EXECUTIVE SUMMARY

1.0 HW Inventory –Background:

In response to a Public Interest Litigation filed by Research Foundation for Science, Technology and Natural Resource Policy (W.P.No. 657 of 1995), Honorable Supreme Court passed an Order dated 14.10.2003, directing each State Pollution Control Board to prepare a fresh inventory of HW generation in their state and submit the same to The Central Pollution Control Board.

Looking at the diverse nature of industries in Maharashtra, with presence of large chemical industries, taking into account the provisions of amended HW (MH&TM) Rules, 2008, MPCB realized that the task of preparation of inventory requires good knowledge of process chemistry, industrial unit operations and processes, hence, Board appointed M/s. Eco Friend & Co. Mumbai to update the inventory.

While assessing the work it needs to ensure the compliance to HW Rules, it was seen that the HW Inventory is dynamic and since there are continuous changes in the inventory as industrial units expand / modernize / change their product mix or as new units get added or old units stop producing. The Board therefore decided to continue the scientific approach adopted during the Inventory preparation by creating a HWM Cell – a unique model of Public-Private Partnership in environmental jurisprudence i.e. using process Chemistry / Technology Experts in conjunction with Board officials to monitor and effectively manage the HW situation in the state.

The HWM cell has been entrusted with various tasks such as updating and maintaining the Inventory, by monitoring the HW generation, transport and disposal on the basis of returns filed by the industries.

The updated Inventory report presenting HW generation statistics as of March 2018 is prepared. This edition, gives updated status for the period April 2017 to March 2018.

2.0 Need for Updating Inventory :

Need for updating information on HW generation from industrial sources arises due to the following:

1. Waste Generator (industrial/non-industrial) feels that waste information is not correctly reflected in the inventory.
2. Change in manufacturing process due:
   - establishment of new units / plants
   - modernization / expansion / revamping / debottlenecking of existing units
   - change of product
   - change of technology
3. New Sources are identified
4. Amendment or renewal of the consents.

3.0 Methodology/Approach :

The approach adopted to update the Inventory was as under :

HWM CELL collected copies of the consents issued during April 2017 to March 2018 and updated present inventory, also included new industries which were not included in the previous inventory

Amendment of consents is required to match the Inventory quantities to compare with quantity filed in annual returns, from the findings queries are raised to units about mismatching of quantities as per consented and generation.

3.1 Industrial Sources :

The following aspects are evaluated / documents scrutinized:

- Copies of existing consents / authorization granted by MPCB
- Evaluate other information as available with the Board eg. Annual Returns / manifest / Environmental Statement copies etc.

4.0 Findings

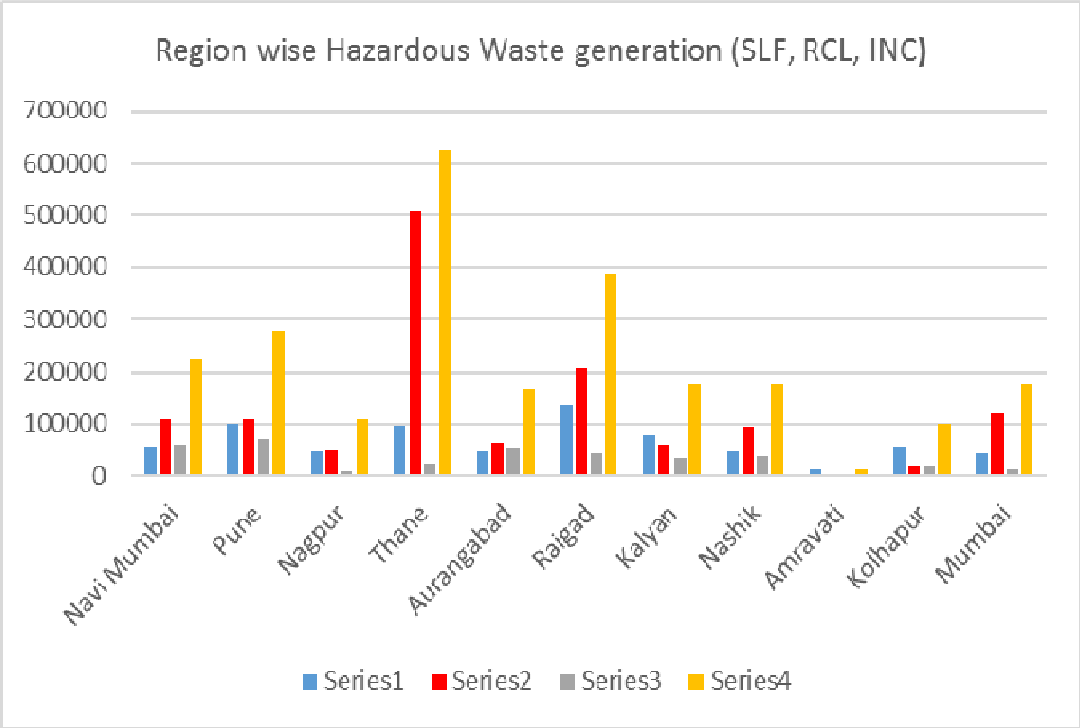
4.1 Industrial Statistics

Maharashtra Pollution Control Board has 12 Regional Offices in the state. Each region being headed by a Regional Officer. The Region wise statistics of consents granted to industrial units classified on the basis of scale of operation and Red/Orange/Green category and expected generation based on disposal method is given below:

Region-Wise HW Total (MTPA)

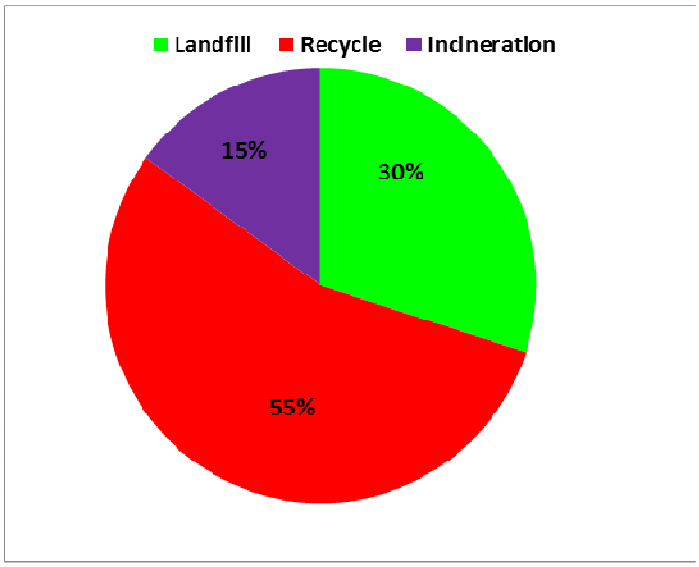
Hazardous Waste Generation Updation as of 31st March-2018

Region wise Hazardous Waste generation (SLF, RCL, INC)				
Region	**SLF**	**RCL**	**INC**	**Total**
Navi Mumbai	56695.76	108263.54	59458.43	224417.72
Pune	98355.99	107866.30	71366.95	277589.24
Nagpur	48380.52	53019.96	8792.18	110192.66
Thane	96049.15	507134.41	20875.31	624058.87
Aurangabad	45724.21	64859.00	55507.98	166091.19
Raigad	137080.13	207761.28	42466.19	387307.60
Kalyan	80218.97	60362.90	35284.60	175866.47
Nashik	46318.99	93166.88	37438.24	176924.11
Amravati	12337.53	825.80	666.36	13829.69
Kolhapur	58377.01	19942.28	20243.39	98562.68
Mumbai	41760.95	119847.07	13513.64	175121.66
Chandrapur	12352.03	2360.32	1999.34	16711.70
Total	**733651.23**	**1345409.76**	**367612.61**	**2446673.59**



5.2 Total Waste Generation :

As per the present inventory, total HW generation for Maharashtra State is **2446673.59** MT/Annum of which about 30% is land fillable, 55% is recyclable and balance 15% is incinerable.

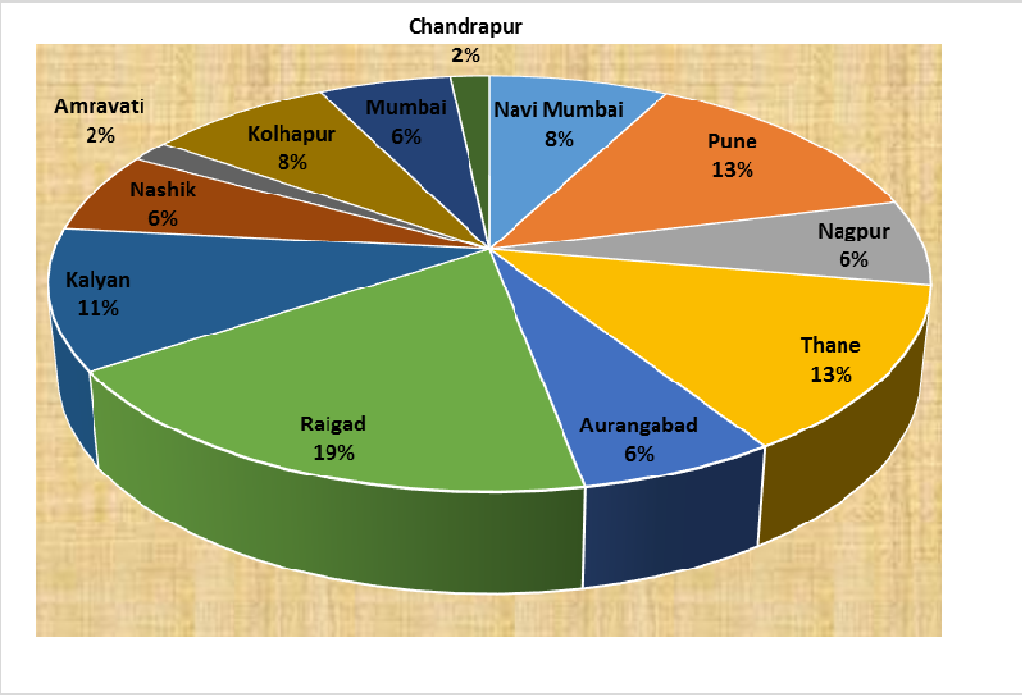


5.3 Region Wise Break-up:

Based on disposal method, salient findings are as below :

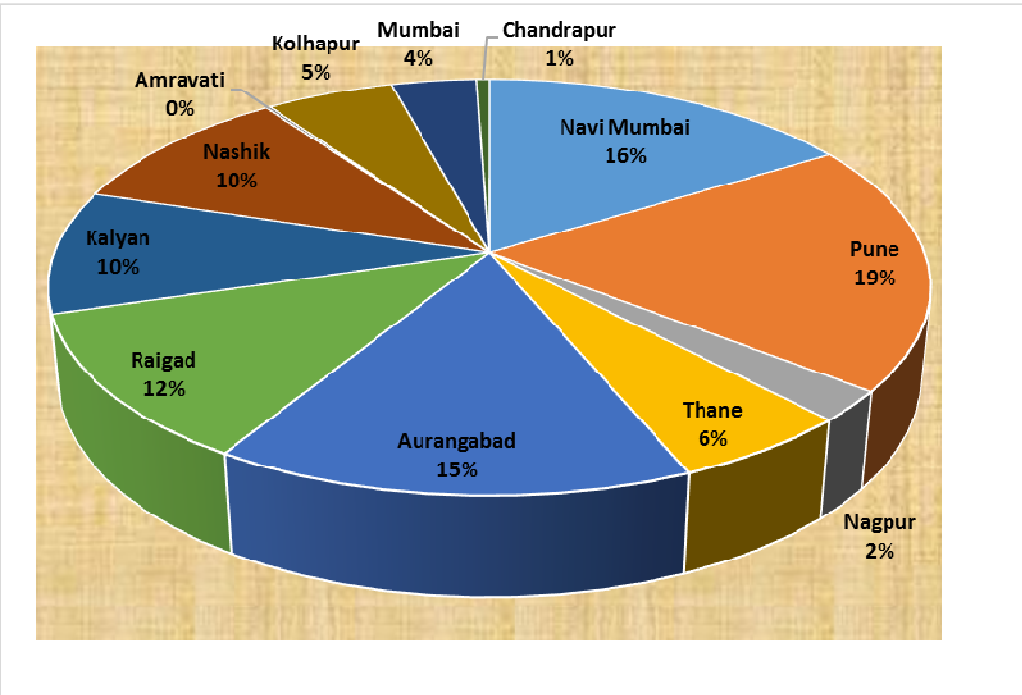
Landfillable Waste :

The largest generation of landfillable waste was seen in Raigad 137080.13 MTPA (19%), followed by Pune 98355.99 MTPA (13%). The lowest generation was observed in Amaravati 12337.53 MTPA (2%). The quantity of Landfillable waste has changed – 1035324.90 MTPA in 2017 versus 733651.23 MTPA today.



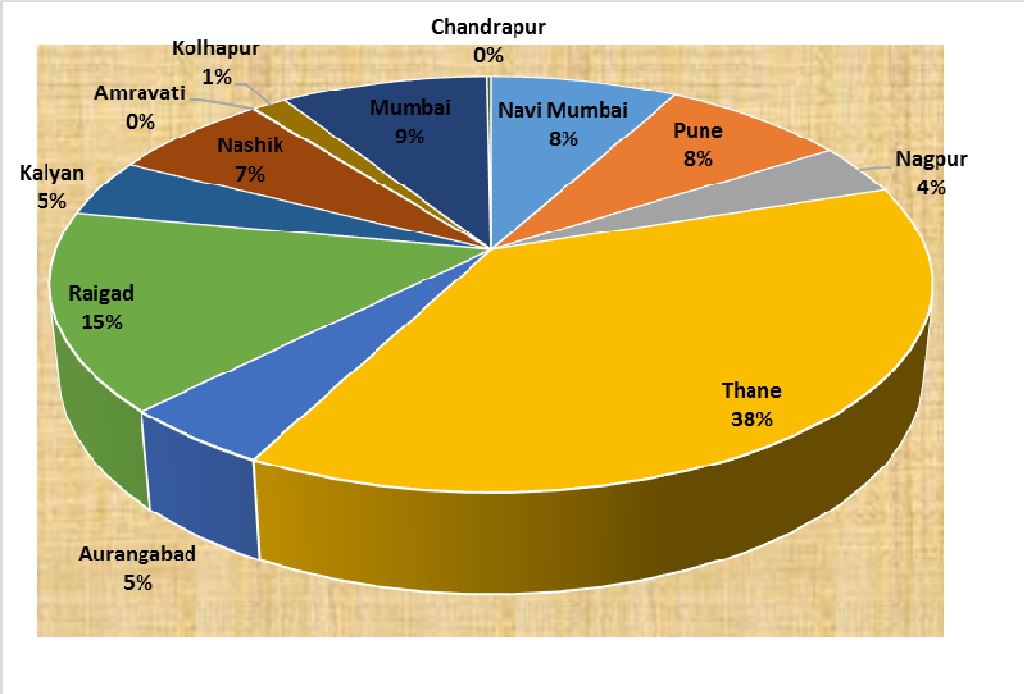
Incinerable Waste :

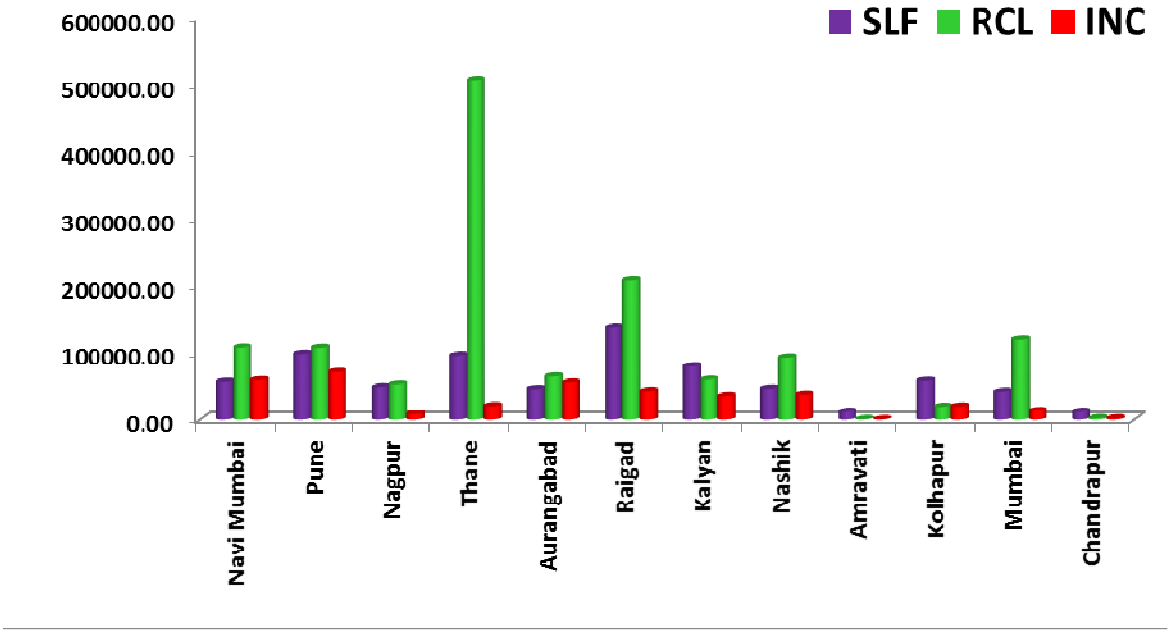
It is observed that the highest incinerable waste generation was in Pune 71366.95 MTPA (19%) followed by Navi Mumbai 59458.42 MT/A (16%). The lowest incinerable waste generation was observed in Amravati 666.36 MTPA. The quantity of incinerable waste has changed – 340897.92 MTPA in 2017 versus 367612.60 MTPA today.



Recyclable Waste :

The highest recyclable waste generation was in Thane 507134.41 MTPA (38%) followed by Raigad 207761.28 MTPA (15%). The lowest recyclable waste generation was observed in Amravati 825.8 MTPA (0%). The quantity of recyclable waste has changed – 1331274.35 MTPA in 2017 versus 1345409.75 MTPA today.



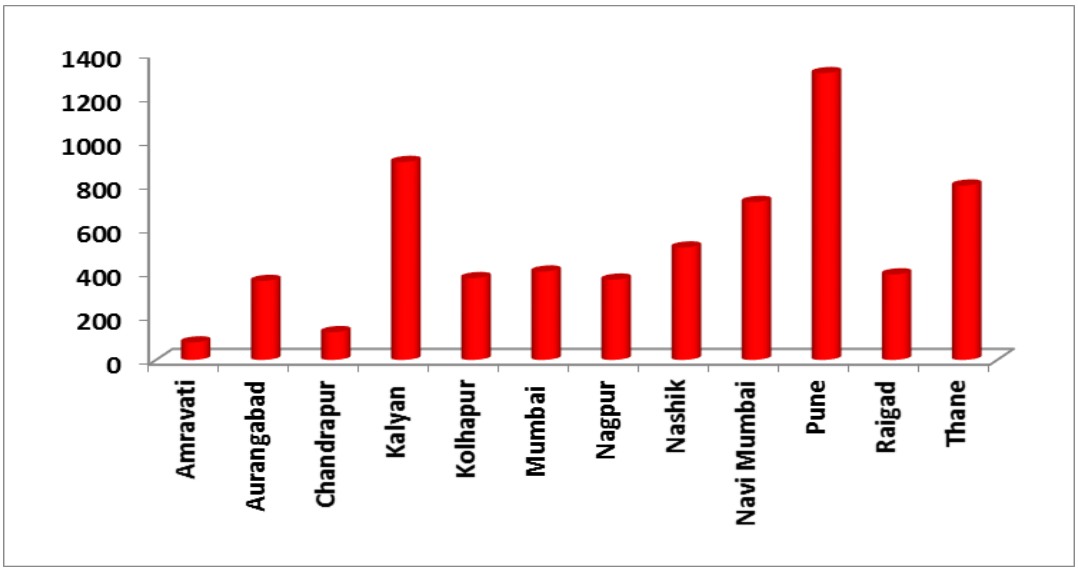


5.4 Classification of Industries Generating Hazardous Waste:

Authorizations – Region wise		
Sr. No.	**Region**	**Total No. of Units**
1	Amravati	80
2	Aurangabad	361
3	Chandrapur	127
4	Kalyan	905
5	Kolhapur	374
6	Mumbai	404
7	Nagpur	367
8	Nashik	514
9	Navi Mumbai	722
10	Raigad	391
11	Thane	797
12	Pune	1311
	Total	**6353**

A total of 6353 authorizations were granted to Hazardous Waste generating units in Maharashtra State. The Table indicates that the highest number of authorizations granted to HW generating units were in Pune Region – 1311 (21%) followed closely by Kalyan Region – 905 (14%). The lowest number of authorizations granted was seen to be in Amravati Region – 80 (1%).

Authorizations – Region wise



Hazardous Waste generation inventory in Maharashtra for last seven years				
(Qty. in MT)				
Year	**SLF**	**RCL**	**INC**	**Total**
2008-09	568135.70	847440.00	152791.17	**1568366.87**
2009-10	512820.85	1022191.99	208766.23	**1743779.07**
2010-11	514865.53	1054363.37	236155.87	**1805384.77**
2011-12	516271.57	1033832.16	255188.93	**1805292.66**
2012-13	595080.92	853612.53	250974.77	**1699668.21**
2013-14	603091.14	728151.95	298546.67	**1629789.76**
2014-15	588838.72	740825.87	313972.62	**1643637.20**
2015-16	676898.48	1192979.12	342270.59	**2212148.19**
2016-17	688574.90	1331274.35	340897.92	**2360747.17**
2017-18	733651.23	1345409.76	367612.61	**2446673.59**