

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH**

ORIGINAL APPLICATION No. 237 /2020

Purva Bora

..... APPLICANT

Vs.

**Ministry of Environment, Forest and
Climate Change & Ors.**

....RESPONDENTS

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Date: 12.03.2021

PLACE: Delhi



ADVOCATE FOR RESPONDENT NO. 9

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH

ORIGINAL APPLICATION NO. 237 OF 2020

IN THE MATTER OF:

PURVA PRAVIN BORA

...APPLICANT

VERSUS

MINISTRY OF ENVIRONMENT, FOREST AND
CLIMATE CHANGE AND OTHERS

...RESPONDENTS

REPLY ON BEHALF OF THE RESPONDENT NO. 9

MOST RESPECTFULLY SHEWETH:

- 1 The present reply is being on behalf of Unicharm India Private Limited, the Respondent No. 9 ("**Reply**"), in response to the present Original Application No. 237 of 2020 ("**Application**") (previously numbered Original Application No. 180 of 2017 (WZ)) filed by the Applicants. The Respondent No. 9 ("**answering Respondent**") is conscious of the issues raised by the Applicants, including the difficulties posed in the disposal of women's sanitary products and infants' diapers ("**Sanitary Products**") and by the present Reply, the Respondent No. 9 seeks to submit certain factual and legal points for the Hon'ble Tribunal's consideration below.



- 2 Save for matters of record, and save for matters specifically admitted hereinafter, each and every contention in the Application is denied by the answering Respondent. For the sake of brevity, unless specifically admitted, all allegations, assertions and statements made by the Applicants should be taken to be denied by the answering Respondent. Each of the averments below is taken in the alternative and without prejudice to the other; and no ground or defence available to the answering Respondent should be taken to be waived. The answering Respondent is presently not filing a paragraph-wise reply given the nature of the matter and seeks the liberty of this Hon'ble Tribunal to file the same separately at a later stage. Until then, the answering Respondent submits that it denies the paragraphs of the Application, subject to the submissions set out below.

PRELIMINARY OBJECTIONS

- 3 ISSUE SUB-JUDICE BEFORE THE HON'BLE SUPREME COURT
- 3.1 Notwithstanding the above submissions, a similar matter bearing Original Application No. 30 of 2015 which dealt with identical issues was heard by the Hon'ble National Green Tribunal, Central Bench, Bhopal and judgment was issued on 3 August 2017 wherein the Hon'ble Tribunal *inter alia* held that:

"26. So far as the disposal of sanitary items is concerned, since the sanitary waste has been classed as Municipal Solid Waste by the CPCB /MoEF the Solid Waste Management Rules 2016 shall be applicable to the



Respondent No. 1. Therefore, we also direct that the Respondent No. 1 shall comply with the Solid Waste Management Rules, 2016 by providing a disposal pouch or wrapper along with the packaged sanitary products for safe and proper disposal of used sanitary napkins and diapers. It shall also be obligatory for the Respondent No. 1 to undertake public awareness measures for disposal of used napkins and diapers in prescribed manner.”

- 3.2 However, an appeal was filed against this judgment before the Hon’ble Supreme Court of India bearing Civil Appeal Nos. 835 – 836 of 2020 titled “*Proctor and Gamble Home Products Limited v PC Sharma and Others*”. The Hon’ble Supreme Court issued notice in the said appeals on 27 January 2020 and has stayed the implementation of the judgment of this Hon’ble Tribunal:

“Status quo, as on today, shall remain in force until further orders.”

- 3.3 The matter was heard again 3 March 2020 where the Appellant therein was directed to complete service on the parties. The matter continues to be pending before the Hon’ble Supreme Court without any further directions being issued. A copy of the judgment dated 3 August 2017 of this Hon’ble Tribunal (Central Bench) in Original Application No. 30 of 2015 is annexed as **Annexure 1**. A copy of the Order dated 27 January 2020 issued by the Hon’ble Supreme Court in Civil Appeal Nos. 835 – 836 of 2020 is annexed as **Annexure 2**. A copy of the Order dated 3 March 2020 issued by the Hon’ble Supreme Court in Civil Appeal Nos. 835 – 836 of 2020 is annexed as **Annexure 3**.



- 3.4 In light of the issue being already *sub-judice* before the Hon'ble Supreme Court, it is most humbly submitted that the present Application does not warrant any interference of this Hon'ble Tribunal and is therefore liable to be dismissed or kept in abeyance till the Hon'ble Supreme Court hears and decides Civil Appeal Nos. 835 – 836 of 2020 finally.

4 NON-JOINDER / MIS-JOINDER OF NECESSARY PARTIES

- 4.1 The answering Respondent states that the Applicants have not impleaded several necessary parties in the present matter and this Application should be dismissed on that ground. There are numerous industry stakeholders which will need to be arrayed as parties.
- 4.2 For instance, the issues raised in the present application are also being discussed between the Feminine and Infant Hygiene Association (“**FIHA**”), a not-for-profit representative industry body, and the Respondent No. 1. FIHA has submitted reports addressing these issues with the Respondent No. 1 and is in the process of having in-person deliberations with the Respondent No. 1's officials to see how the issue can best be tackled sustainably and with the least effect on the environment.

PRELIMINARY SUBMISSIONS

5 EPA PROVISIONS

- 5.1 The Plastic Waste (Management and Handling) Rules, 2016 (“**PWM Rules**”) were enacted under Sections 6, 8 and 25 of the Environment (Protection) Act, 1986 (“**EPA**”):



(i) Section 6(2)(c) & 6(2)(d): provide the Central Government (i.e. the Respondent No. 1) the power to make rules with respect to “*the procedures and safeguards for the handling of hazardous substances*”, “*in different areas*”.

(ii) Section 8:

“8. Persons handling hazardous substances to comply with procedural safeguards. –

No person shall handle or cause to be handled any hazardous substance except in accordance with such procedure and after complying with such safeguards as may be prescribed.” (emphasis supplied)

(iii) Section 25: is also a general rule-making provision [reference to sub-section (j)] but Section 25 (b) states that:

“...such rules may provide for all or any of the following matters, namely:

(b) the procedure in accordance with and the safeguards in compliance with which hazardous substances shall be handled or cause to be handled under section 8” (emphasis supplied)

5.2 The answering Respondent submits that the interpretation of the Applicants of the PWM Rules in terms of the EPA is entirely incorrect for the reasons set out below:



- (i) Section 8 relates to persons handling hazardous substances; therefore, the onus is on the utilizers of sanitary products to dispose of them in a hygienic manner. It cannot be the manufacturer's onus to ensure that they are disposed of in the correct manner.
- (ii) Any rule imposing an obligation on manufacturers of sanitary products is therefore *ultra vires* the EPA, including the provisions in the PWM and SWM Rules that impose an unreasonable restriction on the answering Respondent's right to carry out its business under Article 19(1)(g) of the Constitution of India.
- (iii) In fact, the products (sanitary napkins and diapers) manufactured by answering Respondent are not inherently hazardous by themselves and the answering Respondent therefore does not qualify as a "handler" of a hazardous substance. Such products might be hazardous once they are purchased and used. If used and disposed of appropriately, they are not hazardous. Even so, the used products can only be hazardous if the person using them is already suffering from any sort of infectious disease, which is the case with any other sanitary products used in any household such as swabs, tissues, cotton dressings and the like. "Use" per se can be related to ensuring that the necessary safeguards which the answering Respondent has already included in the product packet.



- 5.3 It is therefore submitted that any rules passed under Section 8 of the EPA cannot and should not apply to manufacturers of sanitary napkins and diapers such as the answering Respondent.

6 PWM RULES

- 6.1 Without prejudice to the above, the answering Respondent is already a registered “producer” under Rule 3(s) read with Rule 13 of the PWM Rules and has been granted a ‘Certificate of Registration’ dated 30 July 2020 (valid until 29 July 2021). A copy of the Certificate of Registration dated 30 July 2020 issued by the Central Pollution Control Board (“CPCB”) of the Respondent No. 1 is annexed as **Annexure 4**.
- 6.2 Under this Certificate of Registration, the answering Respondent is already subject to numerous measures for proper disposal of the products manufactured by it, including sanitary napkins and diapers. These are:
- (i) Establishment of a system for collecting back the plastic waste or multi-layered packaging generated by its products. The answering Respondent has submitted a detailed ‘Action Plan’ to the CPCB which sets out the steps it is and would be taking to implement such a system.
 - (ii) In fact, the answering Respondent has also undertaken to ensure that the system established is able to collect



100% of the waste generated in the one year from the date of registration.

- (iii) The answering Respondent sends plastic waste generated to recyclers with the Respondent No. 2 (or to permitted cement industries) for its processing.
- (iv) Indeed, the answering Respondent is also submitting a 'Quarterly Progress Report' to CPCB in the prescribed format with the necessary supporting documents.
- (v) The answering Respondent also ensures that waste is channelized through agencies directly engaged by 'Urban Level Bodies' ("ULB"). It is pertinent to point out in the backdrop of the answering Respondent's preliminary objections herein that none of the ULBs have been impleaded in the present Application.

6.3 The answering Respondent's registration is therefore subject to achievement and compliance with the provisions of the PWM Rules and the EPA, which if not followed, would be subject to cancellation of the registration. The answering Respondent continues to comply with such undertakings and provisions to the best of its capabilities and regularly engages with the CPCB with respect to its responsibilities under the PWM Rules.

7 SWM RULES

7.1 SWM Rules were enacted under Sections 3, 6 and 25 of the EPA. Rule 17 specifies the duties of 'brand owners' of



disposable products, sanitary napkins and diapers under the SWM Rules:

- (i) It is submitted that the answering Respondent is in compliance of Rule 17 and most of the provisions relate to the undertakings already provided by the answering Respondent to the Respondent No. 1 during its registration as a “producer” under the PWM Rules.
- (ii) A comparative table of the answering Respondent’s obligations under its registration as a “producer” under the PWM Rules and its obligations under Rule 17 of the SWM Rules is set out below.

<u>S.No</u>	<u>PWM Rules Targets</u>	<u>Rule 17 of SWM Rules</u>
1.	Establishment of a system for collecting back the plastic waste or multi-layered packaging generated by its products.	(2) All such brand owners who sell or market their products in such packaging material which are nonbiodegradable <u>shall put in place a system to collect back the packaging waste generated due to their production.</u>
2.	The answering Respondent has to send the plastic waste generated to recyclers with the Respondent No. 2 (or to permitted cement industries) for its	(3) Manufacturers or brand owners or marketing companies of sanitary napkins and diapers <u>shall explore the possibility of using all recyclable materials in</u>



	<p>processing.</p> <p>The answering Respondent presently does not include a pouch with its products for the reasons set out below but continues to explore the possibility of using fully recyclable materials.</p>	<p><u>their products or they shall provide a pouch or wrapper for disposal of each napkin or diapers</u> along with the packet of their sanitary products.</p>
3.	<p>The answering Respondent regularly carries out menstrual hygiene education programmes and its products carry instructions on the proper wrapping and disposal of the same.</p> <p>Some of the commonly followed activities by the answering Respondent include conducting workshops, seminars, and talks aimed at educating the masses about the responsible use of their products.</p>	<p>(4) All such manufacturers, brand owners or marketing companies shall educate the masses for wrapping and disposal of their products.</p>

- (iii) The answering Respondent takes exception to Rule 17(1) of the SWM Rules, which requires the answering Respondent to provide financial assistance to the local authorities for establishment of a waste management system. The Rule is violative of the distinction in law between the State obligations and those of private



entities and individuals. The answering Respondent is a presently loss-making enterprise and should not be imposed with any obligation which may damage itself especially for responsibilities that fall solely within the domain of the State. Further, without prejudice to the above, the answering Respondent reserves its rights to address detailed submissions on this aspect separately.

- (iv) Irrespective of the answering Respondent's submissions above, it is amply evident that the answering Respondent is in compliance of the SWM Rules, in addition to the PWM Rules.

7.2 In any event, to comply with Rule 17(3), the answering Respondent already includes a wrapper in addition to a self-wrapping mechanism with its sanitary napkins and has a self-wrapping mechanism in one type of diapers, similar to that recommended by FIHA (detailed below). The answering Respondent states that subject to the decision of the Hon'ble Tribunal and directives of the Respondent No. 1, the self-wrapping option can be introduced in other types of diapers as well. Such a mechanism conforms with the provisions of Rule 17 of the SWM Rules while at the same time avoids addition of unnecessary plastic waste. It is pertinent to point out that Rule 17(3) of the SWM Rules grants brand owners an option to either explore using recyclable materials or include a pouch or wrapper. The answering Respondent is doing both and merely because a separate plastic 'pouch' is not included, does not mean that the answering Respondent is in violation of the SWM Rules. A copy of the photos of the answering Respondent's products is annexed as **Annexure 5**.



8 PRACTICAL CONSIDERATIONS

- 8.1 Despite several instructions or directions, the public continues to use traditional and unsafe methods of waste disposal due to the taboo or stigma attached with the usage of such products. Therefore, even with the answering Respondent including wrapping mechanisms, the issue is more of social awareness problem where the general public needs to use those mechanisms and not carelessly dispose of the products. This could be best addressed by social outreach programmes by Respondents No. 1 and 2 in conjunction with manufacturers of Sanitary Products.
- 8.2 It is submitted that this Hon'ble Tribunal should also kindly consider the practical effect of having manufacturers (such as the answering Respondent) include a separate plastic 'pouch' with their products for wrapping the used products. The inclusion of an additional 'pouch' for each product will have widespread environmental implications on the plastic waste generated in the country:
- (i) A pouch or wrapper for disposal of each of the napkin or diapers as suggested in Rule 17(3) of SWM Rules, will result in the addition of tons of plastic in environment, which will go against the goal of sustainable environment. The addition of a pouch for disposal of each hygiene product would build on massive quantity of plastic waste by adding more than one lakh ton of single – use plastic at current penetration levels (of approximately 12%, and



estimated to grow at more than 20%). In addition, if every used unit in a household will need to be wrapped it will result in unnecessary surplus plastic getting added in the last stage of waste disposal.

- (ii) Presently, the answering Respondent is responsible for recycling and the proper disposal of approximately 3400 MT of waste under the PWM Rules. Sanitary napkins and one of the diapers produced by the answering Respondent already contain the self-wrapping disposal mechanism. It is estimated that the addition of a separate plastic 'pouch' will generate more than 11000 MT of plastic waste which will further pollute the environment.
- (iii) The self-wrapping mechanism in the answering Respondent's products is aimed at avoiding the excess waste. If the mechanism is used properly by 'waste generators' (as under the SWM Rules) then any sanitary products can be disposed of efficiently and safely.
- (iv) It is pertinent to mention that the raw materials used by the answering Respondent in its manufacturing process are not only as per internationally laid down standards but also keep in mind the interests of the environment and the company follows a sustainable manufacturing process that also lays down great importance towards environment protection.



8.3 One solution that had been offered by the Applicants was to make the sanitary products 'bio-degradable'. Use of bio-degradable pads and diapers should be implemented but it has two important hurdles:

- (i) the pad/diaper itself will yet contain the allegedly hazardous substance i.e. the bodily fluids and solids captured within the product so that will not address the issue of ragpickers and sanitary workers being exposed; and
- (ii) in India, there is a severe lack of sanitary products and provision of accessible and reasonably priced sanitary products to the population has been one of the prime objectives of the Respondent No. 1. The answering Respondent has participated in those objectives but submits that such biodegradable products substantially increase the cost of production which will make the Sanitary Products even more inaccessible to the general population.

8.4 It is the public perception the country has a pervasive and widely recognized problem on the lack of use/availability of sanitary products in the majority of the female and infant population. In fact, a majority of women in the country neither have access to sanitary napkins nor the economic ability to use such products. If the answering Respondent is directed to produce bio-degradable products, it will add components to the said products, which will increase the cost of production which will further deter the customers from using their products as they



would be comparatively more expensive. In a country where only 12% of the female population has access or use sanitary pads, this number would further reduce, thereby increasing the health hazards and risks born out of the non-usage of such products

- 8.5 In a situation wherein the Respondent No. 1, by exempting sanitary products from the purview of the GST, such an act of passing directions against this Respondent will be in direct contradiction of the objectives of the Respondent No. 1 to ensure access to health products by a larger number of women. The answering Respondent states that dire need of cheap and easily available Sanitary Products for public health reasons currently outweighs the need to produce bio-degradable materials. Indeed, a large part of the Respondent No. 1, the answering Respondent and numerous non-governmental organizations' social initiatives are focused on ensuring that women in the country have access to sanitary products.

9 FIHA INITIATIVES

- 9.1 The answering Respondent No. 9 submits that it is also a member of FIHA, which is a not-for-profit company incorporated under Section 25 of the Companies Act, 1956, and is a representative industry body of the manufacturers of sanitary napkins and diapers. The members of FIHA had commissioned a study by Nielsen in June 2017 to understand the behaviour of sanitary napkin users and by IMRB in July/August 2017 for diaper users and found that the majority of consumers already wrap used sanitary napkins and diapers at the time of disposal.



- 9.2 In terms of these studies, FIHA has submitted a representation before the Respondent No. 1 on 15 December 2017 regarding the proposed alternative solutions by manufacturers and brand owners of sanitary napkins and diapers under Rule 17 of the Solid Waste Management Rules, 2006. The said representation is pending consideration and should be read as part and parcel of the present reply. A copy of the letter (representation) dated 15 December 2017 issued by FIHA to the Respondent No. 1 is annexed as **Annexure 6**.
- 9.3 FIHA has also worked on alternative solutions which can protect the health and hygiene of the rag pickers and at the same time avoid addition of more plastic to the environment. To further this objective, FIHA in association with PricewaterhouseCoopers (“PwC”) carried out a study of waste disposal mechanisms in 5 cities - Indore, Bangalore, Pune, Vijayawada and Ahmedabad and proposed solutions to tackle the issue. A copy of the Report issued by PwC and FIHA in March 2019 entitled “Assessment of Sanitary Waste Disposal Mechanisms in 5 cities of India” is annexed as **Annexure 7**.
- 9.4 It is submitted that the PwC/FIHA Report dated March 2019 suggested a mechanism, which can protect the health and hygiene of the rag-pickers, without addition of more plastic to the environment. The solution was based on a self-wrapping design– a paper that wraps and secures the sanitary waste within the product for sanitary pads and a similar self-wrapping tape solution for diapers with a visual indicator. Accordingly, self-wrapping solutions described above can be the long-term solution without affecting the affordability of the products and the



environment. In addition, the PwC/FIHA Report concludes that the provision of a visual indicator on the products (a suggested Red Dot) is able to assist ragpickers and sanitary workers in identifying sanitary products from other waste so that it can be handled with care.

- 9.5 A copy of the PwC/FIHA Report has already been provided to the Respondent No. 1 and FIHA is already engaging in detailed discussions on how such solutions can be implemented industry-wide. The Respondent No. 1 has informed FIHA that it would revert with prescribed steps, if any, keeping in mind the industry's concerns. The current status is that consultation on these issues is pending with Respondent No. 1 in which the findings of the PwC/FIHA Report needs to be discussed and suitable decisions are to be taken by the Respondent No. 1.
- 10 In light of the facts, circumstances and submissions set out above, the answering Respondent No. 9 requests this Hon'ble Tribunal to dismiss the present Application. The answering Respondent also seeks the liberty of this Hon'ble Tribunal to file a further detailed para-wise reply should the same be required at a later stage.

PLACE: NEW DELHI

DATE: 10TH FEBRUARY 2021




RESPONDENT NO. 9

Through its Authorized Signatory
Vijay Kumar Chaudhary

THROUGH

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH**

ORIGINAL APPLICATION NO. 237 OF 2020

IN THE MATTER OF:

PURVA PRAVIN BOHRA

...APPLICANT

VERSUS

MINISTRY OF ENVIRONMENT, FOREST AND
CLIMATE CHANGE AND OTHERS

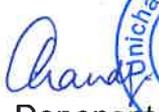
...RESPONDENTS

AFFIDAVIT IN SUPPORT OF REPLY

I, Vijay Kumar Chaudhary, S/o. Shri Rathish Chandra Chaudhary, Age: 47 years, R/o: G-1001, Suncity Hights, Sector-54, Nathupur (67) Gurugram -122002, do hereby solemnly affirm and state on oath as follows:

- 1 I am the authorized signatory of the Respondent No. 9 Company and as such I am personally conversant with the facts of the case. I say that I am competent to affirm the present Reply.
- 2 I say that I am deposing to this present Reply and affidavit on behalf of the Respondent No. 9 Company which has been drawn under my instructions and on the basis of legal advice received.
- 3 I say that all annexures to the present Reply are true copies of their respective originals.




 Deponent



A circular stamp in blue ink with the text 'Vinicharm India Pvt. Ltd.' around the perimeter and a star at the bottom.

VERIFICATION

Verified at New Delhi on this 10th day of March 2021 that the contents of the Reply and Affidavit are true and correct to the best of my knowledge, belief and information. No part of the Reply and Affidavit is false and nothing material has been concealed therefrom.


Deponent



Identified by me

Advocate



ATTESTED
JOGINDER SINGH
ADVOCATE & NOTARY
GURUGRAM DISTT. (HR.)
10 MAR 2021



**BEFORE THE NATIONAL GREEN TRIBUNAL
CENTRAL ZONAL BENCH, BHOPAL**

Original Application No. 30/2015 (CZ)

CORAM:

**Hon'ble Mr. Justice Dalip Singh
(Judicial Member)**

**Hon'ble Dr. S.S. Garbyal
(Expert Member)**

BETWEEN:

1. PC Sharma
S/o Late Shri M.L Sharma
R/o F-1/7 1100 Quarters, Bhopal

.....Applicant

Versus

1. M/s Proctor and Gamble Home Products Limited through its Plant Manager, Plot No 182-A Industrial Area, Mandideep 462046
2. Shri Shantanu Khosla,
Managing Director ,
M/s Proctor and Gamble Home products Limited, P&G Plaza,
Cardinal Gracias Road, Andheri East,
Mumbai
3. State of Madhya Pradesh,
Through the Principal Secretary,
Government of Madhya Pradesh,
Department of Commerce,
Industries and Employment,
Vallabh Bhawan, Bhopal

4. State of Madhya Pradesh,
Through The Principal Secretary,
Government of Madhya Pradesh,
Department of Urban Administration and Environment,
Vallabh Bhawan Bhopal
5. The Madhya Pradesh State Environment
Impact Assessment Authority
(MPSEIAA) through its Member
Secretary EPCO Building,
Paryavaran Parisar, E-5 Arera Colony,
Bhopal.
6. The Madhya Pradesh Audyogik Kendra
Vikas Nigam (MPAKVN) through its
Managing Director,
Tawa Complex, Bittan Market,
Bhopal
7. The Madhya Pradesh Pollution Control Board,
through its Member Secretary
Building, Paryavaran Parisa, E-5 Arera
Colony Bhopal
8. The Municipal Council, Mandideep
Through its Chief Municipal Officer,
Municipal Council Officer, Madideep,
District Raisen
9. The State of Madhya Pradesh,
through its Chief Medical and Health Officer
(CM&HO) District Raisen (Madhya Pradesh)
10. Ministry of Environment & Forests & Climate Change,
Regional Office (WZ),
Bhopal

.....Respondents

Counsel for Applicant :

Shri Ayush Dev Bajpai, Adv.

Counsel for State :

Shri Sachin K. Verma, Adv.

Counsel for MoEF:

Shri O. S. Shrivastava, Adv.

Counsel for MPPCB & MPSEIAA

Ms. Parul Bhadoria, Adv.

Counsel for Respondent No.1 :

**Shri Ajay Gupta, Adv. with
Shri Ankur Mittal, Adv.**

J U D G E M E N T

Reserved on July 20th, 2017
Pronounced on August 3rd, 2017

- 1) Whether the judgement is allowed to be published on the internet - yes / no
- 2) Whether the Judgement is to be published in the All India NGT Report - yes /no

DR. SATYAWAN SINGH GARBYAL, EXPERT MEMBER

1. In this OA filed on 25.04.2015, the applicant had submitted that the Respondent No.1 plant has been manufacturing since 1991 in Mandideep various home products including detergents, baby care products and other products having various chemical compositions. It has been submitted that while manufacturing these products it has been using toxic Savinase Enzyme, STPP, Sulphate, Soda, AC Base, Cellulose Methyl Carboxylate (CMC), Absorbent Gelling Material (AGM) and other hazardous materials.
2. It has been alleged by the applicant that this industrial unit has undergone massive expansion from 2012 to 2015 and constructions were done without obtaining EC as stipulated under EIA notification dated 24.09.2006 under Environment (Protection) Act, 1986. It was also alleged that Respondent plant had violated the guidelines on green belt issued by CPCB and had cut down 150 trees without obtaining permission of the Competent Authority. It has further been stated that safety equipments used in the plant are not 100 per cent fool proof and workers are exposed to various toxic enzymes and

therefore have been suffering from various fatal diseases. It has also been stated that Madhya Pradesh Pollution Control Board (in short MPPCB) had earlier issued show cause notice to the Respondent plant as it had observed that :

- i. *Display Board containing the information of hazardous waste details has not been found at the outside of the unit as per directives of the Hon'ble Supreme Court.*
- ii. *During the inspection, it has been observed that filters of DG sets, chemical containers insulating material and rock wool was lying here and there and the representatives of the unit don't even know about the same.*
- iii. *Separate storage for hazardous waste was not found in the unit and hazardous waste was stored in the scrap yard. The description and labeling was also not found on the hazardous waste.*
- iv. *The plastic waste generated from the unit is being given to the other unauthorized vendor M/s Rauf Enterprises Mandideep.*
- v. *Details and quantity were not given to algaecide being used in cooling towers and chemical information on composition and pathways were not provided.*
- vi. *Discharge of waste water outside the premises was found near to gate number 3 and also near the STP.*
- vii. *The discharge from temporary toilets and bathroom was found outside the premises.*
- viii. *Cooling tower, softeners, wash area have not been joint to treatment plant by closed conduit. Waste water was also observed in the waste water drains.*
- ix. *The information on quality of disposal practice of salt and resin used in softener was not provided.*
- x. *The whole area of the industry has been covered as construction area and no place of green belt has been left as per guidelines of CPCB.*
- xi. *No permission has been taken from the Mining Department for the excavation for the expansion*

program. The details of Environmental Clearance under the EIA notification 2006 have not been given by the industry officials. It seems the mined land is more than 5 hectares.

- xii. Operation of the treatment plant was found satisfactory and excess foam was observed in the effluent, moreover separate electricity meter has not been installed for the treatment plant.*
- xiii. Leaking of diesel from the valve of diesel line was observed which was contaminating the soil of the area.*
- xiv. Adequate land was not found for the utilization of treated effluent towards the green belt development. The grass of the lawn was found burned because of the use of toxic untreated effluent.*
- xv. Battery waste which comes under hazardous waste were observed stored with the scrap and ash of the lead acid battery was found on the open area.*
- xvi. Monitoring reports for DG set and other emission sources have not been submitted as per the condition of the consent.*

3. It has been stated in OA that issues raised in the Show Cause Notice of the PCB have not been complied with and the Respondent plant has been violating the environmental norms pertaining to EC, Hazardous Waste Management, and conditions of Air & Water Act. The applicant, therefore, prayed that this Tribunal may-

- a. Direct the closure of the factory operated by the respondent no. 1 & 2.*
- b. Direct the respondent no. 1 & 2 to restore the area in question to its original form, in the interest of justice and environment.*
- c. Direct an independent agency other than the MPPCB to evaluate the losses caused to the environment.*
- d. Direct immediate action under the penal powers of this Hon'ble Tribunal for the continuous violation for the environmental laws by the respondent no. 1 by raising construction without obtaining prior environmental clearance.*

- e. *Direct the respondent no. , 1 not to sell or alienate the property in dispute or create any third party interest in the illegally raised construction of the industry.*
- f. *Impose exemplary penalty on the respondent No. 1 and prosecute respondent no. 1 and prosecute respondent no. 2 for repeated and continuous violations, in accordance to the polluter pays principal.*
- g. *Initiate suitable action against the officials who have failed in ensuring compliance of the orders / rules restraining the construction activities.*
- h. *Any other relief that this Hon'ble Tribunal may deem appropriate.*

4. On being satisfied that there was a substantial question connected to and concerned with the ecology and environment, this Tribunal on 29.04.2015 ordered the notices to be issued to the respondents.

5. On 19.05.2015 the applicant filed his averments wherein it was submitted that all the deficiencies pointed out by the MPPCB in their inspection were rectified and also that there is no discharge from the unit outside. In order to find out any adverse impact on the soil around the plant the Central Ground Water Authority (in short CGWA) was directed on 28.07.2015 to take soil samples from ground around the industrial unit of the Respondent No.1 and particularly from the inhabited areas where ground water may be consumed by the residents of the area for drinking purposes so as to find out its contents and quantity and potability and whether same is safe for being consumed. State of MP was also directed to take the soil samples from points where the various raw materials were received and also stored in case it is in the open as also from the site where the water discharged was being stored in various depressions within the premises of the plant for testing with regard to its contents. The CGWA was asked to submit the details of their

analysis with particular reference to the materials which were being used/manufactured in the premises and discharged from the same so as to rule out the possible contamination from any source within the premises of the Respondent No.1.

6. As regards green belt the Respondent No.1 and 2 submitted on 29.9.2015 that they were required to keep an area of 48,468 Sq. meters as green area and that this condition is being complied with. It was further submitted that felling of trees was carried out after receiving the permission granted vide order dated 07.07.2010 and thereafter, an area of 20 acres of MPAKVN was also brought under plantation by planting 3000 trees.
7. On 29.05.2015, we also directed the Director (Medical and Health), Government of MP to constitute a Medical Board with at-least two specialists dealing with respiratory diseases and disorder apart from any other specialist that the Director may deem proper to examine the past and present employees whose details and affidavits were furnished and submitted by the applicant on 08.07.2015.
8. On 07.01.2016, we further directed the Respondent No.1 which is a multinational company producing similar products internationally to submit norms and procedures and safeguards and the conditions under which similar products are being manufactured with similar composition internationally.
9. It was further alleged by the Learned Counsel for the applicant that the Respondent No. 1 Plant is using chemicals and enzymes, AGM, and Sodium Poly Acrylate etc. which are hazardous substances and fall within the category of synthetic organic chemicals requiring

prior EC in accordance with the notification dtd. 14.09.2006 of MoEF & CC. Applicant has also submitted that in case of similar products being manufactured by M/s Spectrum Chemicals Industry located at Mahsana in Gujarat, the SEIAA (Gujarat) had considered it obligatory to have EC in terms of item no. 5 (f) of the schedule of the notification dated 14.09.2006 as also in the case of M/s RSPL Ltd. located at Sagar in Madhya Pradesh by SEIAA, M.P.

10. In view of above, this Tribunal had on 29.09.2015 ordered the notices to be issued to MoEF & CC to seek clarification from the Ministry. Since no response was received from the Ministry this Tribunal directed that MoEF & CC to respond on the following issues :

1. *whether the substances, compounds and chemicals used in the manufacturing of their products detergents, diapers and napkins in their plant located at Mandideep, District Raichur (M.P.) by the Respondent No. 1 / Company can be termed either separately or collectively as hazardous requiring prior EC in terms of the notification dtd. 14.09.2006 as amended from time to time,*
2. *whether in the light of the use of AGM for manufacturing of sanitary napkins and diapers special care needs to be taken in the matter of their disposal as it is alleged that in many countries AGM and some of its constituents have been categorised as hazardous substances,*
3. *whether special care and protective gear is required to be used by persons handling such raw material which is used by the Respondent No. 1 / Company for the manufacturing of products,*
4. *whether there is any recorded evidence of harmful impact on human as a result of handling of such chemicals particularly respiratory diseases, as it is alleged in the Original Application that some of the workers have suffered such illnesses as a result of handling of such material without proper protective gear,*
5. *since in the entire country there is a scheme provided for sanitary napkins on a large scale, whether the issue of their proper disposal has been considered at any stage and whether any*

guidelines have been issued to State Governments and by the Urban Development Department in turn to the local and municipal bodies for taking such precautions in their disposal, so that environmental hazardous or adverse impact on stray animals such as cows and dogs etc. do not occur.

11. In compliance of our direction the MoEF & CC filed reply affidavit on 16.012.2016 and made following submissions :

S.N.	Issues raised by Hon'ble Tribunal	MoEF & CC response
1.	Whether the substances, compounds and chemicals used in the manufacturing of their products detergents, diapers and napkins in their plant located at Mandideep, District Raichur (M.P) by the Respondent No. 1 Company can be termed either separately or collectively as hazardous requiring prior EC in terms of the notification dtd. 14.09.2006 as amended from time to time,	<p>1. The Ministry of Environment, Forest and Climate Change considers the project / activities listed in the schedule to the Environment Impact Assessment (EIA) Notification, 2006 as amended from time to time for grant of Environmental Clearances as per provisions of the notification.</p> <p>2. The EIA Notification, 2006 under entry no. 5 (f) of the Schedule covers "Synthetic organic chemicals industry (dyes & dyes intermediate excluding drug formulations ; synthetic rubbers; basic organic chemicals and chemical intermediaries). Therefore, the manufacture / production of aforesaid chemicals requires prior Environmental Clearances under the provisions of the notification.</p> <p>3. It is submitted that the detergent manufacturing unit uses the synthetic surfactant as basic raw material for enhancing the effectiveness of their product. The synthetic surfactants are synthetic organic chemicals; hence covered under entry no. 5 (f) of the Schedule to the EIA Notification, 2006.</p> <p>4. The Basel Convention on</p>

		<p>the control of Trans boundary movement of the hazardous waste and their disposal in Annexure 1 at Serial Y-13 has “wastes from production, formulation and use of resin, latex plasticizers, glues/gells adhesives” as hazardous waste</p> <p>5. The non-biodegradable absorbants used in manufacturing of sanitary napkins and synthetic surfactants used in detergents necessitates assessment of its impact on environment and hence EIQ / EMP and appraisal of the project for environmental clearances.</p> <p>6. Whereas, the applicability of the EIA Notification, 2006 to the industries using the synthetic surfactant as raw material for making other products like detergents is not clarified in the EIA Notification 2006.</p> <p>7. In view of this the Ministry has decided to refer the matter to the Expert Committee, constituted by the Ministry to review the provisions of the EIA Notification, 2006 for expert opinion</p>
2.	Whether in the light of the use of AGM for manufacturing of sanitary napkins and diapers special care needs to be taken in the matter of their disposal as it is alleged that in many countries AGM and some of its constituents have been categorised as hazardous substance,	<p>Yes. The State Pollution Control Board while issuing Consent to Operate to any industrial unit imposes appropriate conditions for environmental management. If any unit is reported to be in violation necessary action is taken as per prevailing laws.</p> <p>The hazardous effects of the Absorbent Gelling Materials (AGM) needs thorough examination.</p>
3.	Whether special care and	Yes. The occupational

	protective gear is required to be used by person handling such raw material which is used by the Respondent No. 1 / Company for the manufacturing of products,	workers need special care and protective gear while handling of chemical constituents.
4.	Whether there is any recorded evidence of harmful impact on human as a result of handling of such chemicals particularly respiratory diseases, as it is alleged in the Original Application that some of the workers have suffered such illnesses as a result of handling of such material without proper protective gear,	The toxicity of any chemical depends upon the dose and time of exposure to that chemical. There are some studies indicating skin and respiratory disorders due to long exposure of such chemicals.
5.	Since in the entire country there is a scheme provided for sanitary napkins on a large scale, whether the issue of their proper disposal has been considered at any stage and whether any guidelines have been issued to state governments and by the Urban Development Department in turn to the local and municipal bodies for taking such precautions in their disposal, so that environmental hazardous or adverse impact on stray animals such as cows and dogs etc. do not occur.	Ministry of Health and Family Welfare has launched Menstrual Hygiene Scheme (MHS) under which one of the major objective is to ensure safe disposal of sanitary napkins in an environmentally friendly manner. The Central Pollution Control Board (CPCB) has classed this as municipal solid waste. The debate is on regarding treating this as a separate stream of waste. The issue is not settled yet.

12. The MoEF made further submissions on 18.01.2017 wherein it is stated that as under :

- a. *Without prejudice, it is submitted that the answering respondent No.1 do not manufacture any of the substance as notified in entry no. 5 (f) of the EIA notification, 2006, and as such, do not require any environmental clearance.*
- b. *The comparison sought to be made by the Applicant with the environmental clearance granted to one M/s Spectrum Chemical Industries and Shri Vinod Khosia (M/s RSPL Limited) is completely out of context and*

absolutely irrelevant for the instant Original Application. As a matter of fact, the aforesaid two environmental clearances have been relied upon by the Applicant, without even carrying out any basic necessary checks, and whether there is any similarity between the products being manufactured.

- c. *Category 5 (f) in this regard provides as under: Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemical intermediates)*
- d. *It is submitted that none of the aforesaid manufacturing operations are being carried out at the Mandideep manufacturing unit of the answering respondent. As such, the question of obtaining environmental clearances by the answering respondent does not arise. On the contrary, a bare look at the environmental clearance granted to M/s Spectrum Chemical Industries would reveal that the application was made specifically for “**manufacturing Synthetic organic chemical..** Similarly, the second environmental clearance annexed along with application was in respect of “Optical Brighter” once again a synthetic organic chemical requiring environmental clearance under 5 (f) of the notification.*
- e. *Furthermore, in so far as reference to Basal convention is concerned, the same is once again out of context, inasmuch, the answering respondent do not produce or formulate resins, latex, plasticizers, glue/adhesives hence do not generate hazardous waste arrayed in Annexure 1 at Sr. No. Y-13 under this convention.*
- f. *It is further submitted that for production of detergent the unit is buying all the required Raw materials including the linear Alkyl Benzene Sulphonic Acid (LABSA) from various vendors. Only Labsa and perfumes which are added as liquid and all other raw materials come in the form of powder or granules. These raw materials in their procured form are mixed in desired proportion for production at plant. LABSA is heated and mixed in a mixer to attain good impregnation into other powdery and granular materials. This mixing also agglomerates the raw materials. The mixed agglomerate after cooling and grinding is sieved to get required mesh size of the powder mix. Post this to impart specific useful*

characteristics a small quantity of perfumes, enzymes and the like materials are admixed with the sieved powder in another mixer. At this stage the detergent powder is ready for packaging and dispatch.

- g. In view of the aforesaid process being followed in the manufacturing unit of the answering respondent, the unit performs no such activity as listed in the schedule to the EIA notification dated September 14, 2006 requiring any prior environmental clearance.*
- h. The aforesaid fact is also fortified by the reply filed by the respondent No.7, MPPCB, which has stated in its reply very clearly that the manufacturing process adopted and the raw materials used by the answering respondent to not require any prior environmental clearance under the EIA notification, 2006.*
- i. Furthermore, the MPPCB has already renewed the Consent to Operate of answering respondent, under the Air (Prevention and Control of Pollution) Act as well as Water (Prevention and Control of Pollution) Act, valid up to 31.08.2017. The said renewal is a further proof of the fact that no prior environmental clearance under the EIA notification, 2006 is required by the answering respondent.*
- j. In so far as the manufacturing of sanitary napkins and diapers are concerned, around 15 different raw materials are needed such as Dry-lap, Nonwovens, paper poly plastics, elastics, glues and adsorbant & gelling material. The entire process happens with only physical application and no chemical reaction takes place. All operating unit operations in manufacturing line are akin to machine used for textile and garment production involving cutting, fluffing, gluing, trimming and sizing, etc. post these physical operation the procured raw materials are converted to sanitary napkins or diapers, and are not listed in the schedule to EIA notification, 2006 and therefore, no prior environmental clearance is required.*
- k. It is further submitted that the answering respondent No. 1 M/s Procter and Gamble Home Product Limited do not manufacture any hazardous substances. The detergent powder, baby diapers and female sanitary napkins do not fall within the list of categorized hazardous products, as provided in the Hazardous Chemical Rules. Even otherwise, the respondent No.1 is only involved in the process of mixing the components/ingredients to reach to*

the final product known as detergent powder, baby diapers and female sanitary napkins, which are neither categorized as hazardous substance not categorized as chemical substance.

- l. The Technical Guidance Manual for Synthetic Chemical Industry, illustrate different types of products, which come within the purview of the EIA notification vis-a-vis Synthetic Chemical Industry, but none of the products manufactured by respondent No.1 fall within the list of Synthetic Chemical Industry. It is further relevant to mention that the manual covers certain set of detergents within the category of synthetic chemicals, but the respondent No. 1 does not manufacture such detergents nor is the formulation of the detergents manufactured by respondent No.1 similar to those covered by the manual. The respondent no.1 is engaged in the production of detergents, which are Linear Alkylbenzene Sulphonic Acid.*
- m. Furthermore, Environmental clearance is not required as plant is an industrial shed and industrial sheds are exempt from 2006 notification vide clarification issued by MoEF circular issued on 22.12.2014, the same is also supported by the reply of respondent No.7 filed on the records of this Hon'ble Tribunal.*
- n. Moreover, PCB has regularly issued CTE/CTO to P&G and has never asked P&G to obtain pre-environmental clearance. In 2012, PCB had highlighted that EC is required for DG sets, accordingly, P&G had applied to SEAC for grant of EC. The application was kept pending wherein the MoEF came out with a clarification that EC is not required for DG sets in captive use.*
- o. It is further clarified that the answering respondent No.1 does not manufacture surfactant or any other raw material which is covered under the EIA notification.*
- p. The MoEF has not placed on record any report of the Expert Committee as stated to be constituted by it in sub-Para 7. Once the said report is made available to the respondent No.1, the answering respondent No.1 seeks indulgence of this Hon'ble Tribunal to reply to the same.*

13. The Respondent No. 5 MPSEIAA has also submitted that the AGM used by the unit are not mentioned in the hazardous waste chemical list and in any case the Respondent Plant has been obtaining and maintaining due authorization for hazardous substances under the Hazardous and Other Waste (Management and Transboundary Movements) Rules, 2016. It has also been submitted that the Respondent Plant follows required safety measures for its employees and contractors and they conduct regular medical test for enzymes monitoring and AGM monitoring.
14. In compliance of our order dtd. 29.09.2015 the Respondent No. 7 MPPCB had filed inspection report of the plant on 13.11.2015 along with the ground water quality assessment by CGWB, North Central Region Bhopal. It has been stated that before expansion of the plant 62,366 sq. mt. (25.30% of the area) was being maintained as green belt and after expansion the extent of green belt was 54,832 sq. mt. (22.30% of the area). Besides, Respondent No. 1 / Plant had planted 1164 trees along the boundary of the factory premises. Apart from this Respondent No. 1 plant was allotted additional area of 20 acres near NH-12 for plantation and the Respondent had planted 3000 trees in that area. The photographs of the plantation done was also produced before us.
15. MPPCB has made following observations in their inspection report
- a. *Consent for the expansion of the plant was granted by the MPPCB on 14.02.2013*
 - b. *Unit obtained permission to cut the trees from the competent authorities in the site of expansion of the plant.*
 - c. *There is a water pond made by the industry to improve the water table near newly constructed shed*

but the inspection team did not find anywhere the industry had disposed or discarded surfactant and other products on land and they also did not observe any waste material being buried under ground.

- d. *ETP & STP with capacity of 100 KLD was found to be operational and no treated / untreated water was seen to be going out of the factory premises.*

16. In the report submitted by the Central Ground Water Board, North Central Region Bhopal on “Ground Water Quality Assessment in and around Procter & Gamble Mandideep, District Raisen” it has been stated that -

“It may be concisely stated that the concentrations of different parameters EC, Carbonate, Bicarbonate, Sulphate, Nitrate, Fluoride, Calcium, Magnesium, Total Hardness, Manganese and Arsenic in water samples collected in and around P & G Hygiene and Health Care Ltd, Mandideep are within permissible limits of BIS standards for drinking water.

However, 3 out of 10 locations (HP1, HP2 and BW6) reported NO₃ concentration greater than BIS desirable limit (45 mg/l). At 7 locations the iron concentrations is observed to be more than prescribed desirable limits of BIS (0.3 mg/l)’’.

17. As stated herein above the Applicant had alleged that Respondent No. 1 industry is manufacturing products which are similar to those manufactured by M/s Spectrum Chemicals Ltd. and M/s RSPL Ltd. for which EC was granted by Gujrat SEIAA and MP SEIAA respectively and, therefore, Respondent No. 1 would also require EC under category 5 (f) of the EIA notification of 2006. The Respondent

No. 7 MPPCB in their reply filed on 22.04.2016 has in Para 3, 4, & 5 submitted as below :

3. That, the answering respondent carried out a detailed analysis of the documents enclosed with the Miscellaneous Application and its similarity with the industry of the Respondent No.1. It has been found that the requirement to obtain the Environmental Clearance arises when the chemical LABSA (Linear Alkyl Benzene Sulphonic Acid) is manufactured indigenously. That, M/s Spectrum Chemicals Ltd as well as M/s RSPL Ltd manufacture the Linear Alkyl Benzene Sulphonic Acid (LABSA) chemical in their own factory and thereby are required to obtain Environmental Clearance under EIA Notification 2006.

4. On the other hand, the Respondent No.1 industry is purchasing all the raw material including Linear Alkyl Benzene Sulphonic Acid (LABSA) from outside vendors and is not manufacturing the same in its own industry.

All the raw materials are mixed in a mixer in desired proportions. The LABSA is first heated and then mixed in the same mixer to attain better impregnation.

5. Therefore, in view of the manufacturing process adopted and the raw materials used by the respondent No.1, the Respondent No.1 industry is not required to obtain Environmental Clearance under the EIA Notification 2006.

18. It is further submitted that health, safety and environment audit is carried out on annual basis in every single manufacturing unit of the Respondent Plant. The Respondent Plant has in their reply dtd. 18.01.2017 stated in Para 5 (4) that the MoEF has not pointed out any recorded evidence of harmful impact on human as a result on handling of chemicals.
19. In terms of our order dtd. 29.09.2015 regarding medical examination of 41 persons who had submitted their affidavits, it has been stated by the Respondent Plant that in complete violation of direction 11 new persons were brought in whose affidavits were neither filed before this Tribunal nor any prior permission was sought by the Applicant before introducing them before the medical board. Name of 11 persons are mentioned below :

Sr. No	Name
1	Guddu Lal
2	Komal Prasad
3	Mahendra Kumar
4	Suni Rai
5	Dharam Das
6	Raj Kumar
7	Deepak Das (17 yrs old)
8	Deepak Sen
9	Balbir Vishavkarma
10	Raghuveer Singh
11	Jitender Sahu

It has been stated that there were no specific details like period of employment in respect of 11 new persons mentioned above.

20. It was further submitted by the Respondent No.1 that 9 Persons who were there in the original list were not present before the medical board. These 9 persons are as follows:

Sr. No	Name
1	Sanu
2	Supyal Sen
3	Pradeep Nagwanshi (s/o Surat SIngh)
4	Santosh Rajput
5	Sanjay Meena
6	Pradeep Nagvanshi (s/o Bihari Lal)
7	Moolchand
8	Komal Singh
9	Devi Singh

21. Out of the 41 persons examined only 7 persons were diagnosed with some abnormality. However, cause of such abnormality is not attributable to the Respondent Plant. The remarks of the medical board with respect to these 7 person are as follows :

Name	Father name	Doctor's Analysis
Santosh Rajput	Gopal Singh Rajput	Mild persistent bronchial asthma with Seasonal Allergy. Means that in a particular season the asthma may be aggravated.
Munna Lal	Hardayal	Moderate persistent bronchial asthma with seasonal allergy.
Rajkumar Raj	Hari Singh	Mild persistent bronchial asthma with seasonal allergy.
Ramgopal Rai	Ram Rathan Rai	Mild intermittent bronchial asthma with seasonal allergy. Patient has history of working in Cotton industry at Present. Also, there is family history of naso-bronchial allergy among other family member, sibling, brother, wife
Ghanshyam Pal	Nirbhay Singh	Mild persistent bronchial asthma with seasonal allergy.

Guddu Lal	Hardyal Signh	Mild persistent bronchial asthma with seasonal allergy.
Komal Prasad	Pussulal	Mild persistent bronchial asthma with seasonal allergy with history of seasonal urticaria in summer. Patient had been working in alleged company.

22. In view of the submissions made herein above by the MPPCB, MPSEIAA, Central Ground Water Authority and Ministry of Environment Forests & Climate Change, Govt. of India it is amply clear that the Respondent No. 1 Plant did not require prior EC for using chemicals, compounds and raw materials in the manufacture of home products, baby care products, sanitary napkins and other products in their plant situated at Mandideep. And also that the plant has been taking all the safety measures for protection of their workers in the plant and that the injuries and diseases suffered by their past and current employees cannot be attributed to the manufacturing process adopted by the Plant. It is also clear that alternate steps have been taken by the Respondent No. 1 Plant with respect to creating and maintaining green belt and that they have taken all the permissions required under law for cutting the tree in the premises of the plant.
23. Having held so in view of the clear statement of the MoEF regarding the requirement of EC not being applicable in the case of the Respondent No. 1 and that entry 5 (f) of the EIA notification 2006 strictly does not apply, however, in the facts and circumstances and keeping in view the precautionary principle we would direct the MPPCB to suggest in consultation with the Respondent No. 1 precautionary measures as are applicable where entry 5 (f) applies. In view of the fact that the final product of the Respondent

No. 1 is manufactured out of some of the components to which an industry manufacturing the same requires EC under entry 5 (f) of the EIA notification 2006. In spite of the fact these are not manufactured or produced by the Respondent No. 1, however, we feel that even in the event of handling of the same precautions need to be adopted and the PCB shall, therefore, suggest to the Respondent No. 1 industry to take adequate precautions.

24. In addition to the above, it was given out during the course of hearing that for handling of such material out of which the products of the Respondent No. 1 are manufactured labour are engaged through the resource person / contractor engaged by the Respondent No. 1. The Respondent No. 1 is, therefore, duty bound that such labour which is engaged should be adequately explained the hazards if any that they may encounter while handling such material and further that the labour handling such material should watch out for and report any particular symptoms that would indicate any ill effects of handling of such materials. Needless to say that, by way of abundant precautions, such labour shall be provided by the resource person and / or the Respondent No. 1 protective equipments for handling such material including gloves and masks etc. so as to prevent inhalation or contamination in any manner as some of the persons who were medically examined were found to be suffering from respiratory ailments. We have no conclusive evidence before us to come to the conclusion that these persons have contracted said ailments as a result of the handling of such materials as it may be the case of coincidence as we have no specific evidence before as to the duration for which

such persons were engaged for handling such material or whether it was a case of past history or any other cause. Be that as it may, we would still direct that adequate precautions and preventive measures be taken by the Respondent No. 1 as well as the resource persons who provide such labour on contract or in case they are engaged by direct employment by the Respondent No. 1 they shall also be provided such equipments.

25. Apart from the above, we would further direct that every fortnight such labour which have been engaged shall be medically examined at the instance of the Respondent No. 1 for ensuring that the labour engaged for handling such material which is the raw material for the manufacture of the goods is not in any manner found to be suffering from any of the ill effects of handling such material. In case they are found to be suffering from any such ailments their treatment shall be the responsibility of the Respondent No. 1 and the Respondent No. 1 shall bear the entire cost of the same.
26. So far as the disposal of sanitary items is concerned, since the sanitary waste has been classed as Municipal Solid Waste by the CPCB / MoEF the Solid Waste Management Rules 2016 shall be applicable to the Respondent No. 1. Therefore, we also direct that the Respondent No. 1 shall comply with the Solid Waste Management Rules, 2016 by providing a disposal pouch or wrapper along with the packaged sanitary products for safe and proper disposal of used sanitary napkins and diapers. It shall also be obligatory for the Respondent No. 1 to undertake public awareness measures for disposal of used napkins and diapers in prescribed manner.

27. In view of the same, no further directions are required to be issued in this Original Application No. 30/2015. Accordingly, the O.A. No. 30/2015 stands **disposed of**. The MPPCB Respondent No. 7 shall take necessary steps for issuance the directions in consultation with the Respondent No. 1 for taking the aforesaid precautions as directed hereinabove.

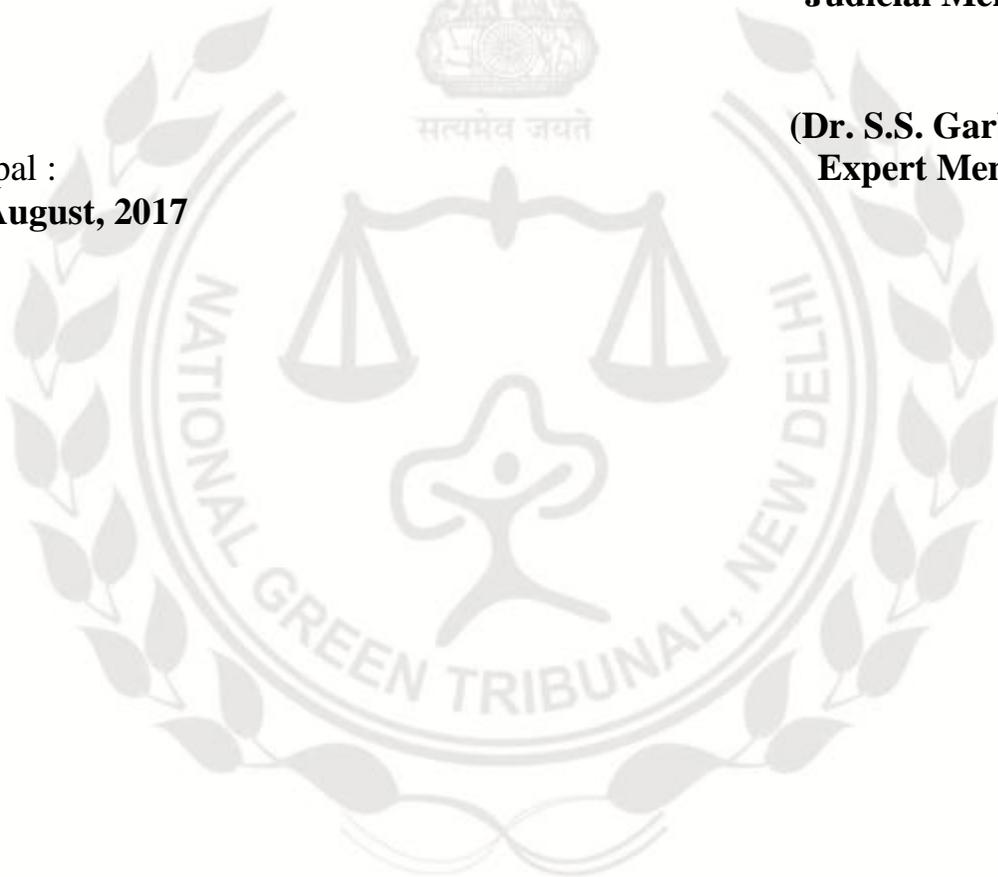


सत्यमेव जयते

(Mr. Justice Dalip Singh)
Judicial Member

(Dr. S.S. Garbyal)
Expert Member

Bhopal :
3rd August, 2017



NGT

ITEM NO.16

COURT NO.7

SECTION XVII

S U P R E M E C O U R T O F I N D I A
RECORD OF PROCEEDINGS

CIVIL APPEAL Diary No.46725/2019

(Arising out of impugned final judgment and order dated 03-08-2017 in OA No. 30/2015 03-12-2019 in RA No.08/2017 passed by the National Green Tribunal)

M/S PROCTER AND GAMBLE HOME PRODUCTS LIMITED (NOW KNOWN AS PROCTER AND GAMBLE HOME PRODUCTS PRIVATE LIMITED)

Petitioner(s)

VERSUS

PC SHARMA & ORS.

Respondent(s)

(With appln.(s) for c/delay in filing CA, exemption from filing c/c of the impugned judgment and ex-parte stay)

Date : 27-01-2020 This petition was called on for hearing today.

CORAM :

HON'BLE DR. JUSTICE D.Y. CHANDRACHUD
HON'BLE MR. JUSTICE K.M. JOSEPH

For Petitioner(s) Mr. Mukul Rohatgi, Sr. Adv.
Mr. K.V. Vishwanathan, Sr. Adv.
Mr. Nikhil Rohatgi, Adv.
Mr. Kapil Arora, Adv.
Mr. Juvraj Singh Bindra, Adv.
Mr. Ankur Mittal, Adv.
Ms. Palak Nagar, Adv.
for M/s. Cyril Amarchand Mangaldas

For Respondent(s)

UPON hearing the counsel the Court made the following
O R D E R

Delay condoned.

Issue notice, returnable in four weeks.

Dasti service be effected on the respondents in addition.

Liberty is granted to the petitioner to file additional documents.

Status quo, as on today, shall remain in force until further orders.

(Chetan Kumar)
A.R. -cum-P.S.

(Saroj Kumari Gaur)
Court Master

ITEM NO.74

REGISTRAR COURT. 1

SECTION XVII

S U P R E M E C O U R T O F I N D I A
RECORD OF PROCEEDINGS
BEFORE THE REGISTRAR SH. ANIL LAXMAN PANSARE

Civil Appeal No(s). 835-836/2020

M/S PROCTER AND GAMBLE HOME PRODUCTS LIMITED (NOW KNOWN AS PROCTER
AND GAMBLE HOME PRODUCTS PRIVATE LIMITED) Appellant(s)

VERSUS

PC SHARMA & ORS.

Respondent(s)

(Service compliance)

Date : 03-03-2020 These appeals were called on for hearing today.

For Appellant(s)

Mr. Ankur Mittal, Adv.
Ms. Chitranshi, Adv.
Ms. Palak Nagar, Adv.
M/S. Cyril Amarchand Mangaldas Aor, AOR

For Respondent(s)

UPON hearing the counsel the Court made the following
O R D E R

Service is complete on respondent Nos.1 & 4, 5 and 7 to 9
but none has entered appearance.

Service is complete on respondent No.6 on 11.2.2020,
however, counter affidavit has not been filed till today. Id.
Advocate-on-record, Mr.Gautam Talukdar appears for the said
respondent and seeks time to file vakalatnama and counter
affidavit. Four weeks' time is granted for filing counter
affidavit as first and only extension in terms of Order V Rule
1(22), Supreme Court Rules, 2013. However, vakalatnama may be
filed.

Id. Counsel for the petitioner to take fresh steps
alongwith fresh and complete address of respondent Nos.2 and 3
within two weeks.

List again on 4.5.2020.

ANIL LAXMAN PANSARE
Registrar



SPEED-POST

Annexure 4
केन्द्रीय प्रदूषण नियंत्रण बोर्ड
CENTRAL POLLUTION CONTROL BOARD
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय भारत सरकार
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE GOVT. OF INDIA

Registration Certificate for Brand-Owner

(Under Rule-13(2) of the Plastic Waste Management Rules, 2016, as amended 2018)

Regn. No. – B-17011/7/UPC-II-PWM(MLP)/2020(UIPL)

Dated: 30/07/2020

To,

M/s. Unicharm India Pvt. Ltd.,
5th Floor, Unit No. 501-508 & 510-518,
Centrum Plaza Building, Golf Course Road,
Sector-53, Gurgaon-122 002

With reference to the application dated 19/05/2020 and subsequent communications regarding registration as a Brand Owner, your application has been processed and found in order. Now, therefore, Central Pollution Control Board is pleased to grant the registration in favour of **M/s. Unicharm India Pvt. Ltd.**, vide registered office address **5th Floor, Unit No. 501-508 & 510-518, Centrum Plaza Building, Golf Course Road, Sector-53, Gurgaon-122 002**, as a **Brand Owner**, for disposal of MLP & other plastic waste generated due to their products as per the EPR Action Plan submitted to CPCB.

This certificate of registration shall be valid for a period of **one year** from the date of issue of the letter unless revoked, suspended or cancelled. The Registration is granted subject to the following terms & conditions: -

1. **M/s. Unicharm India Pvt. Ltd.** shall establish a system for collecting back the plastic waste or multilayered packagings generated due to their products as per the Action Plan submitted to CPCB.
2. **M/s. Unicharm India Pvt. Ltd.** should complete 100% collect back system (EPR Target: 3400 TPA) within one year from the date of issue of registration certificate.
3. **M/s. Unicharm India Pvt. Ltd.** should ensure compliance with provisions of the PWM Rules, 2016, as amended 2018 or with any of the provisions of the Environmental (Protection) Act, 1986 as amended and rules made there under.
4. An application for the renewal of a Registration shall be made at **90 days** prior to expire of validity, along with the necessary information & documents as per the Guidelines issued by the MoEF&CC and CPCB from time to time.

Contd.....2

‘परिवेश भवन’ पूर्वी अर्जुन नगर, दिल्ली-110032
Parivesh Bhawan, East Arjun Nagar, Delhi-110032

दूरभाष/Tel : 43102030, 22305792, वेबसाइट/Website : www.cpcb.nic.in

5. **M/s. Unicharm India Pvt. Ltd.** shall ensure that plastic waste is sent to registered recyclers with SPCB/PCC or to cement industries having permission from concerned SPCBs/PCCs for co-processing of plastic waste.
6. **M/s. Unicharm India Pvt. Ltd.** is required to submit **Quarterly Progress Report (QPR)** to CPCB for disposal of Multilayered Packagings/plastic waste in prescribed format (**Annexure-II**) to CPCB alongwith supporting documents of collection and channelization of plastic waste endorsed by the concerned ULBs/SPCBs/PCCs.
7. **If at any stage, information provided by the M/s. Unicharm India Pvt. Ltd. is found to be incorrect, then the Registration granted by CPCB shall stand cancelled.**
8. **M/s Unicharm India Pvt. Ltd.** shall ensure that waste is channelized through agencies which have directly been engaged by ULBs for collection of Plastic Waste.


(Authorized Signatory)

Divya Sinha
Addl. Director & I/c UPC-II
Joint Secretary (Environment)
Central Pollution Control Board
Ministry of Environment, Forest & Climate Change, Govt. of India
Panchsheel Bhawan, East Arjun Road
New Delhi-110032

Annexure 5







December 15, 2017

To,
Mr. CK Mishra IAS
Secretary
Ministry of Environment, Forest & Climate Change
Government of India, Indira Paryavaran Bhawan,
Jor Bagh Road, New Delhi -110 003.

Subject: Representation regarding proposed alternative solution by manufacturers and brand owners of sanitary napkins and diapers for Rule 17 of the Solid Waste Management Rules 2016 and requesting time to implement the proposed solution

Dear Sir,

The Feminine and Infant Hygiene Association ('FIHA') is a Section 25 company which was incorporated in September 2009. FIHA is a group of large, medium and small scale industries, engaged in the manufacture of adult and baby diapers and sanitary napkins. The members of FIHA include among others, large and medium scale consumer goods companies which manufacture product segment comprising of baby diapers, adult diapers & sanitary napkins. A list of FIHA members is attached herewith as **Annexure A**.

Our Request

At the outset, FIHA and its members congratulate the government of India for developing the comprehensive Waste Management Rules, 2016 ('New Rules'). The objective of this representation is to highlight the concerns of manufacturers regarding these Rules particularly Rule 17(3) that enumerates the obligation on manufacturers/brand owners of sanitary napkins and diapers for providing a wrapper/pouch and suggest alternate sustainable solutions.

Our intent is to safeguard the interests of the **waste picker**, the **consumer** as well as the **environment** through these solutions.

In the last few months, members of FIHA and their technical teams have undertaken an extensive assessment of consumer habits and practices, global practices for sanitary waste disposal as well as stakeholder consultation with municipal corporations, NGO waste picker organizations and environmental sustainability experts. We have leveraged this learning among our respective R&D teams to offer solutions where manufacturers can help solve the sanitary waste handling and disposal issues holistically.

After detailed discussions between our members and their technical teams, we believe that it is not environmentally sustainable nor practical to implement Rule 17(3) in its present form for reasons enumerated below. Instead, FIHA, on behalf of its members, hereby requests the government to consider separating clauses (1) and (2) of Rule 17 as they apply to only manufacturers of disposable products such as tin, glass, plastics packaging etc. to allow industry as well as government to mutually agree on the best possible and sustainable solution for effective segregation and, importantly, identification of sanitary waste, specifically, sanitary pads and diapers. Additionally, FIHA on behalf of its members, requests the government to grant time till 2020 to the industry to implement the alternate solutions. We would work with the local bodies and civil society and pilot solutions relevant to local conditions.

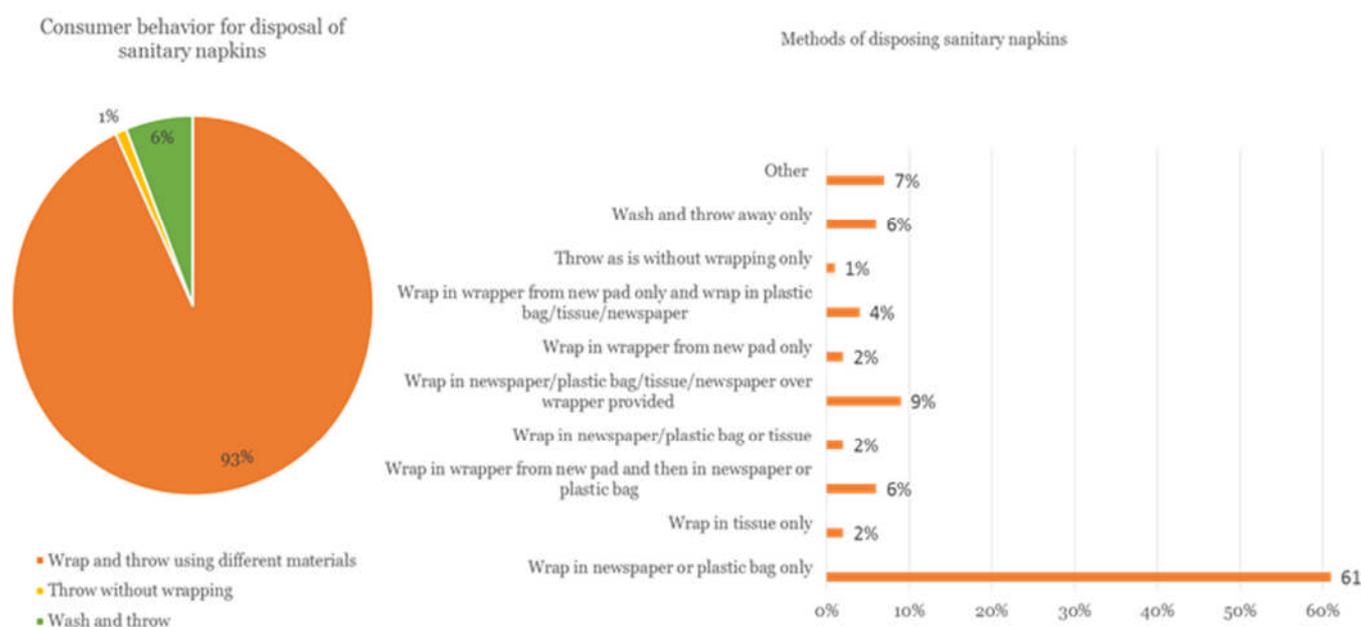


2 **LANDSCAPE ASSESSMENT**

Issues being faced in the collection and segregation of sanitary waste

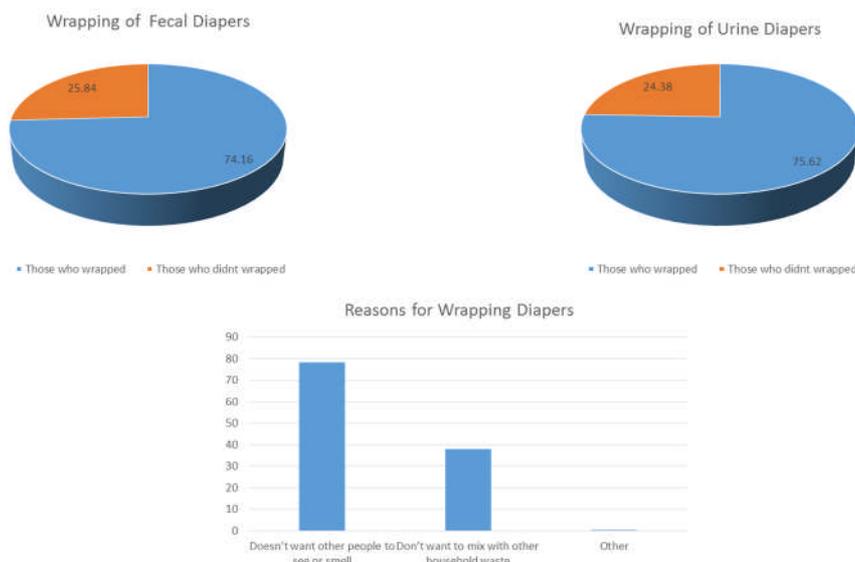
2.1 The sanitary waste management chain starts with the generation of waste to its final disposal. Sanitary Waste is collected unsegregated from different sources by different methods. The sanitary waste from the households and commercial establishments is either collected door to door or dumped by households near the garbage collection points/dumps. It is then transported to the disposal site or landfill. The group of stakeholders across the various stages include the waste generators, rag pickers or the waste collectors, urban and rural Local Bodies etc.

2.2 **Waste Generators/Consumers** : Members of FIHA commissioned a study by Nielsen to understand the behaviour of sanitary napkin users in June 2017 and by IMRB in July August 2017 for diaper users and found that the majority of consumers wrap both used sanitary napkins as well as used diapers.



This origin of this practice of wrapping stems from the fact that menstruation is still considered a taboo in India and women conceal it to avoid getting ostracised or embarrassment within their families.

- ▶ 62% girls in urban India are unaware about menstruation till they get their first period.
- ▶ More than 50% of urban Indian women practice menstrual taboos
- ▶ 45% women across India usually avoid letting their family know when they have periods and 75% of women get their sanitary napkins packet wrapped during purchase in order to avoid embarrassment



Majority consumers wrap their used diapers due to the smell and because of the taboo of this waste mixing with other waste.

2.3 Waste Pickers Habits :

Habit 1: Majority of waste pickers in India are unorganised. All waste finds its way into the garbage landfills or garbage dumps where waste pickers rummage to find waste that it is of value. There are also organised groups of waste pickers like SWACH , Hasiru Dala etc. who have been either commissioned by municipal corporations or housing societies to collect waste from door to door.

Habit 2: Waste Pickers open up all waste (wrapped or unwrapped) to segregate waste that is of value and waste that is not of value. During this process, when handling sanitary waste pickers may be exposed to human waste while opening up the wrapping (i.e. newspaper or plastic bag). The fundamental issue here is that waste pickers cannot identify that the waste is sanitary waste and are likely to open up any wrapping; whether provided by the manufacturer or by the generators. This is especially true given the low segregation of waste at the waste generator level

2.4 **Disposal of Sanitary Waste:** Currently 5% of sanitary waste is incinerated and the rest of it goes to landfill. That said, sanitary waste (diapers & napkins) constitute less than 1% of all waste in India.

2.5 Global practices for sanitary waste disposal:

Asia¹ – Presently, incineration is being used in almost all countries such as China, Japan, Thailand, Singapore and Taiwan. Japan is a leader in the construction and management of incinerators and has developed high end incineration technology that can use low-calorie to high-calorie garbage and is helping in the improvement of public sanitation and environmental conservation. Its technology is being used by other Asian countries as well.

Japan understands that its landmass is limited and finding landfill disposal sites is difficult. Thus, it developed a system to collect and transport waste, process it through intermediary treatment by incineration and other methods, and then dispose it in landfills in a sanitary

¹Report on Solid Waste Management and Recycling in Japan by Ministry of the Environment, Minister's Secretariat, Waste Management and Recycling Department, Policy Planning Division, Office of Sound Material-Cycle Society



manner, in order to prevent environmental pollution in the areas surrounding densely populated cities.

Europe: As per the Final Implementation Report for the Directive 1999/31/EC on the Landfill of Waste prepared for the European Commission (dated July 2015), most of European countries are either using landfill or incineration for disposal of sanitary waste. As per the EU Landfill Directive, permits are required for landfills and disposal in unauthorised sites is illegal. Apart from landfill, incineration is used by the countries for disposal of used sanitary waste products.

3. Pitfalls of adding wrappers/pouches to sanitary napkins & diapers

a) Wrappers do not solve the issue of identification of waste as waste will be opened up by waste pickers even if it is wrapped. Consumer behaviour indicates that they already wrap the waste to make it unidentifiable to members of their household.

b) Adverse Impact to the Environment: Addition of a pouch/wrapper in case it is made of plastic would in turn amount to adding more plastic to the environment in addition to complicating the disposal system in case such pouches/wrappers are not properly disposed. In case the pouch is made of any other material eg: paper, the availability of such material would be a concern considering the vast quantity required for disposal. The following table illustrates the amount of paper/any other material that would be required to dispose the sanitary napkins and diapers in case pouches are used:

Product	No. of pieces produced in a year*	Amount of paper/other material required for disposal**	Total paper/ material required***
Sanitary napkins	700 crores	A4 size sheet = 0.06237 sq. mt.	34927200 kgs
Diapers	585 crores	A3 size sheet = 0.12474 sq. mt.	58378320 kgs
		Total material required	93305520 kgs i.e. approx. 93,305 tons annually

**Figures on the conservative side; the requirement of wrapper/pouches would be much more for baby and adult diapers considering their size*

***Assuming that paper is used for making the wrapper/pouch*

****Assuming that 80 gsm paper is used for making pouches*

c) Impact to affordability for the consumer of essential hygiene products – There is limited usage of diapers and sanitary napkins in India, which has serious adverse consequences for infant and female health. Feminine hygiene is an under-penetrated segment in the FMCG space with only 20% of India’s female population using sanitary napkins. The remaining 80% depend on other un-sanitised alternatives due to which serious diseases like Reproductive Tract Infection is 70% more visible among these women. Similarly, the Indian Diaper Industry is also at a nascent stage - it is less than one-eighth the size of the Chinese market despite the fact that there are 25 million babies born per year in India as compared to 15 million babies in China.

Under the SWACH Bharat Mission’s national guidelines on menstrual hygiene management, it is noted that the commercially available disposable sanitary napkins are the most hygienic method of promoting menstrual hygiene.

This under penetration is due to affordability as well as awareness and the addition of



wrappers/pouches will only escalate the cost to the consumer for her very basic needs.

THE PROPOSED SOLUTION: WASTE HANDLING

Sir, below are the proposed solutions & changes to our product to make a) sanitary waste identifiable to the waste picker b) solve the inherent conflict that consumers have to hide their waste while c) reducing the adverse impact on the environment

SANITARY NAPKIN:

Solution	Benefits
<p>ROLL AND WRAP</p> <ul style="list-style-type: none"> ➤ Consumers roll used sanitary napkin using back sheet adhesive and then wrap in newspaper/ bag ➤ The back sheet would have a common identifying symbol to make it easily identifiable & signal to the waste collectors not to open it 	<ul style="list-style-type: none"> ➤ No incremental cost to the consumer ➤ Fits in with already present consumer habit of disposing in a newspaper or plastic bag available at home(93% of consumers) with a modification of “roll” using existing adhesive ➤ Manages the discretion need of the consumers and identification need of the waste picker

ADULT AND BABY DIAPERS:

Solution	Benefits
<p>In case of baby diapers, two variants are present in the market: Taped diapers and pant style diapers. The taped diapers already have self-sealing mechanism for disposing the diapers. However, for pant style diapers, following is our proposal ROLL AND WRAP (both adult and baby diapers)</p> <ul style="list-style-type: none"> ➤ Consumers roll used diaper which is the present practice being followed and then wrap in newspaper/ bag (74% of consumers) ➤ As industry we will make diapers easily identifiable to the waste collectors 	<ul style="list-style-type: none"> ➤ No incremental cost to the consumer ➤ Fits in with already present consumer habit of wrapping the diapers at generator level ➤ Reduces the adverse impact to the environment that wrappers/pouches would have owing to the size and contents of the used product ➤ Manages the identification need of the waste picker



Waste Handling Stages	Current Scenario	Proposed Solution
Sanitary-waste handling by <u>waste generators/consumers</u>	Existing disposal habit of used sanitary napkin 	The proposed solution is to make the backsheet of sanitary napkins easily identifiable using a visual signal e.g. Red Dots 
Sanitary-waste handling by <u>waste-pickers</u>	Open up wrapped napkin in pouch/newspaper 	Open up the rolled and wrapped napkin 

Our findings are also supported by the Kagad Kach Patra Kashtakari Panchayat, a trade union of waste pickers which started the ‘Red Dot campaign’ in Pune. The Union supports use of newspaper for disposing the sanitary waste and marking the same with a red dot for easy identification of the same by the waste pickers.

4. DISCUSSIONS WITH MUNICIPAL CORPORATIONS:

In line with our last discussions held with you and basis your suggestions, our members have been meeting the Municipal Commissioners of various cities to get their buy in and support on the proposed solutions. Given below is a gist of discussions our members had in various cities:

1. Lucknow
2. Ahmedabad

Our members met Municipal Commissioner and Additional Municipal Commissioner who is also a member of Committee set by MoEF to study, amend and implement issues related to SWM. We explained to them the implication of the rules and how adding pouches would add to the burden of SWM. We discussed issues with respect to current practices, identification, segregation and disposal of sanitary waste. We also demonstrated our potential solutions including imparting educating to consumers and rag pickers. The officials were receptive to our solution of identification and handling of sanitary waste and informed us that they would ensure that issues enumerated by Industry will be considered before any decision is taken.

5. The Proposed Solution

5.1 Amendment of Rule 17

Rule 17 of the Solid Waste Rules 2016 is ambiguous in terms of application to the relevant stakeholders. You would appreciate that Rule 17(1) by specific reference applies only to ‘manufacturers of disposable products such as tin, glass, plastics packaging, etc., or brand owners who introduce such products in the market’ and Rule 17(2) refers to ‘all such brand owners who sell or market their products in such packaging material which are non-biodegradable’.

In our understanding, Clause 1 pertains to manufacturers of disposable products such as tin, glass, plastic packaging, or the brand owners who introduce such products in the market and



does not relate to ‘*manufacturers or brand owners or marketing companies of sanitary napkins and diapers as they are not manufacturing or introducing products mentioned in Rule 17(1) in the market. The expression “such” is relatable to the disposable products stated earlier such as tin, glass, plastic packaging etc.*

Moreover, the obligation stated in clause 2, that same pertains to the collection of packaging material and waste generated on its account is covered under the Plastic Waste Rules, 2016. The clause does not pertain to diaper or sanitary napkins, but is relatable to the plastic packaging material that is being used to sell diapers and sanitary napkins.

It is Rule 17(3) and 17(4) which expressly applies to ‘*manufacturers or brand owners or marketing companies of sanitary napkins and diapers*’.

We therefore propose that obligations of ‘*manufacturers of disposable products such as tin, glass, plastics packaging, etc., or brand owners who introduce such products in the market*’ and the ‘*manufacturers or brand owners or marketing companies of sanitary napkins and diapers*’ is clarified and distinguished in the Solid Waste Rules, 2016. This can be done by making two separate Rules.

We, therefore, propose Rule 17 to be amended as under:

17. Duty of manufacturers or brand owners of disposable products and sanitary napkins and diapers.-

- (1) Manufacturers or brand owners or marketing companies of sanitary napkins and diapers shall work with a local body of its jurisdiction/choice and devise solutions for ensuring proper segregation by means of identification of used napkin or diapers keeping in view the safety and health concerns of the waste collectors.**
- (2) All such manufacturers, brand owners or marketing companies shall collaborate with the government authorities and Local Bodies to educate the masses for wrapping and disposal of their products.”**

5.2 How the Industry proposes to implement the above

With the support of your esteemed Ministry, we are committed to supporting awareness building of the appropriate segregation methods for sanitary waste among consumers. There are three core issues that need to be addressed:

- a) Consumer behavior regarding disposal of sanitary products
- b) Identification of sanitary waste
- c) Final disposal of sanitary waste

Once the government accepts our solution and amends the existing Rules, the industry members propose the following strategy for addressing the above issues.

- The manufacturers/brand owners/marketing companies will invest in making changes to their product to make ensuing sanitary waste identifiable. This will protect the interests of consumers, safeguard health & hygiene of waste pickers when exposed to sanitary waste and reduce the need to add more plastic or paper to the environment. In relation to the issues a) and b) above, FIHA commits to the following:
 - Each manufacturers/brand owners/marketing companies will make requisite investment in order to modify their product to ensure that products are equipped with suitable mechanism which makes them easily identifiable. This mechanism would be uniform across industry pan India. For this purpose, the members propose adding a common symbol across pads/san naps to make the ensuing waste identifiable and thereafter the consumers would roll and wrap the used napkin/diaper using the adhesive provided on the back sheet.



- Each manufacturers/brand owners/marketing companies will create an unbranded advertising campaign, which would include two components: i) propagating the use of sanitary products and ii) educating on safe disposal of sanitary waste products. Apart from printing instructions on the product packaging as well as on their own TV advertising, the Industry members would also undertake awareness campaign to educate the users on how to dispose & segregate the sanitary waste. In this regard, we would request the Government to allow free airing by Govt print and audio-video media (AIR, DD) as well as support in encouraging private channels/cinemas to air these advertisements/messages free of cost in public interest.
- Member companies will continue to invest in exploring recycling of sanitary waste in India
- In order to achieve the above, the members propose to run pilot programs in certain areas in identified cities to demonstrate the workability of this researched solution. On behalf of its members, FIHA commits to consolidate these programs and submit the same to the government for its review and approval.

5.3 **Recycling Sanitary Waste**

Currently, the Solid Waste Rules 2016 Rule, 17(3) asks companies to either 'explore the use of recycled materials in their products' or provide 'a pouch or wrapper for disposal of each napkin or diapers along with the packets of their sanitary products'. The members of FIHA recognise the need for putting in place an efficient, safe and environmental friendly method of disposal of sanitary napkins and diapers. Our member, P&G, has recently developed & tested a technology for the upcycling of sanitary waste which will generate quality product from waste which has multiple alternate uses. P&G has already announced plans to Hon'ble PM Modi to operationalise this technology for the first time in India and plans to do this working collaboratively with waste picker cooperatives as well as local municipalities. P&G is already in advanced discussions with the Pune municipality for deploying its recently tested technology in India as a possible solution. However, in order to demonstrate the sustainability of the potential solution outlined above, the industry needs more time to operationalise the same in India.

6. **Our Submission**

- a) In view on the above background and our submissions, we urge your good office to consider providing a feasible time till 2020 to implement the above environmentally sustainable solutions to the FMCG industry players in India.
- b) FIHA also requests that MoEFCC consider the proposed amendment to Rule 17- as suggested in our representation.
- c) The above commitments are being made by the manufacturers of sanitary products in India. However, a lot of these products are imported from outside India for which we request the government to ensure that standards for such products in line with the Rules are specified and enforced on imports.

We are committed to supporting the esteemed Ministry of Environment & Forests to achieve their vision.

Yours faithfully,

Rajesh Shah

President,

Feminine and Infant Hygiene Association

Authorized Signatory



Annexure A

LIST OF MEMBERS OF FEMININE AND INFANT HYGIENE ASSOCIATION

1. Feminine & Infant Hygiene Care Pvt Ltd
2. Kimberly Clark Hygiene Products Pvt. Ltd.
3. Johnson & Johnson Pvt. Ltd.
4. Procter & Gamble Hygiene & Health Care Pvt. Ltd.
5. Unicharm India Private Limited
6. Nobel Hygiene Pvt. Ltd.
7. Dima Products
8. Kamal Healthcare Products Pvt. Ltd.
9. Sekhani Industries Pvt. Ltd.
10. Rohit Surfactants Pvt. Ltd.
11. RGI Meditech Pvt. Ltd.
12. BellaPremier Happy HygieneCare Pvt.Ltd.

***Feminine and Infant Hygiene Association (FIHA) –
Solid Waste Management***

***Assessment of Sanitary Waste Disposal
Mechanisms in 5 Cities of India***

Executive Summary

March 2019

Project Background

Sanitary waste is thrown out along with the household garbage. Proper disposal of waste is important because certain types of waste can contaminate the environment if it is not disposed off properly. Such waste also has the potential to cause some serious diseases amongst waste collectors, rag pickers and whoever comes in direct contact with it. ***Feminine and Infant Hygiene Association (FIHA)***, comprising a group of large, medium and small scale industries, is engaged in manufacture of diapers and sanitary napkins and has been dedicatedly working towards the safe disposal of sanitary waste by safeguarding the interests of waste pickers, consumers and the environment through its innovative solutions.

As per Rule 17 (3), under Solid Waste Management Rules, 2016 “Manufacturers or brand owners or marketing companies of sanitary napkins and diapers shall provide a pouch or wrapper for disposal along with the packet of their sanitary products”. After detailed discussions between FIHA members and their technical teams, we have reached the conclusion that ***simply adding a pouch for disposal would build on massive quantity of plastic waste by adding more than one lakh tonne of single – use plastic at current penetration levels*** (of approx.. 12%, and growing at more than 20%). Also, waste pickers tend to open up any wrapping since the pouch is not easily identifiable. In addition if every used unit in a household will need to be wrapped it will result in unnecessary surplus plastic getting added in the last stage of waste disposal. Lastly women tend to leave soiled napkins unwrapped in corners or they throw the used pad in dustbins without wrapping them which poses the biggest threat to the health of the rag pickers.

Thus, in accordance with the discussions with Ministry of Environment, Forest and Climate Change (MoEFCC), FIHA recommended that they find some alternative solutions which can protect the health and hygiene of the rag pickers and at the same time avoid addition of more plastic to the environment. FIHA, on the guidance of MoEFCC worked in 5 cities - ***Indore, Bangalore, Pune, Vijayawada and Ahmedabad*** to review their waste disposal mechanisms, propose certain interventions to tackle the problem above and come back to the ministry with its findings. The FIHA, with its research partner ***Nielsen*** and project management partner ***PricewaterhouseCoopers***, conducted a survey in Vijayawada, Ahmedabad and Pune to understand the practices of consumers and also handling of such waste by rag pickers. The document aims to give a brief analysis of the experiment conducted and the survey results.

Approach

FIHA had supported Red Dot Campaign organized by SwaCH (SWaCH specializes in waste management services) in Pune for better identification of Sanitary Waste. This had limited success since rag pickers yet could not differentiate completely, used sanitary waste from other waste. Hence FIHA changed its approach, envisaged another solution for other Pilot cities.

In our numerous interactions with Indore and Bangalore it was realized that these cities were already very advanced in SWM compared to other Pilot cities as they followed 3-way segregation at source. Therefore ***Indore and Bangalore were deprioritized from the experiment and instead a case study was prepared on their SWM practices which could be used as an inspiration for other cities.***

In order to aid proper disposal and subsequent handling of sanitary waste, ***FIHA resolved to introduce new sample products and test the used products wrapping and disposal in two cities – Ahmedabad and Vijayawada.***

FIHA – Solution Details

FIHA’s solution is based on a ***self-wrapping design - a solution that wraps and secures the sanitary waste within sanitary products (diapers and sanitary napkins)***. It has a clear visual indicator as well as the waste disposal instructions printed on it. The visual marking on rejected waste makes it more identifiable and noticeable for rag pickers in segregation. This new products were further introduced in Ahmedabad and Vijayawada, details of which are mentioned below --

Baby Diapers	Sanitary Napkins
Diapers have a transparent wrapping tape attached to make it more noticeable and it also keeps the waste secure and intact	The release paper will be printed with clear identifiable signs and waste disposal instructions with an environmental friendly design which is easily identifiable by rag pickers.

The study was conducted in two phases - **400 waste collectors** (100 each for diapers, sanitary pads in 2 cities – Ahmedabad and Vijayawada for Phase I) and **800 consumers** (200 each for diapers, sanitary pads in 2 cities – Ahmedabad and Vijayawada for Phase II).

a. **Phase I – Concept Test**

Phase I was more of **generating awareness of the new product and taking a feedback of the existing sanitary waste disposal practices**. Given below is the detailed workflow for phase 1. Our research team conducted the survey amongst waste collectors to understand their acceptance of Concept Test solution.

- i. Sample set of Waste collectors were interviewed to check test solutions.
- ii. Demonstrated the test solutions via audio visual
- iii. Checked the waste collectors acceptance towards the test solutions

To check the waste collectors’ acceptance towards the test solution, following questions were broadly asked:

- Will this solution make the waste identifiable, among other household waste?
- What are the current disposal method they use to dispose diapers and sanitary napkins?
- Will this solution satisfactorily secures the waste?

The outcome of the Concept Test was positive – with more than 90% of waste collectors accepting to the solution.

b. **Phase II – Product Test**

Just by showing the audio visuals of the concept for diapers and sanitary napkins was not the target, **our research team further created a prototype of the concept solution and distributed among consumers and gaining feedback of the new product disposal technique from the waste collectors**. Given below is the detailed workflow of Phase II.

- i. Distributed samples of sanitary pads and diapers.
- ii. Educated sample set of consumers on how to adopt the Concept solutions for safe disposal
- iii. Sample set of Waste collectors were exposed to used sanitary napkins and diapers in batches collected from the sample set of consumers
- iv. Lastly, the acceptance of waste collectors towards Concept solutions were checked

The outcome of the Product Test was also affirmative like the Concept Test – more than 90% of waste collectors were able to identify sanitary waste from other waste which in turn helped them in segregation of diapers and sanitary napkins.

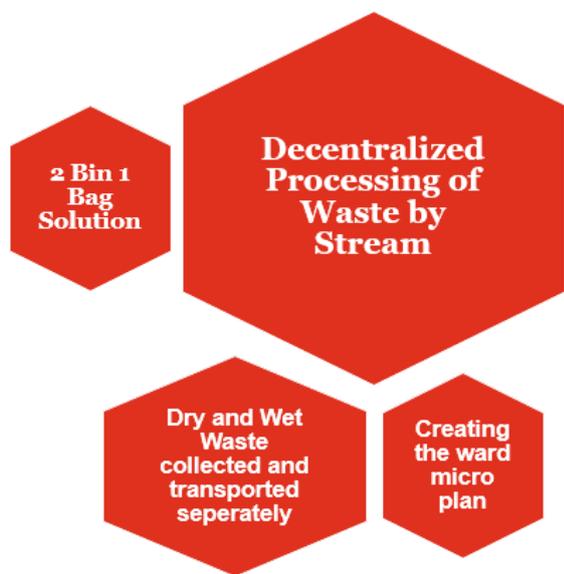
c. **Overall analysis of the Results**

Through the Pilot Study conducted in Ahmedabad and Vijayawada, FIHA concluded as follows:

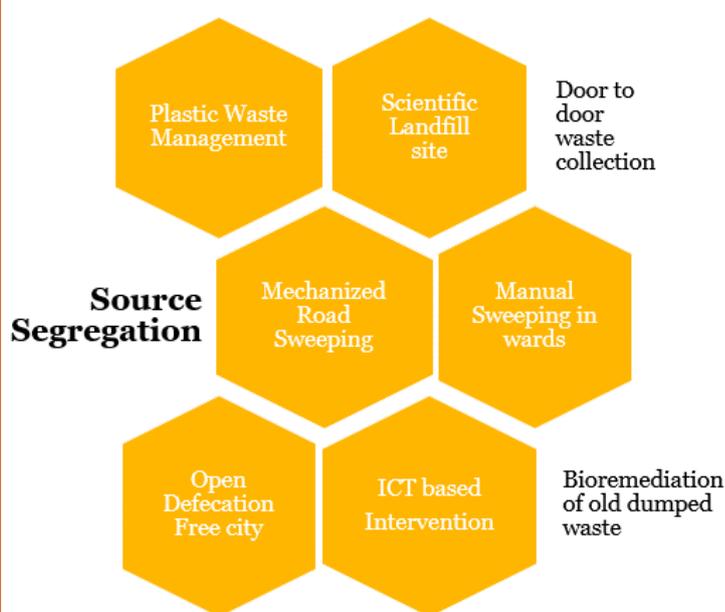
- i. Significantly improved Waste Collection experience for the Rag Pickers
- ii. Consumers find the new sanitary waste disposal mechanism easy to adopt, especially since they now understand and appreciate the risks of poorly handled disposal to rag pickers
- iii. Majority of the Rag Pickers agree that proposed solution will make sanitary waste more secure and identifiable

- iv. The innovative design will ensure that the sanitary waste remains intact with the new disposal technique
- v. The new prototype product solved the challenges of:
 - *Securing the waste efficiently*
 - *Easy Visual Identification*

Learning Good Practices from Indore and Bangalore



Bangalore



Indore

Conclusion

Decentralized processing of waste and **3 – way source segregation** are long term solutions which Indian cities need to aim for. However, FIHA solution of printing clear instructions and convenient used product packing methods seems feasible and an immediate step to implement in order to address the present concerns being grappled by the rag pickers. At the same time this solution eliminates the need of introducing a large volume of single use plastic at the last stage of waste disposal. MoEFCC may consider mandating the new prototype product as a norm to all the Sanitary Waste manufacturers.

*Feminine and Infant Hygiene Association (FIHA) –
Solid Waste Management*

*Assessment of Sanitary Waste Disposal
Mechanisms in 5 Cities of India*

March 2019

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Oxo Bio degradable

1 Synopsis

1.1 Project Background

Sanitary waste is thrown out along with the household garbage. Proper disposal of waste is important because certain types of waste can contaminate the environment if it is not disposed off properly. Such waste also has the potential to cause some serious diseases amongst waste collectors, rag pickers and whoever comes in direct contact with it. Feminine and Infant Hygiene Association (FIHA), comprising a group of large, medium and small scale industries, is engaged in manufacture of diapers and sanitary napkins and has been dedicatedly working towards the safe disposal of sanitary waste by safeguarding the interests of waste pickers, consumers and the environment through its innovative solutions.

As per Rule 17 (3), under Solid Waste Management Rules, 2016 “Manufacturers or brand owners or marketing companies of sanitary napkins and diapers shall provide a pouch or wrapper for disposal along with the packet of their sanitary products”. After detailed discussions between FIHA members and their technical teams, we have reached the conclusion that simply adding a pouch for disposal would build on massive quantity of plastic waste by adding more than one lakh tonne of single – use plastic at current penetration levels (of approx.. 12%, and growing at more than 20%). Also, waste pickers tend to open up any wrapping since the pouch is not easily identifiable. In addition if every used unit in a household will need to be wrapped it will result in unnecessary surplus plastic getting added in the last stage of waste disposal. Lastly women tend to leave soiled napkins unwrapped in corners or they throw the used pad in dustbins without wrapping them which poses the biggest threat to the health of the rag pickers.

Thus, in accordance with the discussions with Ministry of Environment, Forest and Climate Change (MoEFCC), FIHA recommended that they find some alternative solutions which can protect the health and hygiene of the rag pickers and at the same time avoid addition of more plastic to the environment. FIHA, on the guidance of MoEFCC worked in 5 cities - Indore, Bangalore, Pune, Vijayawada and Ahmedabad to review their waste disposal mechanisms, propose certain interventions to tackle the problem above and come back to the ministry with its findings. The FIHA, with its research partner Nielsen and project management partner PricewaterhouseCoopers, conducted a survey in Vijayawada, Ahmedabad and Pune to understand the practices of consumers and also handling of such waste by rag pickers. The document aims to give a brief analysis of the experiment conducted and the survey results.

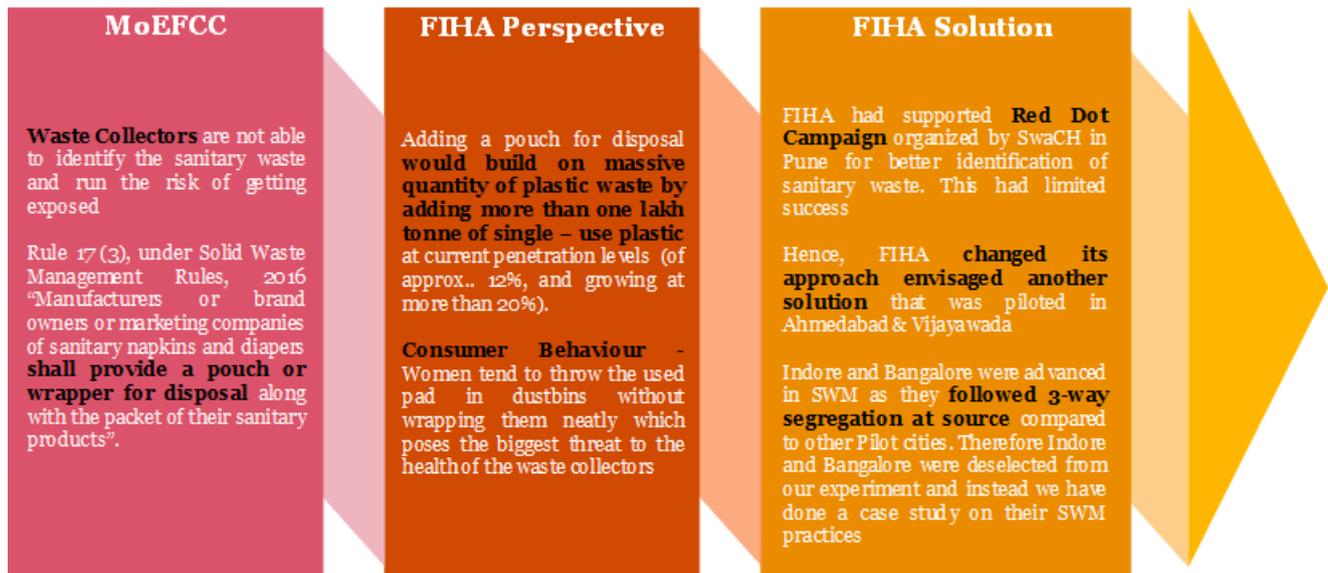
1.2 FIHA Initiative

As per Rule 17 (3), under Solid Waste Management Rules, 2016 “Manufacturers or brand owners or marketing companies of sanitary napkins and diapers shall provide a pouch or wrapper for disposal along with the packet of their sanitary products”. After detailed discussions between FIHA members and their technical teams, we have reached the conclusion that simply adding a pouch for disposal has the following disadvantages such as:

- **It is not a sustainable environmental solution:** While MoEF is considering adding pouch with sanitary napkins and diapers to ensure safe disposal for rag pickers, there are potential hazards it may add to the environment by adding more than one lakh tonne (FIHA estimate) of single – use plastic at current penetration levels (of approx.. 12%, and growing at more than 20%) dumped into the waste.
- **It is not easily identifiable:** Rag Pickers open all waste wrapped in newspaper or plastic to segregate, and during this process they are also exposed to human waste while opening up the wrapping (i.e. newspaper or plastic bag). The gravest issue here is that waste pickers cannot identify that the waste is sanitary waste and are likely to open up any wrapping; whether provided by the manufacturer or by the generators.

- **Consumer’s behavior** : it is often observed that women tend to leave soiled napkins unwrapped in corners or they throw the used pad in dustbins without wrapping them which poses the biggest threat to the health of the waste pickers.

Thus, in accordance with the discussions with Ministry of Environment, Forest and Climate Change (MoEFCC), FIHA would work in 5 cities - **Indore, Bangalore, Pune, Vijayawada and Ahmedabad** to review their waste disposal mechanisms and come back to the ministry with its findings. The FIHA, with its research partner **Nielsen** and project management partner **PricewaterhouseCoopers**, conducted a survey in Vijayawada, Ahmedabad and Pune to understand the practices of consumers and also handling of such waste by rag pickers.



2. Approach

2.1 Red Dot Campaign, Pune



Pune's waste-pickers handle about 20 thousand kilograms of dirty diapers and sanitary napkins every day, exposing themselves to many hazardous diseases. **FIHA has supported “the Red Dot” campaign organized by SWaCH (SWaCH specializes in waste management services in Pune) for better identification of Sanitary Waste.** It supports the use of newspapers for disposing sanitary waste and marking this with a red dot. The Red Dot is an indication of harmful waste and is meant to ensure that the packet is not opened. This had limited success since rag pickers yet could not differentiate sanitary waste from other waste. Hence FIHA changed its approach and envisaged another solution for other Pilot cities.

In our numerous interactions with Indore and Bangalore it was realized that these cities were already very advanced in SWM compared to other Pilot cities as they followed 3-way segregation at source. Therefore **Indore and Bangalore were deprioritized from the experiment and instead a case study was prepared on their SWM practices which could be used as an inspiration for other cities.** The details of these two cities can be found in the later sections of this report.

In order to aid proper disposal and subsequent handling of sanitary waste, **FIHA resolved to introduce new sample products and test the used products wrapping and disposal in two cities – Ahmedabad and Vijayawada.**

2.2 FIHA Solution

FIHA’s solution is based on a **self-wrapping design - a solution that wraps and secures the sanitary waste within sanitary products (diapers and sanitary napkins).** It has a clear visual indicator as well as the waste disposal instructions printed on it. The visual marking on rejected waste makes it more identifiable and noticeable for rag pickers in segregation. These new products were further introduced in Ahmedabad and Vijayawada, details of which are mentioned below --

Baby Diapers	Sanitary Napkins
	
<p>Diapers have a transparent wrapping tape attached to make it more noticeable and it also keeps the waste secure and intact</p>	<p>The release paper will be printed with clear identifiable signs and waste disposal instructions, an environmental friendly design which is easily identifiable by rag pickers.</p>

Benefits Envisaged

For Rag Pickers

- ✓ Rag pickers will be able to identify sanitary waste by simply looking at the wrappers because of their distinctive design and will be able to effortlessly segregate waste without being directly exposed to it.
- ✓ Proper disposal of rejected waste will help to maintain the hygiene and good health of rag pickers

For Consumer

- ✓ The self-explanatory printed instructions on wrapper will help the consumers dispose waste properly.
- ✓ Consumers will not need to dispose the waste in plastic bags. They will simply roll it in the already attached release paper on sanitary napkins and transparent tapes on diapers
- ✓ This will result in better informed consumers, as the instructions will be explicitly printed on the products.

For Government

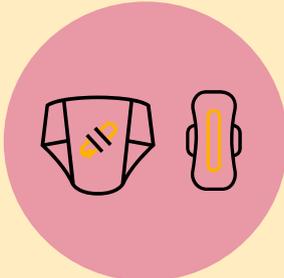
- ✓ The new design will help to safeguard the environment as it is a paper based solution, as opposed to additional being introduced in the last stage of waste disposal.

- ✓ This will ensure enhanced waste handling and disposal in cities by adding a clear indicator depicting sanitary waste on such products.

2.3 FIHA Pilot Study

FIHA has successfully completed the survey in cities of Ahmedabad and Vijayawada, via its research partner Nielsen, to understand the sanitary waste disposal practices adopted by consumers and also the challenges faced by rag pickers. To get a detailed understanding of this intervention, the study was conducted in two phases - **400 waste collectors** (100 each for diapers, sanitary napkins in 2 cities – Ahmedabad and Vijayawada for Phase I) and **800 consumers** (200 each for diapers, sanitary napkins in 2 cities – Ahmedabad and Vijayawada for Phase II). **Both the phases are completed in cities of Ahmedabad and Vijayawada.**

The target group for this research were the waste collectors and the consumers. The flow of the field work is as shown in the table below:

	<p>Waste Collectors: Phase 1</p> <ul style="list-style-type: none"> • Interviewing the client appointed waste collectors • Exposing the concept (diaper and sanitary napkin) • Feedback on the concept
	<p>Consumers: Phase 2</p> <ul style="list-style-type: none"> • Diaper Users/ Sanitary Napkin Users were recruited and the concept was demonstrated • Diaper/Sanitary Napkin products were placed with recruited respondents • Reminder about the disposal technique • 5-6 days after the diaper / sanitary napkin product usage, product feedback was captured • Sanitary napkin /diaper waste collected from these households for Phase 2 (Waste collectors)
	<p>Waste Collectors: Phase 2</p> <ul style="list-style-type: none"> • Exposing the waste collected in Consumer phase (diaper and sanitary napkin) • Feedback on the sanitary napkin and diaper product waste

The implementation strategy for each of the phases were as follows:

a. **Phase I – Concept Test**

Phase I was more of **generating awareness and taking a feedback of the existing sanitary waste disposal practices**. Given below is the detailed workflow for phase 1. Our research team conducted the survey amongst waste collectors to understand their acceptance of Concept Test solution.

- i. Sample set of Waste collectors were interviewed to check FIHA solutions.

Observations:

Diapers	Sanitary Napkins
Waste collectors in both Vijayawada and Ahmedabad claim that disposing diapers unwrapped is the most often used method of disposal adopted by diaper users	Waste collectors in Ahmedabad claim that disposing sanitary napkins unwrapped is the most often used method of disposal adopted by sanitary napkin users and wrapping it in the newspaper is most often used method in Vijayawada
Top challenge faced by the waste collectors is foul smell	Top 2 challenges faced by the waste collectors is foul smell and unable to distinctly identify sanitary napkins before opening it

- ii. Demonstrated the FIHA solutions via audio visual
- iii. Checked the waste collectors acceptance towards the FIHA solutions

To check the waste collectors’ acceptance towards the test solution, following questions were broadly asked:



- Will this solution make the waste identifiable, among other household waste?
- What are the current disposal method they use to dispose diapers and sanitary napkins?
- Will this solution satisfactorily secures the waste?

The outcome of the Concept result was positive – more than 90% of waste collectors accepting to the solution (from the table below).

CONCEPT TEST			
Diapers			
	Ahmedabad	Vijayawada	Overall
The tape will secure the waste within the diaper	90	98	94
This new method of disposal will make used diapers distinctly identifiable	92	98	95
This new method of disposal will improve my experience of collecting diaper waste for the better	92	98	95
Sanitary Napkins			
	Ahmedabad	Vijayawada	Overall

The wrapper will secure the menstrual waste within	90	98	94
This new method of disposal will make used sanitary napkins distinctly identifiable	90	99	94.5
This new method of disposal will improve my experience of collecting sanitary napkin waste for the better	87	99	93

Sample set of waste Collectors – **400 waste collectors** (100 each for diapers, sanitary napkins in 2 cities – Ahmedabad and Vijayawada for Phase I)

b. Phase II – Product Test

Showing the audio visuals of the concept for diapers and sanitary napkins was not the objective. **Our research team further created a prototype of the concept solution and distributed among consumers.**

Given below is the detailed workflow of Phase II.

i. Distributed samples of sanitary napkins and diapers.



- ii.** Educated sample set of consumers on how to adopt the Concept solutions for safe disposal
- iii.** Sample set of Waste collectors were exposed to used sanitary napkins and diapers in batches collected from the sample set of consumers
- iv.** Lastly, the acceptance of waste collectors towards Concept solutions were checked

Feedback from Waste Collector on Product Test:

Diapers	Sanitary Napkins
Waste Collectors find it easier to identify the diaper waste with the new method of disposal	Waste Collectors find it easier to identify the sanitary napkin waste with the new method of disposal
Waste Collectors agree that the diaper waste is secured in the new method of disposal compared to the old method	Waste Collectors agree that the sanitary napkin waste is secured in the new method of disposal compared to the old method

The outcome of the Product Test was also affirmative like the Concept Test – more than 90% of waste collectors were able to identify sanitary waste from other waste which in turn helped them in segregation of diapers and sanitary napkins (from the table below).

PRODUCT TEST			
Diapers			
	Ahmedabad	Vijayawada	Overall
The tape will secure the waste within the diaper	100	97	98.50
This new method of disposal will make used diapers distinctly identifiable	100	97	98.50
This new method of disposal will improve my experience of collecting diaper waste for the better	100	93	96.50
Sanitary Napkins			
	Ahmedabad	Vijayawada	Overall
The wrapper will secure the menstrual waste within	100	94	97.00
This new method of disposal will make used sanitary napkins distinctly identifiable	100	92	96.00
This new method of disposal will improve my experience of collecting sanitary napkins for the better	100	96	98.00

Sample set of waste Collectors – **400 waste collectors** (100 each for diapers, sanitary napkins in 2 cities – Ahmedabad and Vijayawada for Phase I)

c. Overall analysis of the Results

Through the Pilot Study conducted in Ahmedabad and Vijayawada, FIHA concluded as follows:

- i.** Significantly improved Waste Collection experience for the Rag Pickers
- ii.** Consumers find the new sanitary waste disposal mechanism easy to adopt, especially since they now understand and appreciate the risks of poorly handled disposal to rag pickers
- iii.** Majority of the Rag Pickers agree that proposed solution will make sanitary waste more secure and identifiable
- iv.** The innovative design will ensure that the sanitary waste remains intact with the new disposal technique
- v.** The new prototype product solved the challenges of:
 - **Securing the waste efficiently**
 - **Easy Visual Identification**

3. Learning Good Practices

Like mentioned earlier, Bangalore and Indore are quite mature in their solid waste management practices and do not require any immediate intervention from FIHA since they are already progressing rapidly towards a robust 3 way segregation of waste and its effective disposal. A case study is being prepared for both of the cities to understand what they did and how they achieved the outcomes that propelled them on the top of the ranking charts of the **Swachh Bharat Mission**. The practice adopted by each city is explained in detail in the following sections. This will help MoEFCC to prepare a replicable model for other cities which can thereby be adopted by them to achieve 3 way segregation of waste.

3.1. What Bangalore did?

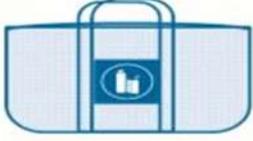
Bengaluru have become the pioneer in 3 way segregation setting an example to the entire nation with its waste segregation at source. Bengaluru generates about 3,000 tons of solid waste per day, of which about 1,139 tons are collected and sent to composting units and the remaining solid waste is collected by the municipality which is dumped in open spaces or on roadsides outside the city.

In 2015, the city passed a law that mandated segregation of garbage at source into organic wet waste, recyclable dry waste, and rejects (sanitary waste). Following are the waste segregation guidelines in Bangalore:

WASTE SEGREGATION GUIDELINES



1. Organic Waste



2. Dry Waste



3. Sanitary/Reject Waste

1. Organic Waste <small>(Do NOT use a plastic liner)</small>	2. Dry Waste <small>(Use only REUSABLE BAGS/BIN for disposal)</small>	3. Sanitary/Reject Waste <small>(Do NOT use a plastic liner)</small>
<p>Kitchen Waste Vegetable/fruit peels Cooked food/Leftovers Egg shells Chicken/fish bones Rotten fruits/vegetables Tissue paper soiled with food Tea bags/Coffee grinds Leaf plates</p>  <p>Garden waste Fallen Leaves/twigs Puja flowers/garlands Weeds</p> 	<p>Plastic (Must be rinsed if soiled) Plastic covers/bottles/boxes/items Chips/toffee wrappers Plastic cups Milk/Curd packets</p> <p>Paper (Must be rinsed if soiled) Newspaper/Magazines Stationery/Junk mail Cardboard cartons Pizza boxes Tetrapaks Paper cups and plates</p> <p>Metal Foil containers Metal cans</p> <p>Glass (handle with care) Unbroken glass bottles</p> <p>Other dry waste Rubber/Thermocol Old mops/Dusters/Sponges Cosmetics, Ceramics, Wooden Chips, Hair Coconut shells</p> <p>E-waste (handle with care) Batteries CDs/Tapes Thermometers</p> <p>Bulbs/tube lights/CFLs (hand over separately)</p> 	<p>Sanitary waste (Use a newspaper for wrapping) Diapers/Sanitary napkins Bandages Condoms Nails Used tissues Medicines Swept dust</p>  <p><small>(Limited quantities of mixed waste is allowed, such as heavily soiled plastic or soiled paper)</small></p> <p>Sharps (small quantities only; wrap in newspaper and hand over separately) Razors/Blades Used syringes Injection vials</p>  <p>Construction debris/Inerts (Hand over separately) Rubble Paints Silt from drains Cement powder Bricks Flower pots</p> <p>Broken glass (wrap in newspaper)</p> 

Waste Generation

As per the assessment and quantification of municipal solid waste generation carried out by BBMP in the year 2016, the waste generation rate in BBMP area is approximately 564 grams/ capita/day. The cities generation of approximately 5760 TPD includes 64% wet waste, 28% dry waste, 3% domestic hazardous waste and 6% inert waste.

Bangalore’s Strategy

The city has adopted a 3 part strategy for its Solid Waste Management System:

1. Strategy 1:

Decentralized Processing of Waste by Stream

In order to reduce the burden of unscientific handling of large volumes of municipal solid waste, city has opted to shift from a centralised ‘single stream’ collection and Landfill disposal system to a decentralised multiple

stream collection and scientific 'Processing' system. The different types of the waste are treated differently such as Dry waste, Organic waste, coconut waste, sanitary waste etc.

For example: Sanitary waste is processed by existing biomedical waste processing agencies. The facilities includes incinerators, Auto clave, shredder and effluent treatment plants to scientifically dispose this waste.



2. Strategy 2:

Bulk Generators managing their own waste

Bulk Generators contribute to 25% of the city's waste and have been separated from the regular collection cycle. They include domestic generators - apartment complexes with more than 50 units and Commercial bulk generators viz hotel/ restaurant, clubs, factory, poultry, mall, shopping complex, marriage halls etc. As per BBMP notification of 25/07/2013, BBMP mandates Bulk Generators to segregate waste into different categories and manage their waste or to utilize the services of BBMP Empanelled Service Providers

3. Strategy 3:

Creating the ward micro plan

The Micro-plan was first piloted and tested in Yelahanka Zone and is now been scaled up to the city level. A Micro Plan is a process of creating a solid waste management plan for the smallest unit of management, by splitting the Ward into Blocks (750 Households + small commercial est.). The process includes

- ✓ Allotment of one Auto Tipper for the block with the details of the Vehicle and driver given to the block residents Geo fencing the block and tracking the Auto tipper to ensure reliable and timely collection
- ✓ Scheduling Block wise pick up of Dry waste twice a week by the Ward Dry Waste Collection Centre
- ✓ Proper street sweeping

Overall, the city has a defined plan and procedure for collection of waste from households and bulk generators as per the literature submitted by the city to Swachh Bharat Mission. ***In order to learn the actual on-ground scenario, FIHA took up 2 random localities to get a better understanding on Sanitary Waste Disposal and Collection at household level.*** Following observations are made:-

Observations

a. General Practices in Menstrual Waste Disposal

- ✓ Women usually pour water on waste accumulated in sanitary napkins and dispose it in dry waste.

- ✓ In most cases, the sanitary waste disposed in dry waste is kept in a black plastic.
- ✓ In households that use diapers for babies, the used diapers and sanitary napkins are kept separately. However, both are added in dry waste.
- ✓ At some places, where the women PKs are involved in door to door collection, citizens give the sanitary waste packets separately.
- ✓ There was also an observation made in one of the locality where people had disposed sanitary waste by flushing. The waste was removed only after clogging of drain.

Conclusion: The sanitary waste in most cases lands up in dry waste.

b. Primary Waste Collection Stage – Door to Door pickup by PKs



Based on the sample survey taken up across two residential areas, it was observed that:

- ✓ There is 2 way segregation of waste at source.
- ✓ This sanitary waste is separated manually by PKs from dry waste.
- ✓ At some places, where the women PKs are involved in door to door collection, citizens at times give the sanitary waste. This at least helps some PKs to properly handle the sanitary waste. However, this is not widespread practice among citizens.

Conclusion:

- ✓ **Sanitary waste is currently segregated manually by contract staff.**
- ✓ **Women PK involvement can make a difference in sanitary waste collection.**

c. Survey Summary and Outcomes

- ✓ The waste collection at household level is primary responsibility of BBMP and the sanitary waste collection needs to be improved here.
- ✓ The process is defined by BBMP however, citizens needs to be educated for 3-way segregation and empaneled vendors needs to directed / mandated for effective implementation of segregated waste collection.
- ✓ Additional observation on small tipper vans involved in primary door-to-door collection was these had loudspeaker but are seldom used for citizen Information, Education and Communication (IEC).
- ✓ The Multi Dwelling Units (MDUs) or Bulk Waste Generators (BWGs) are not covered in this survey. Here, the sanitary waste collection is taken up by empaneled vendors as a private service to residents of MDUs. Here, BBMP has only supervisory role and there is no direct role in collection of waste.

d. Way Forward

- ✓ Citizen Information, Education and Communication (IEC) should educate citizens about 3 way segregation at source & its benefits can make a difference.

- ✓ Women PK involvement at household waste collection can make a difference in sanitary waste segregation & collection at source.

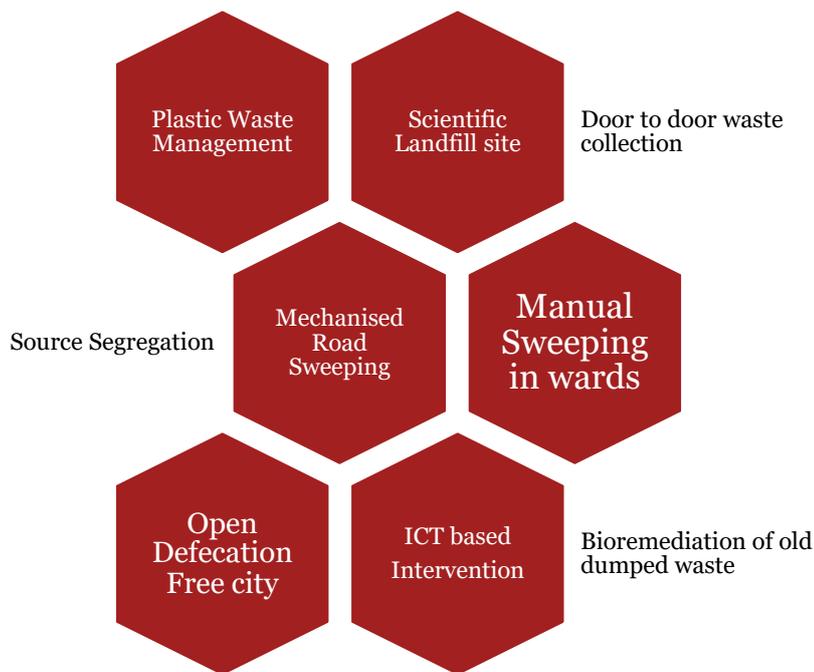
3.2. What Indore did?

1. Introduction

From being placed 149th in a cleanliness ranking of India’s cities in 2014, Indore Municipal Corporation (IMC) climbed to the 25th position in 2016, and the latest ranking of 2018 by Swachh Bharat Abhiyan announced Indore as the cleanest cities in India for a second time. Under this mission IMC planned to make Indore city

- ✓ Bin Free
- ✓ Litter Free and
- ✓ Dust free

Looking into its zonal spread Indore is divided into 19 municipal zones over an area of 275 Km and has 85 wards. Indore Municipal Corporation (IMC) has a total of 13 departments. The Municipal Solid Waste (MSW) quantity generated in the year 2001, 2011 and 2017 was 617 MT/day, 750 MT/day, and 1115 MT/day respectively. The major components of solid waste includes:



2. Challenges faced

Before it was praised for its cleanliness drive in 2017, Indore was just like any other urban city in India dealing with a mounting garbage problem. The challenges were just not limited to the treatment of garbage many issues such as in 2016, the Indore Municipal Corporation (IMC) was criticised by pollution control boards, green bodies, and environmentalists for not treating its garbage properly.

- ✓ **Outsourced Agency’s functioning-** Agencies were not cleaning the city on time. More over most of the garbage bins were very old and decayed.



- ✓ **In disciplined sweeping staff**- Inefficient supervision and monitoring often led to high absenteeism and scattered waste across the city.



- ✓ **Unscientific disposal site** – All waste was disposed of by crude method of dumping which means landfill sites were not used for proper disposal.



- ✓ **Non Functional Workshop** – Insufficient vehicles and lack of tools and machinery lead to many areas uncleaned and full of filth



- ✓ Demotivated Staff
- ✓ Negligible public participation
- ✓ Lack of trust for Indore Municipal Corporation
- ✓ No door to door waste collection
- ✓ No plastic waste management system
- ✓ Insufficient infrastructure and machinery

3. Approach

Until two years back, Indore, Madhya Pradesh's most populous city, was almost choking on its municipal waste. This is when the Indore Municipal Corporation (IMC) decided to change its strategy and overturn the awful state of Indore city. The initiatives which have brought tremendous shift in the city by the way it treated its wastes are:

- ✓ **Door to door waste collection and segregation process** – Effective door to door waste collection started in December 2015 to January 2016 as a pilot project, over the period of time 40 cycle rickshaw and 80 safaimitra were deployed in every ward which lead to the highest collection with the transportation cost of Rs. 2886 per MT. Presently Indore Municipal corporation provides door to door waste collection services to 4, 81,000 households and 1, 40,000 commercial unit



- ✓ **Bin- Free City** – This initiative kicked off in a phased manner from March 2016 to December 2016. Effective D2D waste collection had eventually reduced garbage on roads and open areas. On critical bin locations, 3 times movement of D2D garbage vehicle was done and eventually all the dustbin locations points were cleaned to ensure clean atmosphere on that spot. Local NGO's were deployed for public awareness for D2D collection also aggressive fines were imposed on the people found littering.





- ✓ **Effective evening sweeping** - All residential area/ all commercial area/ railway station and Bus stand are cleaned twice a day morning and evening.



- ✓ **Separate Mechanism for bulk waste generator** - Collection of waste is done from 711 commercial bulk waste generators which includes waste collection from 156 hospitals and nursing homes



- ✓ **Common Bio-Medical Waste Treatment Facility (CBWTF)** – Indore become the first and the biggest city of Madhya Pradesh to treat bio- medical waste. Hoswin Incinerator pvt. Ltd. In agreement with IMC established CBWTF on PPP model. Presently they are providing services to 436 health care institutes of Indore and nearby area. Daily 5.0 MT of bio medical waste is collected and treated on environmentally safe manner



- ✓ **Mechanized road sweeping by outsource Agency** – 12 ultra-modern road sweeping machines are used daily to clean the roads during night between 10 pm to 6 am.



- ✓ **Installation of 2000 twin litterbins in commercial area-** More than 1, 00,000 dustbins were distributed for the segregation at source.



- ✓ **Ensure dustbins in all passengers buses** – All public transport buses have been asked to put dustbin in all the buses



4. Timelines

For a second year in a row, Indore in Madhya Pradesh came on top in a survey that aims to measure the degree of cleanliness in Indian cities. The journey which started from 149th ranking in 2014 to 1st Rank in 2017 and 2018. Indore have become the role model for every cities. One of the best strategy which Indore is following is the 3 way segregation method at the household levels which means all the dry waste, solid waste and bio-medical waste are segregated at source. The door-to-door service was started in June 2015 as a pilot project in two of the 84 wards in the city. It took almost a year but civic officials say the city has achieved 100% door-to-door garbage collection. Technology provided handy support to the initiative. Indore's mini-tippers are GPS fitted so that they could be tracked and monitored, and a helpline app was launched for grievance redressal. The app received 250300 complaints a day initially and these had to be addressed within 24 hours.



5. Outcome

Sweeping cities is only a small part of the solution to the problem of keeping our cities clean – what is more important is **sustainable treatment, recycle and reuse of the waste that they generate**. Indore Municipal Corporation have done exceptionally well and has set an example for the entire nation which can also be seen by the tremendous results such as the respiratory and the other diseases reduced by 50%. According to the report shared by Chief Medical and Health Officer of Indore Cases of Cholera, dengue, Malaria were almost negligible in 2017. Patients of viral fever had reduced from 37000 to 9000 from year 2016 to 2017.

Diseases		Year-2014	Year-2015	Year-2016	Year-2017
Malaria		12	27	16	0
Dengue		160	155	129	0
Swine flu		497	517	989	11
Viral hepatitis B		89	91	62	13
Viral hepatitis		10	524	7	0

Information Education Communication activities on the other hand have played a major role in creating the awareness and bringing out some behavioral changes such as road rallies, street plays, radio jingles, talk shows, hoardings etc.



3.3. Conclusion from learnings – Bangalore and Indore

Decentralized processing of waste and **3 – way source segregation** are long term solutions which Indian cities need to aim for. However, FIHA solution of printing clear instructions and convenient used product packing methods seems feasible and an immediate step to implement in order to address the present concerns being grappled by the rag pickers. At the same time this solution eliminates the need of introducing a large volume of single use plastic at the last stage of waste disposal. MoEFCC may consider **mandating the new prototype product as a norm** to all the Sanitary Waste manufacturers.

4. Some Additional Recommendations to the Cities

Segregation at source has come out to be one of the best solution for the better waste management in cities. This practice has also been stated in Solid waste management rules (SWM), 2016 by Ministry of Environment, Forests and Climate Change. For cities to be clean and waste free following best practices should be followed:



5. Annexures

5.1 Old v/s New Test Result in Ahmedabad and Vijayawada

DIAPERS						
	Ahmedabad			Vijayawada		
	Old Method of Disposal	New Method of Disposal	Difference	Old Method of Disposal	New Method of Disposal	Difference
Ease of identifying diaper waste	65	100	35	55	95	40
Extent to which diaper waste is secured with disposal method	38	100	62	65	95	30
SANITARY NAPKINS						
	Ahmedabad			Vijayawada		
	Old Method of Disposal	New Method of Disposal	Difference	Old Method of Disposal	New Method of Disposal	Difference
Ease of identifying Sanitary Napkin waste	76	99	23	46	93	47
Extent to which Sanitary Napkin is secured with disposal method	32	100	68	63	94	31

Considerable increase in accepting the New Method of Disposal for diapers and sanitary napkins

5.2 Oxo Bio Degradable

Perspective on the use of Oxo-biodegradable Films used in Sanitary napkins

Oxo-Biodegradable polymers are not mandated and rather banned / restricted in many parts of the developed world. The European Parliament has just voted to ban the use of Oxo-Biodegradable polymers in all countries of European Union. As of 2017, France started banning the use, distribution, manufacturing, and marketing of Oxo-Biodegradable polymers. Soon after, Spain followed suit in 2017 with Netherlands recently proposing a complete ban starting 2019.

While we recognize and value the intent to reduce visible littering of the nation’s land and water territories, fragmented polymer can cause larger environmental and public health issues, it is important to be clear that oxo-biodegradable plastics are not a solution for littering. In fact, microplastic waste can cause a greater problem for the environment and public health.

Industry Concerns

Product Safety Issues

Products which are developed in the FEMCARE industry need to adhere to some basic standards. These products are tested to possess a long shelf life of approximately 3 years. The significant proper usage of these products is dependent on a robust cover and barrier material which needs to be structurally stable throughout

the product lifespan. [3] A fast disintegration for either of these materials will only lead to adverse effects on product stability & integrity and ultimate utilization objective of the product use.

Recycle Material

Oxo-Biodegradable polymers have not been proven to degrade completely. Rather, over time, they disintegrate and fragment into persistent smaller pieces which represent a bigger environmental threat in comparison conventional plastics. Hence, this **poses significant difficulties for recycling equipment**. There is currently no standard in the industry to label Oxo-Biodegradable polymer which can facilitate separation of conventional plastic.

Also, the **quality of recycle material** which is formed through the mixing of the oxo-biodegradable plastic and conventional plastic is much inferior.

Shelf Life of the product material

This technology is unfit for products with long shelf lives because disintegration of the product before its proposed shelf life is not acceptable. The fundamental aspect for Oxo-Biodegradable technology involves fast fragmentation into microplastic due to presence of anti-oxidants.

Registered Suppliers in the industry

Another aspect, which is problematic for the industry is the limited availability of registered suppliers for the incorporation of this technology.

Adverse effects on Environment

The European Commission recently issued a report raising numerous concerns about Oxo- Biodegradable polymers. The report reviewed the existing literature and concluded that Oxo- Biodegradable polymers will accelerate fragmentation and degradation in open environment. However, these plastics do not fully biodegrade and can release toxic substances in soils. Secondly, it would create microplastics that are difficult to recover and are ingested by marine fauna.

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