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Gazette
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Administration of
Dadra and Nagar Haveli, UT
Department of Urban Development
Silvassa

No. SMC/CO/GNL/State Policy/263/2018-19/53

Date: -11/09/2018

NOTIFICATION

The Administrator of Daman & Diu and Dadra & Nagar Haveli is pleased to notify the Dadra and Nagar Haveli Solid Waste Management Policy-2018 for the Union Territory of Dadra & Nagar Haveli to ensure scientific and systematic management of solid waste in UT of Dadra and Nagar Haveli.

The Policy enclosed herewith shall come in force on the date of its notification.

This is issued with the approval of Hon'ble Administrator, Daman & Diu and Dadra & Nagar Haveli vide diary No.422787 dated 11/09/2018.

By order and in the name of the
Administrator, Dadra & Nagar Haveli

(Mohit Mishra)
Deputy Secretary (UD)
Dadra & Nagar Haveli,
Silvassa.

Dadra and Nagar Haveli Solid Waste Management Policy**Swachh Bharat Mission****U.T. Administration of Dadra and Nagar Haveli.****Sept 2018****1. Introduction:**

Solid Waste Management has become one of the most challenging and pressing problems of the day. While the insidious heaps of garbage are slowly shadowing the soul of the country, waste-which could have been reused and recycled as a resource-is polluting the air, land and water. The solution lies in changing our perspective towards waste. The aim should not merely be a society with reduced waste but a society with no waste. Like mother earth and its wonderful ecology every decay should give rise to growth, and every waste should generate a resource. Indeed, waste is a distinct human phenomenon. In mother nature there is no waste. The answer to the conundrum of waste lies in realising that we are an integral part of ecology and it's a high time we should start behaving like it.

The scientific solid waste management (SWM) assumes importance with the increasing urban population, changing living styles and its importance in general life for good health. Considering its importance, Ministry of Environment and Forests and Climate Change (MoEF&CC) has notified the Solid Waste Management Rules, 2016 vide notification No. S.O.1357(E) dated 8th April, 2016 in supersession of Municipal Solid Waste (management & handling) Rules, 2000. In conformity with Rule 11 (1) (a) of Solid Waste Management Rules, 2016, and after perusing many other documents and policies "Dadra and Nagar Haveli Solid Waste Management Policy 2018" is being notified to ensure scientific and systematic management of solid waste in UT of Dadra and Nagar Haveli. This policy aims to enunciate goals, objectives and principles and strategies which should be followed by the administration and the citizens of the union territory of Dadra and Nagar Haveli to achieve the goal of zero waste union territory.

2. Background

With rapid urbanisation, the country is facing massive waste management challenge. Over 377 million urban people live in 7,935 towns and cities and generate 62 million tonnes of municipal solid waste per annum. Only 43 million tonnes (MT) of the waste is collected, 11.9 MT is treated and 31 MT is dumped in landfill sites. With the 74th amendment of the Constitution of India in 1992, municipal authorities or Local Bodies in the country have been recognized as the third tier of Government. The 12th schedule of the Constitution has laid down the functions envisaged to be performed by the ULBs and scientific and systematic solid waste management (SWM) as per prescribed SWM Rules, 2016 is one of them. However, almost all municipal authorities deposit solid waste at dump-yards within or outside the city haphazardly.

The key to efficient waste management is to ensure proper segregation of waste at source and to ensure that the waste goes through different streams of recycling and resource recovery. Reduced final residue is to be then deposited scientifically in sanitary landfills. Sanitary landfills are the ultimate means of disposal for unutilised municipal solid waste from waste processing facilities and other types of inorganic waste that cannot be reused or recycled. Major limitation of this method is the costly transportation of MSW to far away landfill sites.

A report by IIT Kanpur (2006) found the potential of recovering at least 15 per cent or 15,000 MT of waste generated every day in the country. This, the report said, could also provide employment opportunities to about 500,000 rag-pickers. The report added that despite immense potential in big cities in this area, participation from non-profits or community is limited.

Solid Waste Management rules in India are based on the principle of “sustainable development”, “precaution” and “polluter pays”. Solid Waste Management Rules 2016, have placed a greater accountability on waste generator and the focus has shifted from mere collection and transportation of solid waste to mandatory source segregation, preferably decentralized low cost scientific processing and safe disposal of solid waste. The SWM Rules 2016 also focus on the principal of 3Rs (reduce, re-use and re-cycle), source segregation and appropriate processing/ management of biodegradable and non-biodegradable closest to point of generation to reduce the financial burden on the local bodies and natural resources and elimination of environmental degradation.

Scientific and systematic SWM is one of the key components of Swachh Bharat Mission-Urban also and Mission mandates to achieve the goal of garbage free cities on 150th birth anniversary of Mahatma Gandhi i.e. 2nd October, 2019. Urban Local Bodies have overall responsibility for SWM, however; most of them are unable to provide requisite SWM system to tackle the current situation. Various studies revealed that out of total budget allocated for SWM, scant amount is being spent for scientific processing of waste and most of the fund is utilized on waste collection and transportation only. About 80-95% of total SWM budget spent on collection and transportation activities being carried out through their own arrangements or private agencies. Huge expenditure on collection and transportation activities affecting the other key components such as scientific processing and safe disposal.

On the contrary, scientific treatment and its safe disposal is an underinvested area and open dumping in low lying areas or dump sites or in water bodies and open burning are common waste disposal practices across cities and towns. This unscientific disposal of solid waste is causing serious health hazards through ground/ surface water pollution, air pollution, soil contamination and vector borne diseases. The challenges of SWM range from lack of ownership of implementing agencies and citizen, poor involvement of community, low level of awareness among the stakeholders, lack of dedicated manpower qualified in environment & solid waste management subject, insufficient budget allocation and land for SWM disposal.

3. About Dadra and Nagar Haveli

Demographic and other relevant details of the Dadra and Nagar Haveli are attached as annexure and charts with this policy. However, before proceeding further a brief detailing of the territory is necessary to truly appreciate the provisions of the policy.

Dadra and Nagar Haveli is a small Union Territory of total area of about 491 square kilometres and situated in the western part of India nestled between state of Gujarat on one hand and the state of Maharashtra on the other. Census of 2011 says that the territory has a population of about 3,42,853. Capital city of Silvassa is the only municipal Council in this union territory. Again, as per census of 2011 the city is populated with 98,265 people. It is

estimated that the current population of Dadra and Nagar Haveli is 4,12,174 and Silvassa is 1,68,931. There are about 24,105 properties in Silvassa and about 90,000 households in gram panchayat area. Out of 24,105 properties in Silvassa municipal Council area, 21,294 residential houses while 3582 are commercial properties. That might appear surprising to many, that in this small territory of merely 17 square kilometres there are 1229 industries.

In addition to Silvassa, there are five other census towns mainly Dadra, Naroli, Samarvani, Masat, Rakholi. Total number of industries in Dadra and Nagar Haveli are 3490. With groups like Sterlite, Hindalco, Hind Aluminum, Associated Group, Advance Detchem Ltd, Gulf Oil, Castrol, Reliance Industries, Blue Star, Global Wind Power(Reliance ADAG), Hindustan Unilever, Sterling & Wilson (P) Ltd, an associate company of Shapoorji&Pallonji Group, Dabur and host of other players in the field of Textiles like Alok Industries, VRIL, and many other FMCG, Gensets, Electronics, Heavy Engineering goods, Chemical, Insecticides, Paints, it has now developed into a full blown industrial hub. Therefore, it goes without saying that Solid Waste Management Policy of DNH should keep in account the realities of the industries and migrant labour/floating population which usually comes with them.

Apart from this, this area is also experiencing a rapid urban growth. Even the casual observer can see several high-rise buildings in the urban centres of this territory which is a phenomenon not often associated with a small towns and cities. Despite such a small population, presence of such swift vertical urban growth gives rise to the problem of construction and demolition waste which is neither sufficient to be economically viable for processing nor so minuscule so as to be ignored.

Being situated on Western Ghats, Dadra and Nagar Haveli experiences rainfall significantly higher than national average. No policy or action plan for disposal of solid waste in the territory can ignore an average annual rainfall of 2169 mm. Extra care needs to be taken to ensure that the leachate does not flow in the perennial water streams.

4. Vision

Dadra and Nagar Haveli administration aims create a sustainable, inclusive, clean, progressive and a zero waste society by adopting well established principles of Solid Waste Management by implementing environment friendly, economically viable, socially inclusive, technology intensive and easy to use and maintain Solid Waste Management technologies and ensuring whole hearted participation of all stakeholders resulting in 100% door to door collection of segregated solid waste and processing thereof.

Corollary to the above-mentioned vision is the goal of changing public perspective towards the waste. Waste should not be treated as a liability but as a resource which reduces the ecological footprint of human activities and increases sustainability of human existence. Therefore, this policy aims at changing habits of the residents of the Union Territory of DNH to ensure that waste is neither littered nor mixed; to guarantee that almost all waste is collected and processed; and to make certain that landfilling is used only as a last resort and to habituate segregation in a manner that it no longer looks impractical or unviable.

5. Solid Waste Management Rules 2016

The Solid Waste Management Rules, 2016 issued by the Ministry of Environment and Forests and Climate Change, Government of India, under the Environment (Protection) Act, 1986, prescribe the manner in which the Authorities have to undertake source

segregation, collection & transportation in similar manner, scientific and systematic processing closet to point of waste generation and safe disposal of solid waste within their jurisdiction under their respective governing legislation. Though the SWM Rules, 2016 make the Local Bodies responsible for management of wastes, LBs have to management their waste at their own level or engagement of private partners, NGOs, CBOs etc. ensuring scientific and systematic SWM focusing on 100% source segregation, door to door collection in similar manner, composting or biogas from organic wastes and maximum recovery of commercially recyclables and refuse derived fuel (RDF) from commercially non recyclables and safe disposal of inerts ensuring no environmental and health hazards. In this context, there is need to revisit, develop, and implement appropriate strategy framework for scientific and systematic processing and safe disposal of solid waste in order to comply with the SWM Rules, 2016. The framework will guide and support the local bodies in the Union Territory of Dadra and Nagar Haveliin managing the solid waste scientifically, cost effectively, by using various approaches.

5.1 Composition of solid waste: Solid waste comprises of i). bio-degradable waste [means any organic material that can be degraded by micro-organisms into simpler stable compounds -3(4) SWM Rules, 2016] and ii) non-biodegradable waste [means any waste that cannot be degraded by micro-organisms into simpler stable compounds - 3(32) SWM Rules, 2016].

5.2 Solid waste management comprises of i) source segregation, ii) door to door collection and transportation in similar manner (segregated form), iii) scientific processing (bio-degradable) for production of compost and bio-gas, iv) resource recovery/ recycling (non-biodegradable - commercially recyclables), v) RDF production (non-biodegradable - commercially non-recyclables) and vi) safe disposal (inerts - chulah ash, fine earth etc.) following waste hierarchy [means the priority order in which the solid waste is to should be managed by giving emphasis to prevention, reduction, reuse, recycling, recovery and disposal, with prevention being the most preferred option and the disposal at the landfill being the least [3(57) SWM Rules, 2016].

5.3 Solid waste management approach: Preference shall be given to decentralized processing to minimize transportation cost and environmental impacts such as – bio-methanation, microbial composting, vermi-composting, anaerobic digestion or any other appropriate processing for bio- stabilisation of biodegradable wastes [15(v) SWM Rules, 2016].

5.4 Key principals of solid waste management: 100% source segregation of solid waste is mandatory [means sorting and separate storage of various components of solid waste namely biodegradable wastes including agriculture and dairy waste, non-biodegradable wastes including recyclable waste, non- recyclable combustible waste, sanitary waste and non-recyclable inert waste, domestic hazardous wastes, and construction and demolition wastes [3(44) SWM Rules, 2016].

Waste segregation at source is a necessary first step for use of all technologies (available) for waste management across the world (Centre for Science -CSE, 2016). Land filling of i) biodegradable waste or garden waste (composted preferably) and ii) dry recyclables (recycled preferably); is not allowed in the MSW (CPHEEO, 2016) and waste to be managed as per waste management hierarchy.

5.5 Bio-degradable (compostable) wastes: “biodegradable waste” means any organic material that can be degraded by micro-organisms into simpler stable compounds/ compost [3(4) SWM Rules, 2016]. Preference shall be given to decentralized processing to minimize transportation cost and environmental impacts such as bio-methanation, microbial composting, vermicomposting, anaerobic digestion or any other appropriate processing for bio-stabilization of biodegradable/ organic wastes [15(v) SWM Rules, 2016]. Organic waste may be composted aerobically or used for generating energy through anaerobic decomposition processes (CPHEEO, 2016). Bio-degradable waste management will be consisting of following key steps: i. Source segregation [means sorting and separate storage of biodegradable wastes]. ii. Processing [decentralized processing - means establishment of dispersed facilities for maximizing the processing of bio- degradable waste and recovery of recyclables closest to the source of generation so as to minimize transportation of waste for processing or disposal -3(15) SWM Rules, 2016] and centralized processing unit. iii. Processing technologies - Composting a) Aerobic composting - means a controlled process involving microbial decomposition of organic matter in the presence of oxygen, b) Anaerobic digestion - means a controlled process involving microbial decomposition of organic matter in absence of oxygen - 3(1 & 2) SWM Rules, 2016] and c) Bio-methanation - means a process which entails enzymatic decomposition of the organic matter by microbial action to produce methane rich biogas [3(5) SWM Rules, 2016].

5.6 Commercially recyclables: “materials recovery facility” (MRF) means a facility where non-compostable solid waste can be temporarily stored by the local body or any other entity mentioned in rule 2 or any person or agency authorised by any of them to facilitate segregation, sorting [means separating various components and categories of recyclables such as paper, plastic, card- boards, metal, glass, etc., from mixed waste as may be appropriate to facilitate recycling - 3(47) SWM Rules, 2016]) and recovery of recyclables from various components of waste by authorised informal sector of waste pickers, informal recyclers or any other work force engaged by the local body or entity mentioned in rule 2 for the purpose before the waste is delivered or taken up for its processing or disposal [3(31) SWM Rules, 2016]. The first preference should always be given to segregating recyclables for further reuse or recycling (CPHEEO, 2016).

5.7 Commercially non- recyclables: “refused derived fuel”(RDF) means fuel derived from combustible waste fraction of solid waste like plastic, wood, pulp or organic waste, other than chlorinated materials, in the form of pellets or fluff produced by drying, shredding, dehydrating and compacting of solid waste [3(38) SWM Rules, 2016].

5.8 Inerts (fine earth and road sweep silt): safe disposal of inert waste (fine earth, house ash, road sweep silt etc. and C&D waste as per C&D Rules, 2016) in landfill as per SWM Rules, 2016.

6. Steps taken under Solid Waste Management Rules 2016

On 8th April 2016, the Solid Waste Management Rules were notified by the Ministry of Environment Forest and Climate change. These rules prescribe duties and standards for various authorities in a state. They implored that the Solid Waste Management Policy of a state should be made in accordance with these rules and that the local bodies should also frame bye laws incorporating the provisions of these rules.

Many milestones, as enunciated in the policy, have already been achieved by Dadra and Nagar Haveli administration. In the implementation of these rules by local authorities: a) Silvassa Municipal Council Solid Waste Management Bye-Laws have already been framed {See Rule 11(d) and 15(a) of SWM rules 2016}. b) In compliance of Rule 23, State Level Advisory Body for the UT of Dadra and Nagar Haveli has been formed and notified. c) Suitable land for setting up of processing and disposal facility for solid waste has already been identified {See Rule 11(f) of SWM rules 2016}. d) Group Housing Societies in Silvassa Municipal Council area are already being directed to ensure that a separate space for segregation, storage decentralised processing of solid waste is demarcated in the development plan of the housing complexes (Rule 11(h) and 12(a)). e) Land has already been identified for the establishment of sanitary landfill for all the urban centres of the Union Territory. f) Waste pickers and waste dealers have been registered in Silvassa municipal Council area (Rule 11(m)). g) In the Solid Waste Management Bye Laws, user fee has been prescribed. h) Littering has been made punishable and fines are being actively collected. i) Land is being identified for material recovery facility or secondary storage facility. j) Door to Door collection and Segregation of waste has started in a few societies. k) Bulk Waste Generators have been identified and have been directed to process their own waste. l) The administration and the Municipal Council have banned plastic in the territory. m) Letter of Acceptance has been given to an agency for door to door collection, segregation, transportation and processing of waste.

7. Principles of Dadra and Nagar Haveli Solid Waste Management Policy

1. Solid Waste Management, which includes segregation, collection, transportation and processing of solid waste, is an integral part of the right to life of all human beings. This is, in addition to water, electricity and other such services, a basic service for which the administration is duty bound to create opportunities and provide basic support.
2. The basic duty of providing Solid Waste Management service lies on the local bodies. However, active support, handholding and monitoring by administration are not only necessary but imperative in achieving the final aim of a zero waste society.
3. It is neither feasible nor advisable to achieve the goals and objectives of Solid Waste Management Policy without active assistance and participation of all stakeholders which includes rag-pickers, waste-dealers, sanitation workers, and the citizens. Therefore, any action or decision of Solid Waste Management must be taken only after active consultation of these stakeholders.
4. Active implementation of bye-laws including fines, and user charges is paramount to achieve the stated goals of this policy.
5. Solid Waste Management Rules, Policy and Bye-Laws are, inter-alia, tools to safeguard and uphold the dignity and safety of sanitation workers. Therefore, any Solid Waste Management Mechanism should actively promote safety and well being of all sanitation workers.
6. Waste is a resource, which if properly utilised could generate livelihood, wealth and profit. It should be treated as an investment.
7. Cleanliness, Health and Prosperity and intricately linked with each other and it is not possible to have one without another.

8. The Polluter should pay; which basically means that the producer of goods or items should be responsible for the cost of preventing or dealing with any pollution that the process causes.

8. Objectives of Dadra and Nagar Haveli Solid Waste Management Policy

1. To move towards a waste management system wherein not more than 10% of non-recyclable waste alone is disposed in a scientifically managed sanitary landfill.
2. To ensure 100% segregation of waste at source and 100% digitally monitored door to door segregated waste collection and processing as per the SWM Rules 2016.
3. To achieve high standards of cleanliness in the urban centres of Dadra and Nagar Haveli to ensure a healthy, hygienic and livable environment by scientific collection, well managed and efficient road sweeping and strict enforcement of fines.
4. To guarantee complete safety and dignity of sanitation workers and active and systematic engagement of rag pickers and waste collectors for activities concerning waste collection, secondary sorting, processing of waste etc.
5. To sustain the Open Defecation Free (ODF) status by providing sewer and water connections wherever possible.
6. To make citizens aware of different categories of solid waste, the importance and necessity of segregation, their duties and rights under Solid Waste Management Rules and Bye-Laws and thereby bring about behavioural changes in the citizens.
7. To ensure and continue complete ban on plastic bags, thermocols, water pouches, non recyclable use and use and throw plastic glasses etc.
8. To build capacity and upgrade consciousness of local bodies to ensure effective and efficient Solid Waste Management by training the stakeholders.
9. To ensure that user charges are levied as notified in the DNH Bye Laws and use it for more efficient collection, transportation, processing and disposal.
10. Ensure that the process of solid waste collection and disposal uplifts the rag pickers and self help groups by giving them legal recognition creating livelihood opportunities.
11. To make sure that the Bulk Waste Generators and industries are responsible for the processing of their own waste. To conduct onsite processing of waste in all the gardens of the territory.
12. To either process construction and demolition waste or to use it for filling roads pits etc.
13. To create market linkages for the ULBs to be able to sell and benefit from their waste products.
14. To promote inhouse, decentralized and onsite processing of the waste so that the cost of transportation of the waste could be minimized.

9. Approach towards Solid Waste Management

9.1 Rural Areas

The Waste Management of rural areas differs from Waste Management of urban areas in not only scope but also in approach. While the interventions in rural areas should be - To achieve the aforementioned objectives it is planned that in all rural areas:-

- a) segregation at source of biodegradable kitchen waste and horticultural waste is initiated, facilitated and implemented. This shall be done even when there is no facility for wet waste processing in a village as the wet waste can always be composted using pit composting.
- b) Composting structures of the windrow type, NARDEP type (lattice-work brick structures) or pits with low side walls for aerobic composting and vermicomposting will be constructed in every village in a common area. If feasible a small composting or methanation machine of capacity not more than one tonne shall also be installed in some villages. Some of the agricultural waste which is shredded can also be used for mixing with the kitchen waste and composted along with it. If there are soak pits, septic tanks or DEWATS for treating septage, then the primary treated sludge (after ensuring that the faecal matter/ excreta is free of pathogens) can be co-composted with the kitchen, horticultural and agricultural waste to produce high quality compost and manure, which after proper curing, can be directly used for the fields and crops.
- c) Door to door collection of segregated wet waste and horticultural waste will be organized by having tricycles integrated with tractors and trolleys. For this purpose self help groups of the same village or neighbouring village should be preferably employed.
- d) Non-biodegradable waste other than construction and demolition waste/ debris etc. can be collected and transported to a shed or a go-down and from there picked up once in a week or fortnight as per weight and volume accumulated and taken to the urban area where a common Dry Waste Collection and Processing Centre can be established for both the rural and urban non-biodegradable waste. Construction and Demolition waste should be used locally to fill pits of stagnant water to prevent malaria, dengue or for filling foundation while building new houses. It should not be preferably transported unless hazardous.
- e) Similarly, the small amounts of hazardous waste should also be segregated at source, collected and transported to the shed or go-down in common locations for groups of villages like one in each 20 group panchayats along with the non-biodegradable waste but in a separate collection location so that they can be transported directly to the Sanitary Landfill when a common SLF comes up in the designated spot in DNH.

- f) Bulk Waste Generators and Industries in rural areas should have to process their own waste as per various rules regulations and guidelines laid down by the central government and UT administration from time to time.
- g) While Solid Waste Management Bye Laws, a user charge and penalty structure is already in force in Silvassa Municipal Council Area, the same is not present in District Panchayat areas. It follows that to be truly effective in implementation of Solid Waste Management Rules 2016, District Panchayat and Gram Panchayats will need to evolve some legal framework to collect user charges and impose fines. User charges, in this respect, are easier to implement as they can be collected merely by a Panchayat resolution. Fines, on the other hand, require either some act, rule, or byelaw for implementation. One solution is that instead of imposing fines, Gram Panchayats can collect administrative charges from the people who generate waste, litter, or do not segregate. It is because administration has to incur extra expense to correct these users behaviour. Every non segregated waste has to be segregated at the level of Gram Panchayats; every waste littered unscrupulously has to be picked by someone in the pay of Panchayat. So Panchayats are fully justified in collecting user charges from people littering or not segregating the waste.

9.2 Urban Areas

- a) For urbanized areas, the decentralized waste processing model should be preferred for Bulk Waste Generators and Industries. For remaining places, given the small size of the territory and small population a centralized waste processing unit for the entire territory is more advisable. In this direction, the administration has already hired an agency for door to door collection of segregated waste, its processing and transportation for the urban areas of the territory. Waste should be segregated in wet, dry and hazardous waste (Hazardous preferably in two categories of sanitary/ home healthcare and toxic/chemical & electronic) and they should be collected separately with proper digital RFID/ GPS enabled systems so that 100% segregation at source and 100% door to door collection and transportation is ensured. Colour coded/ lidded bins/ bags shall be made available as per convenience of the residents and the collecting service provider. In urban areas a combination of tricycles for narrow lanes and slums with four wheel tippers of 1cu.m to 2 and 5 cu.m capacities for transportation to Wet waste processing units/Secondary collection Points may be utilized. From these Primary collection vehicles, waste in closed containers shall be brought to secondary collection points from where, after material recovery and processing the waste will be taken to a centralized processing centre. The movement should be towards a no bin system. Waste compactor bins with proper demarcation of green and blue waste can be kept in commercial areas as it is found that in such areas mere two time collection of waste is not sufficient. However, litter bins which will carry inert dust as well as thrown

garbage of the general public should be available for every 100 meters in the Urban Areas and in the tourist spots or market places of rural area.

- b) One area each in every urban centre should be identified as material recovery cum sorting facility. This will increase the amount of recyclable materials salvaged from the waste and will further lead to reduced transportation costs of the waste. The material can then be sold to the waste dealers. In such sorting facilities the active assistance of rag pickers should be taken. There are several industries in DNH including paper and plastic, glass and metal industries in the industrial areas of DNH and it is envisaged that there will be no difficulty in recycling all the recyclables within DNH with employment generation for ragpickers. In centralized plants, composting should be used to process the wet waste Bio Gas plants or waste to electricity plants are not suitable for the territory as the amount of waste generation is quite low. However, small biogas plants of up to one tonne capacity may be used by the bulk waste generator to allow them to use the fuel so generated in their premises. The gas and manure thus produced can be used for street lighting, cooking, heating and for running vehicles as well as develop open spaces and parks respectively. It is recommended that these common material recoveries cum sorting facilities will serve both rural and urban areas and will be located at a convenient location. Of course, if the quantity of dry waste turns out to be large, then two such facilities can also be set up in one urban area.
- c) A Sanitary Landfill will be constructed at the designated site already identified by the administration, where the unprocessable but somewhat treated hazardous waste like chemicals, parts of electronic waste emanating from the households can be deposited as per the rules and guidelines of MoEFCC and CPCB.
- d) A small incinerator of up to 50 kg/ hr with dual chamber and all pollution control measures, as specified in the CPCB guidelines for Biomedical waste and Hazardous waste management, can be placed at the Common Solid Waste Processing site to incinerate the waste which is hazardous and cannot be put in the landfill without treating. The ash from the incinerator can be placed in the sanitary landfill. If the same is found to be toxic then
- e) If possible, the sanitary and home healthcare waste from homes and institutions can be picked up separately and kept at the material recovery facility from where the service provider for the Biomedical waste should take this and process at a reasonable cost to avoid any spread of infection.
- f) It is recommended that bulk generators like hotels, resorts, marriage halls, large market places like mandis, slaughter houses and industrial estates should set up facilities in accordance with this policy and process their wet, dry, sanitary and hazardous waste. For the ease of processing, they should be also allowed to use the services of any service provider for the management of their waste. Any such bulk waste generator should adhere to the norms of source segregation and not give any mixed waste to the service provider All bulk generators should treat their biodegradable wet waste and horticultural waste by themselves or by employing a common service provider.

10. Time frame for Scientific Solid Waste Management Implementation

Necessary infrastructure shall be created by the administration and the local authorities for the implementation of Scientific Solid Waste Management within the time frame specified below.

Sr. No.	Milestone	Time Frame
1.	Identification of suitable sites for setting up solid waste processing facilities	Already Completed
2.	Identification of suitable sites for setting up sanitary landfill facilities	Already Completed
3.	Enforcing waste generators to practice segregation of wet waste, dry wastes and domestic hazardous waste at source.	31 st March, 2019
4.	Ensure door to door collection of segregated waste and its transportation in covered vehicles to processing or disposal facilities in urban areas.	31 st March, 2019
5.	Ensure separate storage, collection and transportation of construction and demolition wastes.	31 st March, 2020
6.	Setting up solid waste processing plant/ facilities	31 st May, 2019
7.	Bio remediation or capping of old and abandoned dump sites	31 st December, 2020
8.	Ensure door to door collection of segregated waste in covered vehicles to processing at local processing site in rural areas.	31 st December, 2020

Annexure – 1**Demographic Details Of Dadra and Nagar Haveli**

State	Dadra & Nagar Haveli
Area of UT	491 sq. km
Total no. of Panchayat in DNH	20
Total no. of Wards in the ULB	15

Sr. No.	Demographics	Units
1.	Population (Census 2011)	Total 3,43,709 Male 1,93,760 Female 1,49,949
2.	Estimated population of Dadra and Nagar Haveli in 2018	Total 5,02,980 Male 2,83,546 Female 2,19,434
3.	Number of Households (2016 @ growth rate)	76,458
4.	Number of Slums	0
5.	Number of Slum Households	0
6.	Number of Properties / Assessments	52431
7.	Length of Roads (kms) (CC,BT,WBM)	866.14
8.	Length of Pucca drains (kms) (including Storm water Drains)	56.65
9.	Number of Commercial establishments	1
10.	Number of Govt Hospitals	2
11.	Number of Hostels	17
12.	Number of Private Schools	49
13.	Number of Government Schools	26
14.	Number of Government Colleges	2
15.	Number of Bus Stations	1
16.	Number of Railway stations	0
17.	Number of Markets (Vegetable/ Fish/ Non- Veg markets)	11
18.	Number of Play grounds and other Mpl. Lands	10
19.	Number of Public Toilets	18
20.	Number of Surface Water Bodies (tanks/ lakes/ponds)	56

Number of Properties in Silvassa Municipal Council Area

Sr. No.	Parameter	Total Number
1	Residential	21294
2	Commercial	3582
3	Worship Place	60
4	Vacant Plot	105
5	Government Building	632
6	Industrial	1229
7	Other	2850
	Total	29752

Number of Properties in Rural Areas of Dadra and Nagar Haveli

Sr. No.	Parameter	Total Number
1	Residential	115424
2	Commercial	4760
3	Worship Place	130
4	Vacant Plot	0
5	Government Building	900
6	Industrial	3994
7	Other	288
	Total	125496

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 Deputy Secretary (UD)
 Dadra & Nagar Haveli,
 Silvassa.