries and the increasing availability of products of varying quality in the Indian market, investments in generating safety data in India are urgently needed to support the creation of quality benchmarks for menstrual cups by BIS. In the meantime, other quality benchmarks may be referenced as elaborated below.

The US FDA classified menstrual cups as a Class 2 medical device while the European Union classified these products as a personal hygiene device, with minimal regulations. Due to this variance in classifications and lack of clarity of quality control procedures, manufacturers met different specifications. Many brands claimed to be US FDA approved, however, till December 2014, the US FDA only required brands to submit a pre-market notification that clarified that the product had the same function and design as existing products, and did not need to be subjected to other extensive processes like clinical trials or testing. As of 2021, even this requirement had been relaxed.

The UNGM procurement specification for menstrual cups released in April 2021 provided some guidance on cup standardization including sizes, length of pull-out stem, colour content in the product (no more than 0.5 percent) and others. They also specified that the products should comply with the following global certifications:

- ISO 13485 or ISO 9001 and CE mark (CE self-declaration), or FDA registration, or equivalent which ensured that the manufacturing facility was suitable for manufacturing a medical device
- Adheres to biocompatibility requirements of ISO 10993-1, ISO 10993-3, ISO 10993-5, ISO 10993-10, which ensured that the product did not cause irritation, skin sensitization or other related issues
- Compliance to regulations related to the use of chemicals (e.g. REACH, SVHC in EU)
- Adherence to European Pharmacopoeia (PhEur) or U.S. Pharmacopeia requirements for materials

Of the seven manufacturers interviewed in India, only one was U.S. Pharmacopeia (USP V) and US FDA compliant. Three of the other six manufacturers had manufacturing facilities that were US FDA registered (eligible for sale in the US) and met ISO 13485 for medical device manufacture. Only two of seven facilities reported having a good manufacturing practices (GMP) certification for the manufacturing facility. Given that the UNGM specification were released in 2021, none of the manufacturers had certifications for the required criteria at the time of the interview. Interviews revealed that the quality of menstrual cups were likely variable, especially since most brands procured products from contract manufacturers from within or outside of India. Hence, defining quality requirements (potentially in line with the UNGM specifications) would be important to guide quality product procurement in the Indian context.

3.3.3 Market Structure

The menstrual cup market in India was characterized by products manufactured domestically and imported, with over 25 menstrual cup brands retailed in the country. Whether domestically manufactured or imported, the product was typically manufactured through contract partners. Two of seven respondents had their own menstrual cup brands that were manufactured through contract partners in India; the rest of the respondents imported from China, Australia, USA and Europe. While products imported from Europe, Australia and USA were typically made in ISO 13485 compliant facilities, the same was not necessarily true for those manufactured in India. Little data was available on products imported from China and respondents hesitated to share more details stating that this was sensitive information for both suppliers and buyers. Some respondents were re-sellers for international brands in India.

Some insights into manufacturing processes suggested that the processes and raw material grades diverse. For instance, production capacity was in the range of a few lakh units per month with lead times as low as one week. Production capacity for startups was lower if they did not have exclusive contracts with their suppliers.

Menstrual cups were typically sold in pack sizes of a single product with price in the range of INR 250-1500, with a median price of around INR 600. A few imported products were available at a higher price range of over INR 2500 per cup.

3.3.4 Distribution

The primary market for menstrual cups in India was urban areas with South India holding the highest market share. However, recent exploratory field interventions are showing potential for adoption amongst married women and even adolescent girls in rural and peri-urban low-income communities in Rajasthan, Gujarat and Karnataka. While all seven manufacturers sold products pan-India, two of them had offline presence in Karnataka and Rajasthan. One organization was exploring a project opportunity with the Government of Odisha at the time of the interview.

All seven manufacturers sold their product, and seldom distributed products free of cost; one respondent had a 'Buy One Donate One' model and two gave products at cost to NGOs. For commercial sales, the interviews highlighted the following:

- Primary sales channel for all brands were e-commerce platforms such as Amazon, Nykaa, Flipkart, Zivame, Bare Essentials
- Four manufacturers had very limited offline retail presence either with niche vegan/organic stores or selected pharmacies
- Modern trade outlets were not a cost-effective channel for menstrual cup brands
- Two respondents sold to governments (Panchayat and district level in Karnataka and to central prisons) and multilateral agencies

Three respondents were registered on GeM; however only two were active at the time of the interview. One manufacturer shared their concern over GST billing on menstrual cups on the GeM platform. In July 2018, the Ministry of Finance had allowed sanitary pads to be GST exempt, however, it was unclear if menstrual cups would fall under the same category. The impact of this was not clearly understood, and requires further research.

3.4 Decentralized production of sanitary pads under Government of India and non-Government initiatives

To enhance access to menstrual products at the community level, Central and State Governments, donors and NGOs have promoted and implemented decentralized small-scale production units. The additional value proposition for these models was that they provided livelihood opportunities for girls and women engaged in production and distribution related activities while addressing a market gap related to easy access to affordable menstrual products. While production units differed in the scale and scope of their operations, a typical value chain for small scale production units is summarized as follows:

INBOUND LOGISTICS

- Vendor identification and management
- Raw material sourcing
- Raw material receiving, inventory and stocking

PRODUCTION

Core activities

- Assembly line activities - Cutting, assembling, sealing, sterilizing and packaging

Support activities

- Machinery O&M
- Utilities (electricity, water etc.)
- Facility maintenance

OUTBOUND LOGISTICS

- Packaging
- Transportation

SALES AND MARKETING

- Awareness meetings
- Community sales nodes (develop and maintain)
- Insitutional outreach
- Retail/Trade outreach

- BCC content development and delivery

- HR – Staff recruitment, onboarding, training and incentive design
- Strategy and planning – Production strategy, market assessmen and marketing plan development, monitoring and reporting
- Technology – tech know-how for machine sourcing and set-up
- Quality control – protocols for quality for raw materials & final product; hygiene for storage and production process

Under the ambit of the State Rural Livelihoods Mission (SRLM), many state Governments had implemented schemes for decentralized production units. Most of these were set up through self-help groups (SHG) created through SRLM. In States like Maharashtra, Tamil Nadu, Rajasthan, Odisha, Madhya Pradesh and Bihar, SHGs were supported to install and operate a small-scale production unit. The SHGs simultaneously undertook promotion and sales of the manufactured sanitary pads in their communities. In some cases, the state Government supported the SHG operated units by procuring the product for free or subsidized distribution through schools, hospitals, prisons and other institutional settings (as in the Tamil Nadu). A list of such programs operating under SRLM is included as Annexure 2. Some small-scale manufacturing units across States were funded under the 'My Pad My Right' initiative of National Bank for Agriculture and Rural Development's (NABARD) subsidiary NAB Foundation. This self-sustaining enterprise model was designed as per NABARD's Livelihoods and Enterprise Development Program (LEDP) guidelines and was scheduled to be implemented in all 739 districts of 28 states and 7 union territories of India. The research team was unable to reach officials to get more information on the status of this initiative.

There is limited evidence on the long-term viability and sustainability of small-scale units, except when operating at a cluster level e.g., district level to serve the aggregated demand from the cluster. Some of the challenges related to small scale production units as articulated by key stakeholders are outlined below:

Demand-side challenges faced by suppliers and manufacturers:

- Lack of sales expertise for an FMCG product amongst SHGs and NGOs
- Increasing competition from global, national and regional brands which were able to offer products at low prices (INR 2-3 per pad for a regular fluff pad)
- Lack of financial capacity to compete through distribution incentives i.e., higher trade margins for distributors and retailers, which helps increase brand awareness
- Direct community sales is the main platform – however, this was cost intensive and dependent on availability of ongoing funding and grants, and not on revenue generated

Supply-side challenges faced by suppliers and manufacturers:

- Dependence on machine manufacturers for ongoing maintenance and technical support, which was unreliable
- Lack of technical expertise to modify product configuration, production processes and design to have a product that can meet the quality of products in the commercial market
- Inability to source raw materials at favourable rates
- Lack of technical know-how for ensuring quality of product in terms of performance, hygiene and safety

To address these challenges, in some states like Maharashtra and Chhattisgarh, SHGs do not engage in the manufacturing of sanitary pads. Instead, they procure sanitary pads from identified vendors, and focus on distribution and sale of the product at the community level. More details on the models implemented at the state level can be found in the accompanying study undertaken by UNFPA, WaterAid India, and Development Solutions on understanding procurement for menstrual products through State Government interventions.

4

Key Takeaways and Recommendations

Some of the key takeaways for the product landscaping are as follows:

4.1. Recommendations for Enhancing Compliance to Quality Standards

Given that compliance to quality standards was lacking for most suppliers, the following recommendations provide guidance on enhancing compliance within menstrual health programs and advocacy activities:

- The BIS standards for menstrual products are voluntary and compliance dependent on the manufacturer. Given this loophole, procurement agencies, Government and non-Government, must ask for documentation on compliance with BIS standards by including it as a criterion for eligibility in tender documents. This can be done by either including specific components of the BIS standard or compliance to the standard as a whole in the eligibility criteria
- Compliance can be strengthened by educating consumers on quality identification in the form of the ISI mark, thereby creating market demand for compliance with country standards. Globally, organizations like Consumer International support educational activities for consumers on standards and quality criteria. Consumers can be further educated to find recourse through consumer courts for ensuring that manufacturers adhere to the BIS standards
- Advocacy with the Ministry of Consumer Affairs and the BIS can be undertaken to request that the standards be given a mandatory status, on the grounds that menstrual product quality is integral for ensuring health of users
- Small and medium scale manufacturers highlighted the need for support to understand quality assurance requirements and practical means of ensuring compliance, including details and frequency of tests to be done, contact of laboratories certified by NABL (National Accreditation Board for Testing and Calibration Laboratories), cost of various tests and financial aid to undergo testing. Small and mid-sized entrepreneurs (SME) can be capacitated on these aspects through trainings done in partnership with BIS. An operational guidance document developed by Development Solutions in consultation with the BIS provides information that can be disseminated through such a training (Development Solutions, 2021)
- For menstrual cups, where standards do not exist, partnership and advocacy with the Ministry of Health and Family Welfare, the Indian Council of Medical Research (and other technical agencies), and other multilateral agencies working on sexual and reproductive health can help in generating safety data for the product in the Indian context

4.2 Takeaways for Disposable Sanitary Pads

- Only few of the sanitary pad manufacturers that were interviewed meet the 2019 BIS requirements
- With outsourcing of centralized procurement and repackaging, quality assurance was a gray area and it was unclear whether the responsibility lay with the supplier or the procuring agency to certify quality and ensure adherence to standards

- Various quality control tests were inaccessible due to lack of awareness, few testing facilities and high costs
- Demonstration of material safety (at least for raw material) was a critical area due to high variance in types of materials used. This needs to be a key consideration for any procurement
- Subsidies may be needed for testing and technical assistance through multilateral agencies or consulting organizations that can provide support for design and implementation of Government programs. The technical support needed is likely to include information on testing facilities and practical guidance for adoption of quality criteria by small manufacturers
- Monitoring of product hygiene across the supply chain, especially where last mile repackaging of products is done, is essential, even if the product is manufactured in a GMP/ISO certified facility

4.3 Takeaways for Reusable Sanitary Pads and Menstrual Cups

- Reusable pad manufacturers have far lesser manufacturing capacity as compared to disposable pad manufacturers, a point to be considered while setting turnover limits for procurement. This implies that more than one vendor may be used for reusable products for a program to minimize risks of stock-out (this model is also followed for the procurement of large quantities of sanitary pads by State Governments)
- Reusable cloth pads are of two broad categories – basic cloth-based products and higher cost variations with more expensive materials and/or anti-microbial treatments. Procurement should consider the needs and aspirations of the target group for selecting any specific type of reusable pad. Access to supportive water and sanitation infrastructure and disposal facilities in homes, schools and workplaces, hygiene practices, prevalent myths and taboos, existing availability of products, preferences and aspirations related to products all play a role in defining which product is best suited for the user in a certain context
- For menstrual cups, given the lack of data on safety and acceptability of cups in India, further studies are required. A better understanding of consumer preferences and implications of design change such as length of stem, ridges, capacity also need to be explored
- Being relatively new product categories in the Indian market (compared to disposable sanitary pads), both cloth pads and menstrual cups (also being an insertion product) need focus on user education and hand-holding for appropriate, safe and continued use
- For reusable products, manufacturer instructions should also specify the manufacturer's recommendation for the maximum product lifetime (number of cycles, years, washes etc.)

4.4 Takeaways for use of GeM portal for Government tenders

- Manufacturers interviewed for this study found the registration process difficult due to the user interface. Further, product categories were not well-defined. As innovation in products continue, the GeM portal needs to be updated to account for approved innovations that meet standards
- Even after registration, manufacturers were not been able to participate in government tenders, possibly due to:
  - State Governments not being aware of GeM or not utilizing the platform for procurement
  - Reusable product categories– cloth pads and menstrual cups, being overlooked for Government procurement
  - Lack of alignment with BIS standards, which made it difficult for manufacturers to adhere to GeM-based tendering norms

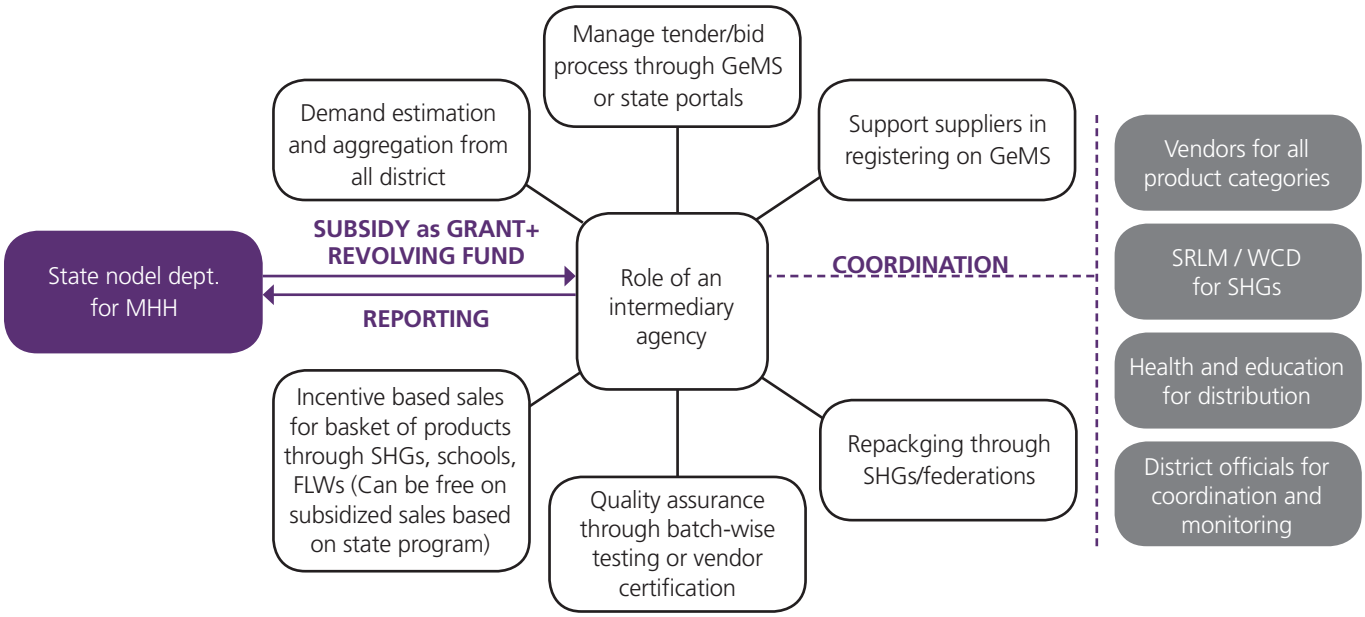
Streamlining of the portal with clarity for all menstrual product categories and their specifications is required, along with increasing awareness of the portal amongst State Government stakeholders.

4.5 Supply Chain Models for Enhancing Access

- Decentralised production models had limited sustainability due to lack of economies of scale and limited technical know-how on product design. They also faced challenges in terms of ensuring quality controls across the manufacturing process which were essential for a personal hygiene product. On the other hand, manufacturers with the production capacity and economies of scale did not have networks for last-mile (or direct) community distribution.
- To address the challenges with decentralized production models, alternative models for access which include procuring multiple products from large and mid-scale manufacturers while engaging community-based organizations for last mile reach and awareness, may be considered. However, even with this, technical support would be required for facilitating procurement, demand management, vendor management and coordination with relevant State Government departments. This is illustrated through the role of a potential intermediary agency in the following figure:

The intermediary agency is envisaged to undertake this role through a Technical Support Unit set up with support from a multilateral agency or consulting organization supporting program design and implementation for intersectoral programs in the areas of sexual and reproductive health, water and sanitation, livelihoods generation, education and others.

Over the past decade, India has witnessed a marked increase in the use of safe menstrual materials by girls and women of reproductive age, as well as significant growth and diversification of the menstrual hygiene product landscape. Several State Governments, development partners and civil society organizations, and the private sector have committed to and invested in initiatives to improve menstrual health and hygiene, with an overarching emphasis on disposable sanitary pads. Keeping the health and the right to choose of menstruators central, efforts to improve access to affordable and quality products can be bolstered through comprehensive information about the evolving product landscape. This will enable informed decisions about the product basket to be made available to all those who experience menstruation. This report outlines the three categories of products currently available in the Indian market, and presents the relative advantages and disadvantages for inclusion in Government programs. The report calls for adherence to quality standards established by the Government of India through BIS for sanitary pads and cloth pads, and the establishment of quality standards for menstrual cups. These considerations are necessary to ensure that menstruators have continuous access to affordable and quality menstrual products.



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Annexures

Annexure I: References

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Annexure II: List of Key Informant Interviews

S.No.	Organisation	Type	Designation	Name
1.	Living Guard	Product Manufacturer	VP - Sales and Key Accounts	Shivani Swamy
2.	Unipads	Product Manufacturer	Founder	Geeta Solanki
3.	Ecofemme	Product Manufacturer	Co-Founder	Kathy Walkling
4.	Project Baala- Baala Triple E Care Ltd.	Product Manufacturer	Founder	Somya Dabriwal
5.	Boondh	Product Manufacturer	Co-Founder	Bharti Kannan
6.	Soch Green - Health and You	Product Manufacturer	Founder	Priyanka N Jain
7.	Anandi- Aakar Innovations	Product Manufacturer	Founder & MD	Jaydeep Mandal
8.	Niine-Shudh Hygiene Plus	Product Manufacturer	Chief Executive Officer	Richa Singh
9.	Saral Designs	Product Manufacturer	Co-Founder & CEO	Suhani Mohan
10.	Sirona Hygiene Pvt. Ltd.	Product Manufacturer	M.D. Director, Medical Research & CSR	Dr Diksha S Chadha
11.	Trucup-TruTribe Ventures Pvt. Ltd.	Product Manufacturer	Co-Founder & CEO	Alakshi Tomar
12.	Stonesoup	Product Manufacturer	Co-Founder	Smita Kulkarni
13.	Dima Products	Product Manufacturer	MD	Nirav Mehta
14.	Real Relief Way	Product Manufacturer	Sales Manager	Karthik Thangavel
16.	Jatan Sansthan	Product Manufacturer	Additional Director	Lakshmi Murthy
17.	Riopads-Nobel Hygiene Pvt. Ltd.	Product Manufacturer	VP- Marketing & Commerce	Kartik Johri
18.	Sakhi Pads (Assam)	Product Manufacturer	CEO	Nayan Saika
19.	Myna Mahila Foundation	Product Manufacturer	Founder & CEO	Suhani Jalota
20.	Pad Woman	Product Manufacturer	Executive Director	Anibal Bose,
21.	The Woman's Company	Product Manufacturer	Founder & CEO COO	Anika Rupam Gupta
22.	Safecup-The Crimson Project	Product Manufacturer	Founder	Akash Tekriwal
23.	HeyDay care	Product Manufacturer	Founder & CEO	Deepanjali Kanoria
24.	Wager	Product Manufacturer	Founder & CEO	Jinoj Wager
	Vatsalya Foundation	Product Manufacturer and Implementing NGO	Secretary	Swati Bedkar

S.No.	Organisation	Type	Designation	Name
25.	Mesa- Healing Feels Foundation	Implementing NGO	Manager Operations	Gayathri Prashanth
26.	UNICEF Bihar	Development partner providing technical support to Government	WASH Officer	Sudhakar Reddy
27.	UNICEF Maharashtra	Development partner providing technical support to Government	Program Specialist WASH, DRR and Emergency Focal Point	Yusuf Kabir
28.	UMED Maharashtra State Rural Livelihoods Mission	Government Stakeholder	Erstwhile CEO MSRLM, Lead Asmita Plus Yojana	R. Vimala
29.	North Eastern Region Community Resource Management Project	Government Stakeholder	Director (G&I)	Raj Khungur Basumatary
30.	Health and Nutrition Department, Bihar Government	Government Stakeholder	Project Manager	Ms. Somya
31.	Swachh Bharat Mission (G), Chhattisgarh	Government Stakeholder	District Consultant, Kanker District	Yogita Panwar

Annexure III: State Government initiatives for menstrual product access under SRLM

State	Agency	Location	Type of Initiative	Funding	Objective	Scale	Cost	Best Practices
Madhya Pradesh	NRLM	Jhabua district	SHG led production	Loan from NRLM	Improve MHH	600-700 pads/ month	-	Exposure visits to successful SHG Units before setting up production units
	Madhya Pradesh Rajya Aajeevika Forum	State-wide	MPRAF sets rate contract for 3 years and SHGs voluntarily procure, & vendors distribute	SHGs buy and sell at a profit margin	New Options of Livelihoods + MHH awareness and product access	Approx. 20 Lakh packets of 8 pads/ month	-	MPRAF facilitating procurement from credible vendors at competitive rates
	SBI Foundation & UNFPA	Chhatarpur district	Samriddhi Project	UNFPA Funded	MHH awareness and product access	18,000 packets/ month catering to 335 villages, employing 10,000 girls and women	-	Ultra-thin, 'non-plastic biodegradable' sanitary napkins
Bihar	Bihar Rural Livelihoods Promotion Society	Sheikhpura- automatic unit	SHG led production	Infrastructure– District Administration Machine- HFF Training- UNICEF Operations- JEEViKA	Non-Farm Livelihoods + MHH Awareness and Product Access	3,00,000 pads/ month	Machine Cost 22-25L (45 pads/ min)	Visit Mathura to audit the raw materials. Tender raised on government platform Creation of Producer's Group (60 women)
		Bhojpur- semi automatic	SHG led production	Gram Panchayat	Non-Farm Livelihoods + MHH Awareness and Product Access	30,000 pads/ month	DM sanctioned 10L for upgrade	UNICEF extended training and capacity building support
		Jamui and Muzzafapur -manual units	SHG led production	-	-	-	-	-

State	Agency	Location	Type of Initiative	Funding	Objective	Scale	Cost	Best Practices
Rajasthan	Rajasthan Grameen Aajeevika Vikas Parishad	Begu in Chittorgarh Baki in Jhalawar	SHG led production	CSR - Rajasthan Rajya Vidut Prasaran Nigam Ltd (RRVPNL)	Non-farm income generating avenues + MH Product access	-	-	Exposure visits to successful SHG Units in MP before setting up
Odisha	Odisha Livelihoods Mission	Maneswar Block of Sambalpur district	SHG led production	NAB Foundation	Livelihood + MHH	-	15 Lakhs	-
	WCD and Mission Shakti	Angul district	SHG led production	-	MH Product Access	-	-	-
	(Center Govt) IOCL, BPCL and HPCL	93 blocks in 30 districts	Common Service Centers will hire women	CSR- Oil Marketing Companies	Economic empowerment and self-reliance	1200-2000 pads/ day	100 'Ujjwala Sanitary Pads' Units 2.94 Cr	'Biodegradable' Pad- virgin wood pulp, non-woven sheet and gel sheet.
Chhattisgarh	Chhattisgarh State Rural Livelihood Mission (Bihaan)	Gariyaband district (Subhsavera Cluster Level Federation)	Repackaging and Selling	Bihaan	Income Generation + MHH improvement	8700 packets ready to be distributed (2020)	-	The state has also formed many adolescent girl groups to encourage sanitary pads adoption
	District administration and National Mineral Development Corp (NMDC)	Geedam and Dantewada blocks	Produced and distributed free of cost	NMDC CSR	MHH Improvement	Aims to create awareness 65,000 women on MHH	-	-
Telangana	Telangana -- Society for Elimination of Rural Poverty (SERP)	Individual SHGs have their own initiative but no consolidated state level program with rural livelihoods mission. For e.g., women SHG in Peddapalli have their own brand of sanitary napkins called 'Sabala'						

State	Agency	Location	Type of Initiative	Funding	Objective	Scale	Cost	Best Practices
Maharashtra	Umed Maharashtra State Rural Livelihoods Mission (ASMITA SCHEME)	State-wide 34 districts	Central Empanelment. Procurement, Distribution and Sales via SHGs	Yes Bank CSR, MSRLM, MahaOnline (Govt of Maha + TCS)	MH product Access + Livelihoods (3As- Affordability, Accessibility and Awareness)	~2 crore direct beneficiaries	-	
Assam	Assam State Rural Livelihoods Mission (ASRLMS)	Tinsukia district- Sakhi-Stree Swabhiman	SHG led production	ASRLMS	MHH Accessible and Affordable	50,000 pads/ month	3L INR income (2018-19)	-
J&K Union Territory	Jammu and Kashmir Rural Livelihood Mission (UMEED)	Bhalwal block of district Jammu	SHG led production- Reusable Sanitary Napkins	Department of Rural Development and Panchayati Raj	Livelihood, environment friendly MH products and improved MHH	100 reusable pads/month	-	- Specific training to SHG members - Product choice for the users - Environment friendly cloth and banana fibre pads
		Ghagwal, Sambal District	SHG led production- Disposable Sanitary Napkins		Livelihood + MHH Accessible and Affordable	-	-	Specific training in Coimbatore

State	Agency	Location	Type of Initiative	Funding	Objective	Scale	Cost	Best Practices
Haryana	Haryana State Rural Livelihoods Mission	Village Beedmangoli Block Babban, Kurukshetra District	SHG led production	Haryana Women's Development Corporation	Non-Farming Livelihood + Financial Independence for women	45,000 sanitary napkins made as per report	-	-
	Ambala District Admin	Ambala District: Sakhi Suraksha Project	SHG led production	Ambala District Administration	MHH Accessible and Affordable	35,000 pads/ month	5L + 3L (community investment fund + Machinery Update	- Upgradation to semi-automatic machinery - 15 days training
Jharkhand	Jharkhand State Rural Livelihoods Promotion Society	Simdega District	SHG led production and community awareness	District Administration	MHH Awareness, Accessibility and Affordability	300 'biodegradable' sanitary pads/ month	-	Comprehensive program with awareness and product access at the village level Partnership with technical experts (WSSCC and Jatan Sansthan)
	Tata Steels and Local SHGs	Bagunhatu	SHG led production	Tata Steel Processing and Distribution Ltd. CSR Funds	Livelihood for women+ Accessible and Affordable MH Products for school-going girls	-	-	Health Department committed to procuring MH products from SHGs (annual spend Rs 25Cr) under ex-CM Mr Das (2018)

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Uttar Pradesh	Uttar Pradesh State Rural Livelihoods Mission (UPSRLM)	District Kheri	SHG led production	UPSRLM	Livelihood	30000 pads/ month	-	Gwalior Based Company provided machine and custom trainings to SHG women
		District Siddharth Nagar	SHG led production	UPSRLM	Livelihood + Accessible and Affordable MH Products	10000 pads/ month	Approx. 5L INR	Supply agreements with health center and local university
Nagaland	Nagaland State Rural Livelihood Mission (NSRLM)	Changtongya village, Mokokchung district	SHG led production	National Bank for Agriculture and Rural Development (NABARD) NAB Foundation	Livelihood and Enterprise Development	-	Approx. 5L INR	-
Kerala	Kerala State Rural Livelihoods Mission	Kudumbashree Idukki District	SHG led production	Kudumbashree-Kerala	Livelihood + Accessible and Affordable MH Products	-	-	Femy napkins are "plastic free and are made of cotton and bamboo"
	Local gram panchayat and Ashoka Trust for Research in Ecology and the Environment (ATREE)	Muhamma village, Alappuzha district	Community focused	Antrix Corporation, the commercial arm of the Indian Space Research (ISRO)– CSR Fund	Eliminating menstrual waste	550 cloth pads and 500 menstrual cups distributed	-	First synthetic sanitary pad free village in Kerala by encouraging use of menstrual cups and reusable pads

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Gujarat	Gujarat Livelihood Promotion Company Limited- GLPC (Mission Mangalam)	Bhavnagar, Panchmahal and Dahod districts	SHG led production	Supported by Triveni Kalyan Foundation, the CSR arm of Pidilite Industries Limited	Reducing Migration and Improving MHH	Approx. 35,000 pads/month	-	-Undertook training and technical guidance from subject matter experts (Aakaar Innovations) -Both institutional (hospitals, CSRs) as well as retail sales channels (direct to customer)
Manipur Meghalaya Assam Arunachal Pradesh	Science & Technological Intervention for North East India (STINER) and North Eastern Region Community Resource Management Project (NERCORMP)	Bordumsa, Changlang, Arunachal Pradesh Purasingha, West Garo Hills, Meghalaya Mahur, Dima Hasao, Assam Ukhrul, Manipur	SHG led production	-Ministry of MDoNER, Govt. of India -Samarpan Foundation, Mumbai supported the reusable napkins units	SHG led production	Reusable Sanitary Napkins: Approx. 9000	-	-Product choice for users in the region -Project set up with advisory support from Principal Scientifc Advisor, PM's office and RuTAG, IIT Madras -Technical partners solicited through a consultative and evaluative process -Focus on environmental impact

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		Churachandpur, Manipur Mairang, West Khasi Hills, Meghalaya Amsai, Karbi Anglong, Assam Khonsa, Tirap and Changlang Arunachal Pradesh				Disposable Sanitary Napkins: Approx. 17L		