

POLICY BRIEF: IMPROVING THE MENSTRUAL WASTE DISPOSAL ECOSYSTEM IN INDIA

Background

India disposes of an estimated number of 1 billion sanitary napkins per month.¹ These used sanitary napkins contain blood and body fluids that hold harmful pathogens and consist of plastic components that take up to 500 to 800 years to decompose.² The quantum of waste generated makes safe menstrual waste disposal an important component of the overall Menstrual Hygiene Management (MHM) ecosystem (awareness \rightarrow access \rightarrow usage \rightarrow disposal). However, in India until now, the primary focus of policymakers has understandably been on improved access and affordability of products for better menstrual hygiene. While there exists some direction towards safe disposal through multiple quidelines issued by various government agencies, the implementation of these guidelines/ frameworks has been poor at best. However, with rising incomes and awareness, as more and more women adopt the usage of sanitary napkins, safe disposal has now become pivotal to both the environment in general and the health of those that come in contact with this waste, in particular and can no longer be ignored.

Quick guide to improving menstrual waste disposal in India:

- 1) Incentivise ULBs to ensure segregation of menstrual waste and incineration of menstrual waste centrally
- 2) Evaluate and monitor the use of decentralised incinerators that are currently installed
- 3) Improve procurement processes for decentralised incinerators
- 4) Amend existing frameworks under Swacch Bharat Mission that suggest 'appropriate disposal methods' to remove ambiguity.
- 5) Leverage SHGs under National Urban Livelihood Mission (NULM) for driving segregation at source and ensuring disposal of menstrual waste using centralised incinerators

Given that menstrual waste disposal is a subset of the larger solid waste management, this issue also necessitates engagement of urban local bodies and waste management agencies at the local levels. In this context, this brief seeks to suggests ways by which menstrual waste disposal systems may be improved in India by identifying gaps in the current waste disposal systems and by studying various models that have been deployed in India and other parts of the world.



Legal framework around menstrual waste disposal

Due to its recent inclusion within the policy framework, menstrual waste disposal at present in India is discussed under different laws (covering both solid waste management and MHM) and is also indirectly influenced by a set of guidelines.

The primary legal framework for the same under the sanitation ecosystem, is the Solid Waste Management Rules, 2016 (SWM Rules) issued by the Ministry of

Environment, Forests and Climate Change (MoEF&CC), which state that menstrual waste should be disposed in wrappers provided by manufacturers, placed with other non-biodegradable waste and disposed of either in a

¹ Ministry of Drinking Water and Sanitation, Government of India, 'Menstrual Waste Management: A Simple Guide' Pg. 1 (<u>https://jalshakti-</u>

ddws.gov.in/sites/default/files/MGISC_Menstrual_Waste_Management_WASH_Network.pdf)

² Anisha Bhatia, 'An Urgent Challenge: Why India needs to tackle its menstrual waste' NDTV on 28th February 2018 (<u>https://swachhindia.ndtv.com/urgent-challenge-india-needs-tackle-menstrual-waste-6665/</u>)



sanitary landfill, through pit burning, composting or incineration.³ From an MHM perspective, the treatment of menstrual waste is also covered under the **MHM Guidelines issued by the erstwhile Ministry of Drinking Water & Sanitation (MDW&S) in 2015** in conjunction with UNICEF India. The MHM Guidelines state that menstrual waste disposal should be done in an environmentally sustainable manner with limited human interaction using either composting, deep burial or incineration.⁴ Finally, menstrual waste disposal has also been indirectly addressed through various frameworks including the SBM Guidelines (both Urban and Gramin) along with the ODF+ and ODF++ protocols issued over the last few years. Under each of these programs/ frameworks, there is a thrust towards menstrual waste disposal and more specifically the use of incinerators.

A cumulative impact of these frameworks is that: (i) most of them are not enforceable; (ii) the inconsistency in the law, makes it difficult to implement the right disposal method; and (iii) there is a clear thrust towards the use of decentralised incineration as the mode of disposal in the absence of other scalable alternatives.

Menstrual waste disposal in practice

At present, disposal of menstrual waste is far from the scenario that is prescribed by the legal framework discussed above. In most urban areas, the menstrual waste finds its way to landfills along with other nonbiodegradable waste after being thrown out wrapped in plastic or paper, along with other household waste. In other communal areas such as public toilets or schools, it is found at the sides of toilet or flushed down toilet drains. In rural areas, where taboos around menstruation are still prevalent, disposal of menstrual waste is even more difficult, and it often finds its way into water bodies or burned in open fires. Due to the thrust of various govt. schemes, incinerators have started being installed in schools and other public spaces in a few states. Some cities also incinerate sanitary napkins with other bio medical waste. However, as a percentage, these instances still form a miniscule number.

Viability of incineration

Incineration is a preferred method of menstrual waste handling as it destroys pathogens. It can either happen at: (i) a centralised level, where a city/ a ULB or a cluster or ward installs a centralised incinerator or uses an available bio-medical incinerator; or (ii) a decentralised level, whereby small or medium sized incinerators are installed at the household or school levels. Decentralised incinerators are characterised by their placement close to the source of waste generation, while centralised incinerators are characterised by the need for segregated collection and transportation for disposal. Interestingly, developed countries such as USA, UK, China and Japan use incineration for practically all of their waste, while decentralised incinerators are becoming increasingly popular in some countries in South Asia and Africa,⁵ given that the solid waste management systems are inadequate in these developing countries.

³ Solid Waste Management Rules, 2016 (<u>http://bbmp.gov.in/documents/10180/1920333/SWM-Rules-2016.pdf/27c6b5e4-5265-4aee-bff6-451f28202cc8</u>) 4Ministry of Drinking Water and Sanitation and UNICEF India, '*Menstrual Hygiene Management Guidelines, 2015*' 22nd December 2015 (http://unicef.in/Story/1177/The-National-Guidelines-on-Menstrual-Hygiene-Management-)

⁵ Menstrual Hygiene Management and Waste Disposal in Low and Middle Income Countries—A Review of the Literature, Myles F. Elledge, Arundati Muralidharan, Alison Parker, Kristin T. Ravndal, Mariam Siddiqui, Anju P. Toolaramand Katherine P. Woodward, <u>https://www.mdpi.com/1660-4601/15/11/2562/htm</u>



1.) Centralised incinerators



Centralised incinerators are generally considered a more economically efficient option and are found either in medical colleges or part of the common waste treatment plants in some cities. One of the most important prerequisites for the use of any centralised incinerator, is the need for developed infrastructure and processes around segregation which have limited implementation in India. Cities like Panjim⁶ and Pune⁷ have over the years experimented with ways to improve segregation for menstrual waste but in general have not seen adequate success due to the increase in the quantum of waste generated in the city as well as the immense shift in behaviour that it requires.

2.) Decentralised incinerators



In the absence of viable alternatives, at least 19 states have reported one or more schemes to install decentralised incinerators in schools/ government office etc. with procurement size as small as 5 incinerators on a pilot basis to as large as 4000.⁸ The market for decentralised incinerators at present has more than 50 suppliers who are selling these units across a large spectrum of price range (small scale incinerators cost anywhere between Rs. 5000 to Rs. 40,000). Despite, this there are a limited set of guidelines that regulate the manufacture of such machines. At present, in response to tenders, suppliers self-certify that they meet the CPCB guidelines on emission control without any testing

or certification leading to faulty products that often fall into disuse. Our research also suggests that most of the installed decentralised incinerators often fall into disuse within a few months because of lack of maintenance and user education.

Recommendations

Given the challenges highlighted above and through our discussions with key stakeholders in the ecosystem, an improvement in menstrual waste disposal ecosystem can be achieved through the following steps:

TABLE 1: A BLUEPRINT FOR THE CENTRAL GOVT. TO IMPROVE MENSTRUAL WASTE DISPOSAL

Steps/Stages	Intervention	Impact
Step 1: Incentivise	At present large-scale segregation efforts are underway in many	Incentivises ULBs to
ULBs to ensure	cities around India, largely due to the impetus and incentive structure	participate and actively
segregation of	put in place by the Swachh Survekshan's point system. Under this	work towards improving
menstrual waste and	system, while cities are marked on the segregation of waste (into wet	MHM and disposal
incineration of	waste and dry waste) and processing and disposal of such segregated	practices for such waste.
menstrual waste	waste, menstrual waste is not recognised as a category. It, therefore,	

⁶ Why Panaji should not give up on decentralized waste management, Richa Agarwal, 03 August 2017, <u>https://www.downtoearth.org.in/news/waste/back-to-bins-58380</u>

⁷ A Simple Red Dot On Your Menstrual Waste Can Change A Sanitation Worker's Life, Gopi Karelia, 28 February 2018,

https://swachhindia.ndtv.com/simple-red-dot-menstrual-waste-can-change-sanitation-workers-life-2-5840/

⁸ The SLWM component of SBM, capacity building component of Sarva Shiksha Abhiyaan has been used for the procurement of incinerators. In addition, the 'appropriate disposal method' requirement under the ODF+ and ODF++ protocols for public and community toilets has also been interpreted to incentivise purchase of decentralised incinerators. The procurement of such incinerators is typically done through the Government E-Marketplace portal or on an ad-hoc tendering basis.



centrally	inadvertently finds its way to landfills. In order to ensure that ULBs		
-	are incentivised to effectively dispose of menstrual waste as well, we		
	recommend that the Service Level Progress indicators in Swachh		
	Survekshan's point system in the Toolkit should be amended and		
	include the following:		
	• Under Sub-indicator 1.2 : Source segregation into dry waste,		
	wet waste and menstrual waste.		
	• <u>Under Indicator 2</u> : Additional sub-indicators for:		
	(i) whether the capacity of the disposal facility matches the		
	amount of menstrual waste generated, and		
	(ii) the total percentage of menstrual waste generated that is		
	processed either through decentralised or centralised		
	incinerators.		
	• <u>Under Indicator 4</u> : Additional sub-indicators for IEC		
	(Information, Education, Communication) on menstrual		
	waste as is required under the Solid Waste Management		
	Rules 2016.		
	• <u>Under Indicator 6</u> : Additional sub-indicator for innovation in		
	menstrual waste management including interventions for		
	behaviour change.		
Step 2: Evaluate and	At present there are many schemes for procurement and installation	•	Issues around user
monitor the use of	of decentralised incinerators, however, we have observed that such		experience can be
decentralised	schemes have not taken into account whether the installed		adequately
incinerators that are	incinerators are being appropriately used and are achieving the		addressed, making
currently installed	results for which they were implemented. Therefore, for ensuring		the incinerators more
	that public funds are used only for proven, efficient, cost-effective		user compatible.
	and scalable solutions, we recommend that:	•	Given the high
	• An agency be contracted for monitoring and evaluation of the		propensity for
	use of incinerators that have already been installed under		procurement of
	various schemes by central govt./state govts/ ULBs.		incinerators currently
	• Such monitoring and evaluation should be done for a period of		seen, it is necessary to
	at least 1 year from installation for the purpose of this study.		evaluate whether
			incinerators are the
	Evaluation of the use of incinerators should be done among different		right disposal option
	types of demographic profiles- rural/urban, in schools/offices, etc. and		before a large
	the results should be evaluated around user experience, frequency of		quantum of public
	usage, ease of maintenance, initial and recurring expenditure		funds is allocated
	incurred. This will help determine the scalability of decentralised		towards the same.
	incinerators as a solution towards menstrual waste disposal in the		
	absence of centralised solutions that require segregation of waste.		
Step 3: Improve	At present, there are no specific standards for the manufacture of	•	Ensures that all
procurement	decentralised incinerators and where there are standards such as for		manufacturing and
processes for	with and enforced. Accordingly, there is a need for ensuring that		procurement occurs
incinoratora	manufacture and procurement of decentralized incinerators is dece		basis the standards to
memerators	annonactore and procorement or decentralised incinerators is done		limit harm to the
	appropriately, we therefore recommend that:		environment and
	Bureau or indian Standards (BIS) should notify the relevant		nealth of those in
	standards for manufacture of small and medium scale		
	incinerators arter consultation with relevant industry bodies,	•	Ensures that there is
	(i) emission control standards processily during derivery		an objective process
	(I) emission control standards prescribed under law,		for certifying



	(ii) materials to be used, size and other specifications.	compliance with
	• Appropriate bodies including laboratories for certifying	these standards.
	compliance with the standards need to be set up.	
	MoHUA/appropriate central govt. body should issue a set of	
	guidelines for state governments and ULBs on procurement of	
	decentralised incinerators. Govt. tenders should include requirements	
	on adherence with existing emission guidelines and provisions for	
	user education and maintenance of incinerators.	
Step 4: Amend	In addition to being hard to enforce, there exists ambiguity in the	 Ensures clarity in the
existing frameworks	various guidelines and frameworks that address menstrual waste	framework for easier
under SBM that	disposal. In order to ensure that these guidelines are more precise	implementation.
suggest 'appropriate	and implementable, we recommend that:	 Before large sums of
disposal methods' to	• Existing protocols/ frameworks for ODF+ and ODF++ and the	 Defore large soms of public funds are
remove ambiguity.	SBM-G Guidelines specify what are the 'appropriate and safe	dovelved for building
	disposal methods' for menstrual waste.	relevant
	• The methods can be specified as centralised incineration or	infrastructura
	decentralised incineration (provided the above study has	onsures that the
	positive outcomes)	ontion being used is
	All incinerators so installed should meet BIS standards for	the best and
	them to be considered compliant, appropriate and safe.	
		avaliable.
Step 5: Open ways to	One of the primary concerns around segregation has been lack of	 Helps SHGs generate
leverage SHGs under	awareness/incentives among users and waste pickers around the	business
National Urban	need for segregation of menstrual waste. In order to involve the	opportunities and
Livelinood Mission	community in waste segregation, we recommend that:	earn income.
(NULM) for ariving	Under the NULM program, loans can be given to self-help	 Can help ULBs
segregation at source	groups (SHGs) to set up a business whereby they collect,	address the disposal
ana ensuring aisposai	transport and dispose of menstrual waste on behalf of ULBs.	of menstrual waste in
of menstrual waste	The ULBs can pay SHGs for such services rendered. This	a composite and
using centralisea	model can be piloted in one city and scaled up to other cities	wholesome manner,
incinerators in towns	in case it is successful.	within limited
ana cities	The services include:	resources without
	(i) awareness among households towards segregation,	having to necessarily
	(ii) provision of specific bags for segregation,	pay for infrastructure
	(iii) collection of waste, either through network of members or	such as segregation
	through partnerships with existing waste pickers, and	trucks, additional
	(IV) transportation of such waste, to either the biomedical	awareness with its
	incinerator or other common treatment plant in the ULB.	own waste pickers
	The roles and incentives for each player is as below:	etc.
	(i) An SHG set up under the aegis of NULM shall be the entity	
	responsible for the efficient and adequate delivery of	
	services towards menstrual disposal discussed above	
	against a remuneration provided by a ULB.	
	A LU D which is required under the Court by Court between states	
	A ULB which is required under the Swachn Survershan point system	
	(as suggested above) to ensure effective and segregated menstrual	
	waste disposal, can contract it out to the SHGs, without having to	
	invest in the intrastructure and pay for it as a service instead.	