Hon’ble National Green Tribunal, Principal Bench, New Delhi

Presentation on O.A. No. 606/2018

Chief Secretary
Government of Himachal Pradesh

16th March 2023

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Solid Waste Management Progress in the HP

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Status	Upto February 2023	% age Achieved till Feb 2023
Total No. of ULBs in the State	61	-
Total No. of Wards in the State	558	-
Quantity of MSW Generated (TPD)	365* TPD (Wet: 201 & Dry: 146 Inert: 18)	100%
Quantity of MSW Collected (TPD)	365 TPD (Wet: 201 & Dry: 146 Inert: 18)	100%
Quantity of MSW Transported (TPD)	365 TPD	100%
Quantity of MSW Processed (TPD)	352 TPD	96.43%
Gap in waste processed (TPD)	13 TPD	3.56%

* ***Calculation of waste generation is as per norms laid down in SBM Guidelines i.e. 300 grams per capita for town below 1.0 lac population and 450 grams per capita for town above 1.0 lac population.***

- **Timelines for achieving 100% processing has been fixed for December, 2023.**
- **The Gaps are mainly in newly formed ULBs due to Land Issues.**

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Municipal Solid Waste (Wet & Dry) Processing

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Status as on February 2023			
Particulars	**Total Generation (TPD)**	**Total Processing (TPD)**	**Gap**
Wet waste	201	193	8
Dry Waste	146	141	5
Inert Waste	18	18	0
Total	365	352	13
Total Gap in Processing upto Feb. 2023	**13 TPD**		

- **Compost is being used in parks, gardens of ULBs and some ULBs have started selling the compost for agriculture/horticulture purpose. In some areas compost is being distributed free of cost.**
- **SCF/RDF is being send to cement industries for co-processing and PWD for use in road construction.**
- **Inert waste (Soil/Dust/ Gravels/Glass/Process rejects etc.) is in very small quantity and being disposed locally through land leveling. Landfill facilities are being developed at Shimla and Baddi.**

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ULB wise Gap in Wet Waste: 8.08 TPD

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Sr. No.	ULB	Generation(TPD)	Processed (TPD)	Current Gap(TPD)
1	Jawali	2.28	1.28	1.00
2	Nurpur	2.51	0.51	2.00
3	Palampur	7.96	7.8	0.16
4	Karsog	0.58	0	0.58
5	Mandi	10.02	8.16	1.86
6	Rohroo	1.53	0.8	0.73
7	Tahliwal	0.96	0.06	0.90
8	Anni	0.36	0.21	0.15
9	Nirmand	0.34	0.2	0.14
10	Chirgaon	0.56	0	0.56
	Total	27.10	19.02	8.08

❖ The funding to address the gaps has been tied up under Swachh Bharat Mission (U) 2.0.

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ULB wise Gap in Dry Waste: 05.34 TPD

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S. No.	ULB	Generation (TPD)	Processed (TPD)	Gap (TPD)
1	Nurpur	1.82	1	0.82
2	Palampur	5.79	4.5	1.29
3	Rohroo	1.11	0.7	0.41
4	Jawali	1.66	1.3	0.36
5	Karsog	0.42	0	0.42
6	Chopal	0.30	0.17	0.13
7	Tahliwal	0.70	0.01	0.69
8	Amb	0.87	0.45	0.42
9	Anni	0.26	0.12	0.14
10	Nirmand	0.24	0.11	0.13
11	Chirgaon	0.41	0.15	0.26
12	Nerwa	0.27	0	0.27
	Total	13.85	8.51	5.34

❖ The funding to address the gaps has been tied up under Swachh Bharat Mission (U) 2.0.

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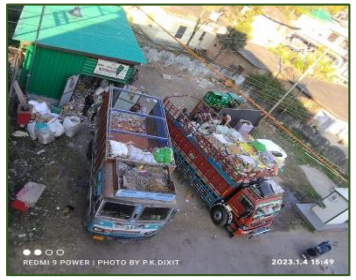
Status of Bio Mining of Legacy Waste

#	Details	As on Feb. 2023
	Legacy waste management	
a	**No. of Legacy waste dumpsites**	16
b	**Quantity of legacy waste dumped at dumpsites – in Tonnes 263641.00**	263641.00
c	**Quantity of Legacy Waste Cleared at dumpsites –in Tonnes 83311.28**	83311.28
d	**Quantity of Balance Legacy Waste at dumpsites- in Tonnes 180329.72**	180329.72
e	**No. of legacy waste dumpsites cleared (Sunder Nagar & Sarkaghat)**	02
f	**No. of legacy dumpsites where bio mining has commenced**	14
g	**Timeframe for clearing all legacy dumpsites**	Dec , 2023

Plastic Waste Buy Back Policy

- ❖ Total quantity purchased and processed so far -258 tonnes
- ❖ Processed through Cement industries and road construction (tarred length – 175kms).
- ❖ Total amount disbursed to ULBs Rs. 99.65 lacs.

Municipal Solid Waste Management in Himachal Pradesh



PIT Composting & Onsite Waste Convertors (OWC) facilities at various ULBs

NP Arki

MC Palampur

MC Palampur

MC Hamirpur

MC Nahan

MC Una

MC Dharamshala

MC Sujanpur

NP Nadaun

MC Palampur

MC Kullu

NP Baijnath

MC Chamba

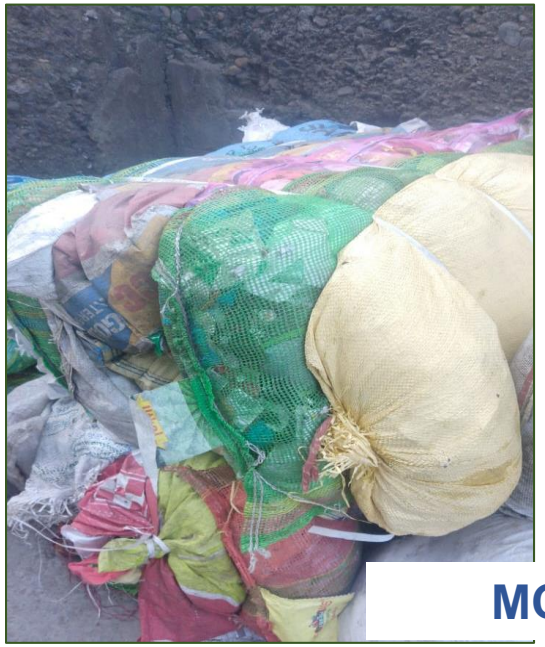
MC Kullu

NP Baijnath Paprola

MC Palampur

MC Solan

MC Naina Devi



MC Nahan

Bailing of RDF at MRF

Transportation of RDF to Cement Factories

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Nahan

Bilaspur

Chamba

MC Manali

MC Chamba

MC Sundernagar

MC Solan

MC Palampur

Clearance of Legacy Waste Sites

Construction of Domestic Hazardous KIOSK

MC Parwanoo

MC Sujanpur

Sewage Waste Management in Urban Sector

Base Year	Sewage Generation (MLD)	STP Installed Capacity (MLD)	Projected Assessment of Sewage Generation (MLD)	Remarks
2020 Action Plan				
2020	-	109.22	210.49 (Year 2035)	Action Plan submitted in compliance to OA no. 593/2017 (Paryavaran Suraksha Samiti Vs. Union of India) in 2020. Projected sewage treatment capacity (2035) was inadvertently reported as sewage generation during 2035.
Status as on March, 2023				
March 2023	91.95	114.80	129.25 (Year 2035) (Re-assessed)	Estimated Sewage generation after 15 years (2035) has been assessed based on projected population growth and rate of water supply as per urban norms. Although, overall adequate capacity is available & there is surplus capacity of 22.85 MLD in 29 Towns, however, there is a gap of 22.15 MLD in 32 towns in the State.
Likely Status as on 31st March, 2024				
March 2024	92.99	154.99	129.25 (Year 2035)	Town wise gap will be reduced to 18.10 MLD in respect of 25 Towns.

Town wise Sewage Generation and Gap

Sr. No.	Name of Town	Total Sewage generation (2023) MLD	Treatment Capacity available (MLD)	Gap (MLD)
1	Dalhousie	0.70	0	0.70
2	Chowari	0.24	0	0.24
3	Mandi	5.39	4.3	1.09
4	Rewalsar	0.13	0	0.13
5	Parwanoo	1.27	1	0.27
6	Santokgarh	1.18	0	1.18
7	Gagret	0.42	0	0.42
8	Bilaspur (AFD)	0.93	0	0.93
9	Palampur (AFD)	3.82	0.351	3.47
10	Karsog (AFD)	0.26	0	0.26
11	Nahan (AFD)	4.12	0	4.12
12	Banjar	0.10	0	0.10
13	Baijnath-Paprola	1.03	0	1.03
14	Ner Chowk	0.70	0	0.70
15	Talai	0.30	0	0.30
16	Ghumarwin	1.41	1.2	0.21

Towns to be completed by March , 2024

Towns will be taken up as per availability of funds

Town wise Sewage Generation and Gap

Sr. No.	Name of Town	Total Sewage generation (2023) MLD	Treatment Capacity available (MLD)	Gap (MLD)
17	Bhota	0.16	0	0.16
18	Jawali	0.54	0	0.54
19	Shahpur	0.24	0	0.24
20	Anni	0.16	0	0.16
21	Nirmand	0.10	0	0.10
22	Chopal	0.14	0	0.14
23	Chirgaon	0.20	0	0.20
24	Nerwa	0.17	0	0.17
25	Paonta	3.57	3.16	0.41
26	Rajgarh	0.18	0	0.18
27	Solan	5.98	2.9	3.08
28	Kandaghat	0.33	0	0.33
29	Mehatpur	1.16	0.83	0.33
30	Tahliwal	0.26	0	0.26
31	Amb	0.37	0	0.37
32	Daulatpur	0.32	0	0.32
Grand Total		35.89	13.741	22.15

Latest Status of Upcoming Sewerage System to be Completed by March, 2024

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Sr. No.	Location of STP	Capacity (in MLD)	Physical Progress (STP) in % age up to Feb. 2023
1	Gagret	3.14	100%
2	Rewalsar (Chalahar)	0.35	95%
3	Chowari	1.10	95%
4	Santokhgarh	2.50	80%
5	Mandi-(Raghunath ka Padhar & Khaliyar)	6.28	41%
6	Chamba (Parel)	0.87	80%
7	Dalhousie	2.70	35%
8	Parwanoo Zone-II	1.00	20%
9	Dharamshala	1.35	90%
10	Shimla (SJPNL)	20.9	82%
Total		40.19	

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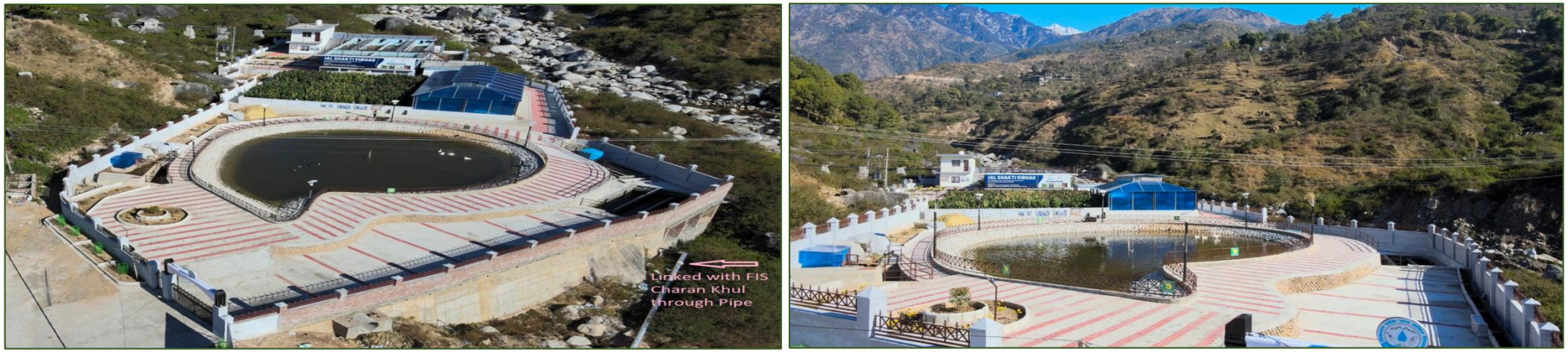
Reuse of Treated Waste Water

- A water body of Treated Waste Water (TWW) has been created from 1.40 MLD STP at Gamru (Dharamshala) which is under use for gravity based irrigation system and proposed fire fighting system for Dharamshala Town.



Treated Waste Water body at Dharamshala

- Due to mountainous topography and general location of STPs being at lower elevation to allow gravity flow in trunk sewers, limited scope exists for reuse of TWW for flow irrigation.
- Public un-acceptance to the use of Treated Waste Water for purposes like irrigation.
- Possibility to use TWW for industrial and other purposes like fire fighting is being explored and efforts are being made in this direction.
- Irrigation scheme from Shamli Khad in Distt. Shimla is planned to irrigate 48 Ha land. The source is predominantly TWW.
- Irrigation scheme Chadow Chadoli in Distt. Shimla is planned to irrigate 45 Ha land. The source is predominantly TWW.

Photographs of Upcoming STPs Expected in March 2024

Photographs of Upcoming STPs Expected in March 2024

Photographs of Upcoming STPs in Shimla Expected in March 2024

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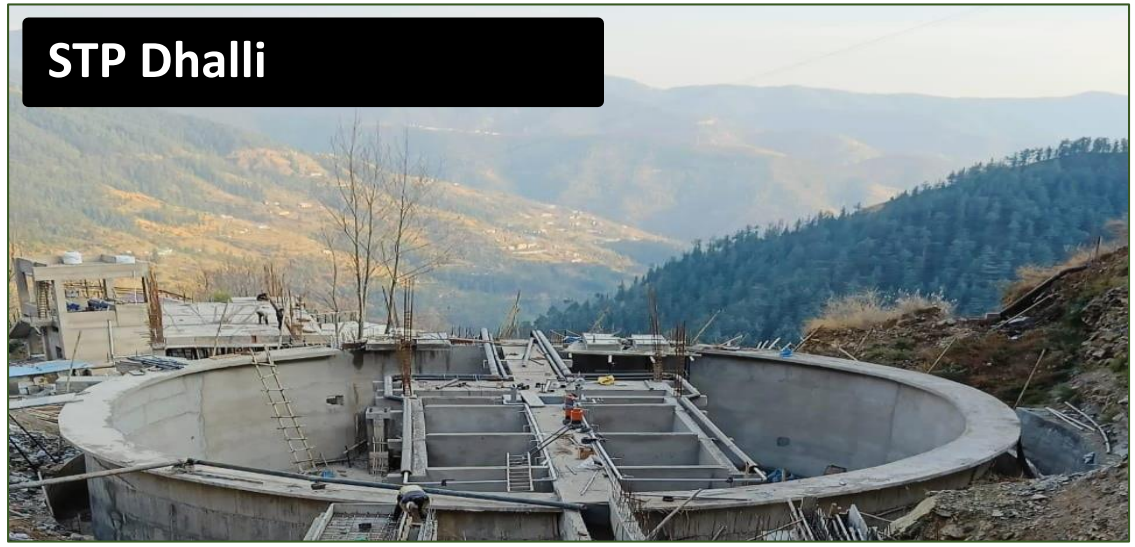
STP Malyana

STP Lalpani

STP Dhalli



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Status of Solid & Liquid Waste in Rural Sector

- **Rural Population : 72 Lakh approx.**
- **Total Gram Panchayats / villages: 3615 / 15900**
- **Rural Households (HH): 18.32 Lakh as per Parivar Register data**
- **Total Bio-degradable solid waste generated**
  - ✓ Per day per HH: 0.250 Kg (@70% of total waste)*
- **Total Non-Bio degradable solid waste (Plastics) generated**
  - ✓ Per day per HH: 0.100 Kg (30% of total waste)*
- **Total waste generated = Average 40 Kgs per village per day .**
- **Total Waste Water (Grey & Black) generated = Average 41.25 litres per day per capita****

**as per Manual of Biodegradable waste management of Ministry of Jal Shakti, GoI*

*** @75% of the water supply lpcd (i.e. 55) of H.P.*

Present Status of SWM in Rural Sector

❖ Infrastructure Developed for Waste Management

➢ Wet waste management

- Community/ HH level compost pits - >6 lakh HHs covered.
- Disposal through localized methods - >5 lakh HHs (i.e. feed to cows/ pigs etc.)

➢ Plastic/ dry waste management

- Segregation sheds - 654 Villages.
- Plastic Waste Management Units - 28 Blocks.

(At local level arrangements have also been made with the local Ragpickers)

➢ Gobar gas plants

- Gobar gas plants under SBM-G - 04 Nos.

Present Status of LWM in Rural Sector

❖ Infrastructure Developed for Waste Management

➢ Grey Water Management

- Community/ HH level soak pits - Approx. 1 lakh HHs covered.
- Disposal through localized methods - Approx. 4 lakh HHs (due to scattered HHs, kitchen garden as preferred method being used).

➢ Faecal Sludge Management

- Retrofitting of toilets - Permission given for retrofitting under 15th FC & MNREGA schemes
- Faecal Sludge Treatment Plants - 4 (1 complete & 3 under construction)
- Co-treatment - 43 STPs identified with the collaboration of JSV.

Proposed Action Plan for Waste Management in Rural Sector

- **Plastic Waste Management Units:** At least 1 PWMU in all 88 blocks with forward & Backward linkages. *Total existing = 28 PWMU*
- **Transportation of Plastic Waste:** Arrangement of collection/ transportation of plastic waste to the appropriate waste processing facility to be done in all villages.
- **Segregation–cum–Storage Sheds:** Segregation–cum–Storage Shed as per the quantity of waste generated at cluster level (3-5 villages). *Total existing = 654.*
- **Biomethanation (Gobardhan Plants & other Biogas schemes):** Feasibility of constructing additional Biomethanation plant under the Gobardhan scheme of SBM-G in each District is being worked out.
- **Soak Pits:** Community/Individual Soak Pits to be constructed to cover all the remaining HH.
- **Retrofitting:** Retrofitting of single pit into twin pit under 15th FC & MNREGA.

Economics of Environmental Compensation (Urban Sector)

Type of Waste	Gap	Rate of Compensation (in ₹)	Total Compensation (in ₹)
Sewage	22.15 MLD	2 crores per MLD	44.3 crores
Legacy Waste	180329 Tonnes	300 per Tonne	5.40 crores
Solid Waste	13.43 TPD	01 lac per TPD	0.1343 crores
			Total 49.834 Crores rounded off to 50 Crores