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IN THE NATIONAL GREEN TRIBUNAL PRINCIPAL BENCH, NEW DELHI

O.A. No. 199 of 2014

In the matter of:

Almitra H Patel & Anr

... Applicant

Versus

UOI and Ors

... Respondents

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Filed on.17/03/2015

MS.BANSURI SWARAJ

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116, Uday Park,

New Delhi

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BEFORE THE NATIONAL GREEN TRIBUNAL

PRINCIPAL BENCH, NEW DELHI

ORIGINAL APPLICATION No. 199/2014

Almitra H Patel and anr.

..... Applicant

v/s

Union of India and ors.

.... Respondents

AFFIDAVIT ON BEHALF OF THE GOA STATE POLLUTION

CONROL BOARD

I, Levinson J. Martins, son of Francis Xavier Martins, aged about 47 years, resident of S4-Classic Heritage, Pajifond, Margao Goa, the Member Secretary, Goa State Pollution Control Board (GSPCB), Respondent above named most respectfully state and submit as under:

1. I state that I am presently holding charge as Member Secretary in the Goa State Pollution Control Board (GSPCB) and am authorized to file the present Affidavit.

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2. I state that I have previously filed an Affidavit enclosing a status report in the present matter, in terms of the directions of this Hon Tribunal dated 15/01/2015.

3. I state that vide Order dated 5/2/2015 passed in the present matter this Hon'ble Tribunal was pleased to direct that all status reports filed so far in the present matter to be cancelled.

4. I state that vide the aforestated Order dated 5/2/2015, this Hon'ble Tribunal was pleased to grant the present Respondent time to file a fresh status report with complete reply / suggestions. I state that vide the said Order this Hon'ble Tribunal was pleased to direct the present Respondent to take into consideration the comments of the Central Pollution Control Board with regard to collection and disposal of Municipal Solid Waste while submitting its status report. I state that this Hon'ble Tribunal was further pleased to direct that this status report should specifically indicate if there is a signal district or village in the entire State where the Municipal Solid Waste is collected in its entirety, segregated and disposed off in accordance with MSW Rules, 2000.

5. I state that in this regard, by way of the present affidavit, I am placing on record the 'Status Report' in terms of the directions of this Hon'ble Tribunal as aforestated.

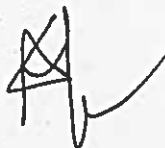
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Annexed herewith and marked as EXHIBIT-A colly is a copy of the 'Status Report' prepared by the Goa State Pollution Control Board in this regard.

6. I state that vide orders dated 21/11/2013, the Respondent Board has granted the Department of Science, Technology and Environment, Government of Goa, Consent to Establish, under the Water (Prevention and Control of Pollution) Act, 1974 and the Environment (Prevention and Control of Pollution) Act, 1981, for setting up of 'Integrated Solid Waste Processing and Disposal Facilities' at Calangute Village, Bardez Taluka, North Goa District, Goa and at Cacora village, Curchorem, South Goa District, Goa . I state that the said Consent to Establish, have been granted for setting up of 'Integrated Solid Waste Processing and Disposal Facilities' comprises of manual/mechanized sorting, material recycling centre, organic extrusion press, bio-methanisation plant followed by Bio-gas plant, in vessel composting and sanitary landfill with a plant capacity that is 100 tons/day (3 shifts per day) with 10TPD capacity of sanitary landfill and bio gas plant of capacity 0.3-0.4 MW.

7. I state that the Board has also vide orders dated 20/11/2013, granted the Department of Science, Technology and Environment, Government of Goa, Authorisation for the aforestated 'Integrated Solid Waste Processing and Disposal



Facilities' at Calangute Village, Bardez Taluka, North Goa District, Goa and at Cacora village, Curchorem, South Goa District, Goa, in terms of the Municipal Solid Wastes (Management and Handling) Rules, 2000.

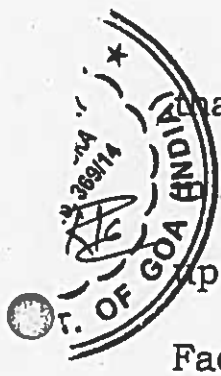


8. I state that the site at which the aforesated 'Integrated Solid Waste Processing and Disposal Facilities' are being set up are degraded sites as the said sites were being used as dumping sites for solid waste, for many years. I state that this unscientific dumping of solid waste at the sites was a source of public nuisance and a health hazard in the area, and was also affecting the environment adversely, including in case of the site at Calangute village; causing of pollution of the Salmona Spring that was located in the vicinity. I state that the site at Calangute village was being used for dumping of solid waste for more than 25 years and approximately 50,000 sqmts of area has been degraded. Indeed the Facility is required, as the same would remediate the existing solid waste and also treat the new waste, therefore it is of utmost importance that the facility comes up at the site as the same would prevent the Salmona Spring from being further polluted.

9. I state that the Respondent Board is of the firm and considered opinion that the establishment and operation of the aforesated 'Integrated Solid Waste Processing and Disposal Facilities' at the sites¹ aforementioned is essential towards

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ensuring that the Solid Waste generated in the State of Goa, and particularly the Solid Waste that is currently dumped at the aforesaid degraded sites is effectively managed, handled, treated and disposed off, in terms of the Municipal Solid Waste (Management and Handling) Rules, 2000.



I state that the Board is also of the considered opinion that having regard to the present state of the sites it would be in the greater interest of ecology to remediate the sites and set up the 'Integrated Solid Waste Processing and Disposal Facilities', along with the Social Forestry measures including landscaping, planting of trees, recreational facilities etc.. I state that this was also approved off in the case of Appeal no. 70 of 2012, i.e. Captain Mall Singh and ors. v/s Punjab PCB and ors, wherein a degraded site was used for setting up the Facility. I state that the Board is of the further opinion that the interest of ecology would be better served if the said sites are used for the Facilities, rather than the State going for any other area or plot which will be a Greenfield area.

- 10. I state that the Respondent Board will further ensure that the duties and responsibilities as cast upon it under the provisions of the Municipal Solid Waste (Management and Handling) Rules, 2000, are diligently performed. I state that in the case of the Facility that is being set up at Calangute village; the plans for the said facility also includes recreational facilities, garden, green area, landscaping and social forestry.

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11. I state that whatever stated herein above is based on the records available with the office of the Respondent Goa State Pollution Control Board, to which I have access and which I believe to be true and correct.



Solemnly affirmed on

this 16th day of March 2015

Deponent

SOLEMNLY AFFIRMED AND VERIFIED
BEFORE ME BY Levinson J. Martins
WHO IS IDENTIFIED BEFORE ME BY
Self WHOM I KNOW.
SR. NO. 526/15
DATED: 16/03/2015

R. N. Kalangutkar
Advocate & Notary
Tiswadi Taluka
Reg. No. 369/14



Status Report of the solid waste in the State of Goa

BACKGROUND:

There are 13 Municipal Councils and 1 Municipal Corporation in the State of Goa. Out of these 6 Municipal Councils and 1 Municipal Corporation in the North Goa District and 7 Municipal Councils in the South Goa District.

The Hon'ble High Court of Bombay at Goa was monitoring the implementation in S.M. W.P. No.2 of 2007, wherein the State Government has informed the Hon'ble High Court that the State Government will establish two landfill sites one in North Goa and one in South Goa. While disposing the said Petition, the Hon'ble High Court has directed the Municipalities and Village Panchayats as follows:

a) Directions to Corporations/ Municipal Councils.

- i) The Corporation of City of Panaji and the Municipal Councils of Mapusa, Ponda, Curchorem, Margao, Pednem, Sanguem and Valpoi are granted a period of 1 year to complete the constructions of landfill for the burial of residual / inert waste collected by the Corporations/ Municipalities.
- ii) In case of Mormugao Municipal Council, a Committee consisting of the following members is constituted to identify suitable site for setting up of landfill:
 - Director of Municipal Administration
 - Chief Conservator of Forest
 - Chief Town Planner
 - Chairman of Goa State Pollution Control Board
 - Member Secretary of Mormugao Planning and Development Authority
 - Chief Officer of Mormugao Municipal Council

The Committee shall identify the site within a period of 2 months from the date of issue of Order and the State Government shall take appropriate steps to acquire the land suggested by the Committee and hand over possession of the acquired land to the Mormugao Municipal Council within a period of 6 months from the date of submission of report by the Committee.

- iii. The Mormugao Municipal Council will construct the landfill within 1 year from the date of handing over possession of land to it by the State Government.
- iv. The corporation o City of Panaji/ Municipal Councils to ensure that the plastic waste that accumulates after segregation of the waste, shall be baled and stored at the Councils waste disposal site or at any site that may be selected by the State Government for plastic waste collection, until the agency appointed for the purpose collects the same.
- v. The Director of Municipal Administration shall appoint M/s. Good Earth Management Enterprises Pvt. Ltd., which has been appointed by the Director of Panchayats for collection of plastic waste from the Village Panchayats or any other agency approved by the Goa State Pollution Control Board to collect the baled plastic waste from all Municipal Councils/ Corporation, every fortnight for safe and hygienic disposal.
- vi. By way of last opportunity, time of three months is granted to the Municipal Councils of Mapusa, Ponda, Curchorem, Margao, Sanguem and Valpoi to set up adequate composting facilities for disposal of organic/ biodegradable waste to the satisfaction of the Goa State Pollution Control Board.
- vii. The Board shall inspect the facilities within one month thereafter and file a report in this Court, within two weeks thereafter, stating as to whether these Municipal Councils have taken measures for disposal of organic/ biodegradable waste in terms of order dated 9th July, 2008 passed by this

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Court. The Board shall also send a copy of its inspection report to the concerned District Magistrate who shall consider it for taking appropriate action in accordance with the law in case of non-compliance of the directions by any Municipal Council.

(b) Directions to the Village Panchayats.

- (i) The Village Panchayats shall ensure that the plastic waste that is collected every week from all wards of the Village Panchayats is baled properly and stored at an appropriate site, until it is collected by the agency appointed for the purpose. If the Government selects a site for storage of plastic waste, the Village Panchayats shall transport the plastic waste to this site in secure condition for baling.
- (ii) In case of non-compliance of directions No.(1), the Director of Panchayats shall report the same by filing appropriate application, so as to enable this Court to pass further orders, including initiation of contempt proceedings against the concerned Village Panchayat/s.
- (iii) By way of last opportunity, time of three months is granted to the Village Panchayats of Calangute, Candolim, Taleigao, Benaolim, Colva and Chicalim to make adequate composting facilities for disposal of organic/biodegradable waste to the satisfaction of the Goa State Pollution Control Board.
- (iv) Within one month thereafter, the Board shall inspect the facilities and file report in this Court within a period of 15 days, stating therein as to whether these Village Panchayats are in full compliance with the order dated 18th February, 2009, passed by this Court regarding the steps to be taken for disposal of organic/biodegradable waste. The Board shall also send a copy of the report to the concerned District Magistrate who shall

take appropriate action in accordance with law against the erring Village Panchayat/s.

(v) Considering the population and the fact that till date not many commercial activities are undertaken in the Village Panchayats of Querim-Tiracol, Paliem, Poinguinim, Loliem, Cola, Agonda, Naquerim, Fatorpa, and Quitol, they are exempted from setting up composting stations. However, the Goa State Pollution Control Board shall carry out periodical inspections of these Village Panchayats and issue directions to them to set up composting stations if the Board is of the opinion that the composting stations are to be set up having regard to the mega housing projects and/or commercial establishments set up hereinafter in these villages.

(vi) a) The Village Panchayats of Mandrem, Morjim, Taleigao, Benaulim, Varca, Colva, Majorda, Chicalim, Sancoale and Fatorpa are directed not to issue construction licence/s to multidwelling projects of 5 residential units and above, until the Goa State Pollution Control Board is satisfied that the plastic waste is collected weekly from all wards of the Village and baled properly for onwards disposal through the plastic waste collector. The Secretary of the Village Panchayats shall inform, in writing, the Board that the plastic waste is being collected weekly from all the wards of the village and is baled and if the Board is satisfied with the arrangement of the plastic waste disposal, it shall issue a certificate to the concerned Village Panchayat/s to that effect and it is only thereafter that the concerned Panchayat/s shall be entitled to issue construction licence/s to the multi-dwelling projects of 5 residential units and above.

(b) The Goa State Pollution Control Board, as well as the aforementioned Village Panchayats shall maintain a separate record of

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the certificates issued by the Board to the concerned Village Panchayat/s.

- (c) In the event any of theaforementionedVillage Panchayatgrants permission/constructionlicence to the multi dwelling project of 5 residential units and above, without a certificate of the Board, the same shall be construed as contempt of this Court and an appropriate action would be taken against the concerned Village Panchayat and/or its official.

(c) OTHER GENERAL DIRECTIONS ;

(1) The State Government shall set up two or more sanitary landfills within a period of one year for accepting the residual/inert waste for Village Panchayats of North Goa and South Goa.

(2) The State Government shall consider setting up of a plastic waste disposal unit, having regard to the fact that on transportation of plastic waste out of Goa heavy expenditure has to be incurred.

(3) The Director of Panchayats shall appoint M/s. Good Earth Management Enterprises Pvt. Ltd., or any other agency selected by the State Government to collect the baled plastic waste from the Village Panchayats every fortnight or in case any site is allocated by the State Government for storing/baling of the plastic waste, the agency selected by the State Government, shall collect the waste from the said site every fortnight.

(4) The Agency selected for collecting plastic waste shall

maintain record of collection of baled plastic waste from the Municipalities and the Village Panchayats.

(5) The record shall be made available to the Goa State Pollution Control Board, on demand. The Board shall designate Officer/Officers to inspect the records preferably once in three months to ensure that all coastal Village Panchayats are adhering to the directions given by this Court. If the Board finds that the Municipality or the Panchayat is not complying with the directions issued by this Court, the Board shall file a report to this Court in order to enable this Court to pass appropriate orders.

(6) The Goa State Pollution Control Board shall provide technical assistance and guidance regarding proper methods of disposal of biodegradable waste through composting, use of scientific methods of treating biodegradable waste to Village Panchayats and Municipal Councils, upon request being made in that regard.

(2) The Board received directions under section 18 (1) (a) of the Water (Prevention and Control of Pollution) Act, 1974 and under section 18 (1) (b) of the Air (Prevention and Control of pollution) Act, 1981 for implementation of MSW (Management and Handling) Rules 2000 in the State/ UT. The Board then issued directions to all the corporations/ Municipal Councils to comply with the directions issued by the CPCB. The Board has received the replies to the directions from few Municipal Council which is under scrutiny.

The status of implementation of Municipal Solid Waste Rules by the Councils/ Corporation is as follows;

Sr. No.	Name of Municipal Council/Corporation	Status of implementation of Municipal Solid Waste Rules	Remarks
	NORTH GOA DISTRICT		
1	Corporation of City of Panaji, Panaji - Goa.	<p>A) Population:-59006 as per 2001 censuses.</p> <p>B) Generation of Solid Waste 72.2 M.T.per day</p> <p>C) Present facilities</p> <p>i. The Corporation collects house to house segregated waste.</p> <p>ii. The non biodegradable waste collected is sorted and baled at the baling facility at Material recovery facility at St. Inez.</p> <p>iii. The Baled non biodegradable facility is transported to Vassadata cement and ACC Wadi at Sedam, Karnataka for co-incineration.</p>	<p><u>Short term measures:</u></p> <p>1) The CCP should expedite and commission the composting facility at P.T.Sheet No.56 and Chalta No.6 within the next 60 days.</p> <p><u>Long term measures</u></p> <p>1) The CCP should expedite and set up the</p>

		<p>iv. Approximately 1370 tons of bailed Non Biodegradable has been transported for co incineration from 3/04/13 to 16/12/14.</p> <p>v. The CCP has set up decentralized composting facilities at various locations including two at Patto Plaza of 8 ton/ day capacity each for which the GSPCB has granted authorization. The facility established is inadequate to treat the biodegradable waste generated by the CCP.</p> <p>D) Landfill:</p> <p>i. The CCP has not yet establishment any landfill site. However the GSPCB has granted authorization for disposal of construction of debris and horticulture waste in Sy.No.20 (Sub Div. 1-I, 3-A-I, 2-A), at Bainguinim Tiswadi</p>	<p>integrated solid waste management facility including landfill at Bainguinim</p> <p>Implementations of Municipal Solid Waste Rules: Partially complied</p>
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Taluka.

E) Proposed Integrated solid waste management facility including landfill at Bainguinim.

- i. The CCP identified land bearing Survey No. 20 (Sub Div. 1-I, 3-A-I, 2-A), at Bainguinim Tiswadi Taluka for setting up of Integrated solid waste management facility including a landfill. The land has been acquired and authorization has been granted by the GSPCB for setting up the said facility.
- ii. There were 3 W.P. filed in the High Court of Bombay at Panaji challenging the identification of land at Bainguinim i.e. W.P. No.115/2008, W.P.No.3/2009, W.P.No.353/2009. All the said Writ Petitions have been disposed by the Hon'ble High Court

		<p>without granting any relief to the party in the year 2008.</p> <p>iii. CCP has also proposed to set up dry recyclable material sorting centre (material recovery facility) and composting station at P.T. Sheet No.56, Chalta no.6 of Panaji City.</p> <p>iv. The CCP has not yet set-up the facility and landfill site at Bainguinim.</p>	
<p>2</p>	<p>Pernem Municipal Council, Pernem – Goa.</p>	<p>A) Population:- 8725 as per the annual report for the year 2013-14.</p> <p>B) Generation of Solid Waste:- 0.60 tons per day</p> <p>C) Present facilities</p> <p>i. Pernem Municipal Council is carrying house to house collection in wards having major household density and in the market area.</p> <p>ii. Maximum bio degradable</p>	<p>House to house collection of waste is carried out only in the market area and in wards that have major population density.</p> <p>The treatment plant is made operational, depending on the quantum of waste received.</p> <p>Implementations of Municipal Solid</p>

		<p>waste is taken care by households by way of treating the waste in their backyard/ orchard.</p> <p>iii. The Council has set up 5 MT/day capacity of solid waste management facility in Plot bearing survey no.310/1-A of Pernem.</p> <p>iv. The mixed waste is treated in windrows and thereafter screened.</p> <p>v. The Council has also established a land fill site.</p> <p><u>D) Present Status:</u></p> <p>a) Presently 0.4 -0.6 tons/ day of waste is generated.</p> <p>b) Plastic waste is segregated and stored for handing over to the agency appointed by the Government.</p> <p>c) Recently a baling machine has been installed by the Council at MSW site.</p> <p>d) The plant not operated</p>	<p>Waste Rules: Partially complied</p>
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		satisfactory.	
3	Bicholim Municipal Council, Bicholim.	<p>A) Population:-14,913 as per 2001 censuses.</p> <p>B) Generation of Solid Waste:- 6 tons per day approximately.</p> <p>C) Present facilities</p> <ol style="list-style-type: none"> i. The Bicholim Municipal Council is carrying out house to house collection of segregated waste from all wards. ii. The collected waste is taken to the garbage treatment plant site at Lakherem. The biodegradable waste is composted plastic waste is given to the agency appointed by GSPCB. iii. The Council has established a solid waste management facility. The residual waste is disposed into the sanitary landfill admeasuring 2,500 sq.mts. iv. The mixed waste is 	<p>Implementations of Municipal Solid Waste Rules: Partially complied</p>

		<p>treated in windrows and thereafter screened.</p> <p><u>Present Status:</u></p> <p>a. The council has set up 10 MT biological garbage treatment plant at Lakherem.</p> <p>b. The segregation of mixed waste after windrows composting into biodegradable and non biodegradable fractions has low efficiency thereby increasing the load on the landfill and also on the quality of the compost.</p>	
<p>4</p>	<p>Sanquelim Municipal Council, Sanquelim – Goa.</p>	<p>Population:-13243 as of 2013.</p> <p>B) Generation of Solid Waste:- 6 tons per day approximately.</p> <p>C) Present facilities</p> <p>i. The Sanquelim Municipal Council is carrying out house to house collection of segregated waste.</p>	<p>Implementations of Municipal Solid Waste Rules: Partially complied</p>

ii. The Council has established a solid waste management facility at survey no.74/0 Harvalem Sanquelim Bicholim Goa

iii. The mixed waste is treated in windrows and thereafter screened.

D) Landfill:

i. The Council has completed the construction of landfill site.

Present Status:

a) Council has set up facilities for treatment of bio degradable waste and has completed the construction of landfill site.

b. The segregation of mixed waste after windrows composting into biodegradable and non biodegradable fractions

		has low efficiency thereby increasing the load on the landfill and also on the quality of the compost.	
5	Valpoi Municipal Council, Valpoi - Goa.	<p>A) Population:-7913 as per 2001 censuses.</p> <p>B) Generation of Solid Waste:- 2.5 tons per day approximately.</p> <p>C) Present facilities</p> <ol style="list-style-type: none"> i. The Valpoi Municipal Council is carrying out house to house collection of segregated waste. ii. The mixed waste is treated in windrows and thereafter screened. Composting is also carried at the composting unit situated in the market area. <p>D) Landfill: The land fill site is under construction in survey no.54/6</p>	Implementations of Municipal Solid Waste Rules: Partially complied

		<p>(Part) of Massordem.</p> <p><u>Present Status:</u></p> <ul style="list-style-type: none">a) Decentralized composting units are set up.b) The council has set up Garbage treatment plant shed and sanitary landfill site at Massordem, Valpoi.c) Plastic waste and other re-cyclable waste is segregated and stored separately at the garbage treatment plant shed and the bio degradable waste is treated by way of composting and through windrows system.d) The segregation of mixed waste after windrows composting into biodegradable and non biodegradable fractions has low efficiency thereby increasing the load on the landfill and also on the quality of the compost.	
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6	Ponda Municipal Council, Ponda - Goa.	<p>A) Population:-48650 as per annual report 2013-14.</p> <p>B) Generation of Solid Waste:- 7-8 tons per day approximately.</p> <p>C) Present facilities</p> <p>i. The Ponda Municipal Council has implemented door to door collection of segregated waste. Storage facility has been set up at Keriyan Khandepar.</p> <p>ii. The Council is treating the bio degradable waste collected from all wards by windrows method at Keriyan Khandepar.</p> <p>iii. Non-biodegradable waste is sent to GSPCB authorized site at Sarvona in Bicholim and at vassudatta cement factory in Karnataka. Til date the Council has transported around 256 tons of non-biodegradable waste.</p>	<p>Implementations of Municipal Solid Waste Rules: Partially complied</p>
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		<p>D) Landfill:</p> <p>i. Site has been identified at Keriyan Khandepar for setting up of sanitary landfill and solid waste management facilities.</p> <p><u>Present Status:</u></p> <p>a) The PWD has accord the Technical Sanction and NIT approval for setting up of scientific waste disposal and landfill facility in survey no. 45/1 at Keriyan Khandepar and the same file has been transferred to GSUDA for execution of work. Council has acquired land for setting up the landfill.</p> <p>b) The segregation of mixed waste after windrows composting into biodegradable and non biodegradable fractions has low efficiency thereby increasing the load on the landfill and also on the</p>	
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		quality of the compost.	
7	Mapusa Municipal Council	<p>A) Population:-40487 as per annual report 2013-14.</p> <p>B) Generation of Solid Waste:- 18 tons per day approximately.</p> <p>C) Present facilities</p> <ul style="list-style-type: none"> i. The Council is carrying out house to house collection of segregated waste. ii. Windrows composting is carried out in the shed at Assagao Plateau site. iii. Council has set up 10 nos. of composting units at various places in all wards. Also 1.5 MT OWC has been installed opp. to fish market, Mapusa. <p>D) Landfill:</p> <ul style="list-style-type: none"> i. Landfill site has not been established. ii. The Council has also acquired land admeasuring 32,050 	<p>GSPCB has granted Authorization for set up of waste treatment facility at Assagao Plateau in Bardez Taluka, Plot bearing survey no.145/1.</p> <p>The Council has failed to set up the plant at Cunçhelim.</p> <p>Implementations of Municipal Solid Waste Rules: Not complied</p>

sq.mts. at Cunchelim for proposed setting up of waste management facility which will include scientific disposal plant and landfill.

Present Status:

- a) The council has erected a shed for installation of 5 M.T. capacity Organic waste converter at Assagao Plateau site.
- b) Authorization of GSPCB has been granted for setting up and operation of waste processing facility in Sy. No. 145/1 at Assagao Plateau.
- c. The segregation of mixed waste after windrows composting into biodegradable and non biodegradable fractions has low efficiency thereby increasing the load on the landfill and also on the quality of the compost.

	SOUTH GOA DISTRICT		
8	Mormugao Municipal Council, Mormugao – Goa.	<p>A) Population: - 1.5 lakhs approximate as per annual report 2013-14.</p> <p>B) Generation of Solid Waste: - 30-35 tons per day approximately.</p> <p>C) Present facilities</p> <p>i. The Council is carrying out house to house collection of unsegregated waste.</p> <p>ii. Council has established a treatment facility for treatment of biodegradable waste.</p> <p>iii. Currently windrows composting is carried out at the solid waste management site at Sada, Vasco.</p> <p>D) Landfill:</p> <p>i. At the direction of the Hon'ble High Court,</p>	<p>Solid Landfill site is yet to be established. The Council is yet to acquire land for a construction of Solid waste landfill.</p> <p>Implementations of Municipal Solid Waste Rules: Not complied</p>

		<p>the committee so appointed has identified landfill site at Village Loutolim. The said land is yet to be acquired by the Council.</p> <p><u>Present Status:</u></p> <p>a) No landfill site has been established.</p> <p>b) Non biodegradable is presently dumped at the solid waste management site at Sada, Vasco.</p> <p>c) The segregation of mixed waste after windrows composting into biodegradable and non biodegradable fractions has low efficiency thereby increasing the load on the landfill and also on the quality of the compost.</p>	
9	Margao Municipal Council, Margao – Goa.	<p>A) Population:- one lakh approximately as per annual report 2013-14.</p> <p>B) Generation of Solid Waste:-</p>	<p>Solid Landfill site is yet to be established. The Council has acquired land for the</p>

		<p>50 tons per day approximately.</p> <p>C) Present facilities</p> <ul style="list-style-type: none">i. The Council is carrying out house to house collection of segregated waste only in three wards.ii. The un-segregated waste is collected from the road side.iii. Waste management plant has been established at Sonsodo in Margao.iv. The Bio degradable waste is processed by Aerobic Composting. <p>D) Landfill:</p> <ul style="list-style-type: none">i. Construction of landfill is in progress. <p><u>Present Status:</u></p> <ul style="list-style-type: none">a) The waste management plant has been established and is in operation.b) Construction of Land fill site in progress.c) The segregation of mixed	<p>same.</p> <p>Implementations of Municipal Solid Waste Rules: Not complied</p>
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		<p>waste after windrows composting into biodegradable and non biodegradable fractions has low efficiency thereby increasing the load on the landfill and also on the quality of the compost.</p>	
10	<p>Quepem Municipal Council, Quepem – Goa.</p>	<p>A) Population:-15,000 as per annual report 2013-14.</p> <p>B) Generation of Solid Waste:- 2 tons per day approximately.</p> <p>C) Present facilities</p> <p>i. The Council is carrying out house to house collection of unsegregated waste.</p> <p>ii. The Council has established composting units.</p> <p>D) Landfill:</p> <p>i. Landfill has been established.</p> <p><u>Present Status:</u></p>	<p>Implementations of Municipal Solid Waste Rules: Partially complied.</p>

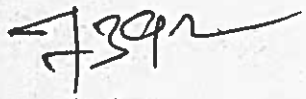
		<p>a) The construction work of setting up treatment facility for bio degradable waste and landfill site is completed.</p> <p>b) The segregation of mixed waste after windrows composting into biodegradable and non biodegradable fractions has low efficiency thereby increasing the load on the landfill and also on the quality of the compost.</p>	
<p>11</p>	<p>Curchorem-Cacora Municipal Council, Curchorem - Goa.</p>	<p>A) Population:- 21407 as per 2001 censuses.</p> <p>B) Generation of Solid Waste:- 17 tons per day approximately.</p> <p>C) Present facilities</p> <p>i. The Council is carrying out house to house collection of segregated waste.</p> <p>ii. The Council has constructed the decentralised composting</p>	<p>Composting is not carried out.</p> <p>Implementations of Municipal Solid Waste Rules: Not complied</p>

		<p>units for treating biodegradable waste, but are not properly functional.</p> <p>D) Landfill:</p> <p>i. The Council has established the temporary landfill site.</p> <p><u>Present Status:</u></p> <p>a) Composting is not carried out.</p>	
12	Cuncolim Municipal Council, Cuncolim – Goa.	<p>A) Population:- 25, 000 as per annual report 2013-14.</p> <p>B) Generation of Solid Waste:- 3 tons per day approximately.</p> <p>C) Present facilities</p> <p>i. The Council is carrying out house to house collection of segregated waste.</p> <p>D) Landfill:</p> <p>i. One landfill site has been established behind IDC at Survey No.340/1 admeasuring</p>	Implementations of Municipal Solid Waste Rules: Partially complied

		<p>28,395 sq.mt.</p> <p><u>Present Status:</u></p> <p>a) The Council has set up facility for treatment of bio degradable waste.</p> <p>b) The segregation of mixed waste after windrows composting into biodegradable and non biodegradable fractions has low efficiency thereby increasing the load on the landfill and also on the quality of the compost.</p>	
13	<p>Sanguem Municipal Council, Sanguem – Goa.</p>	<p>A) Population:-5000 as per annual report 2013-14.</p> <p>B) Generation of Solid Waste:- 1.5 – 2.0 tons per day approximately.</p> <p>C) Present facilities</p> <p>i. The Council is carrying out house to house collection of waste.</p> <p>ii. The Council has constructed 15 decentralised composting</p>	<p>Due to the objection of local people, the matter regarding land acquisition at Goonjamol in survey no.62/01 is going on in the Hon'ble High Court.</p> <p>Solid Landfill site is yet to be established.</p> <p>Implementations of Municipal Solid</p>

		<p>units for treating biodegradable waste, but are not properly functional.</p> <p>D) Landfill:</p> <p>i. Site identified/ Authorization issued by GSPCB. Land acquisition is in process.</p> <p><u>Present Status:</u></p> <p>a) Landfill site is yet to be established.</p> <p>b) The Council has identified garbage disposal site at Goonjamol in survey no.62/01.</p>	<p>Waste Rules: Not complied</p>
<p>14</p>	<p>Canacona Municipal Council</p>	<p>A) Population:- 14,230 as per annual report 2013-14.</p> <p>B) Generation of Solid Waste:- 7 tons per day approximately.</p> <p>C) Present facilities</p> <p>i. House to house collection of waste is partly implemented by the Council.</p>	<p>Implementations of Municipal Solid Waste Rules: Partially complied</p>

		<p>ii. Segregation and treatment of waste is carried out at Garbage treatment plant at Dumanem.</p> <p>D) Landfill:</p> <p>i. The Council has established one landfill site admeasuring 4,225 sq. mt.</p> <p><u>Present Status</u></p> <p>a) Composting is not carried out.</p> <p>b) The segregation of mixed waste after windrows composting into biodegradable and non biodegradable fractions has low efficiency thereby increasing the load on the landfill and also on the quality of the compost.</p>	
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1. There are 190 Village Panchayats, 13 Municipal Councils and 1 Municipal Corporation in the State of Goa. Approximately 400 to 450 Tonnes per day of garbage is generated in the state of Goa.
 2. It is observed that none of the Corporation/Municipal Councils have fully complied with Municipal Solid waste Rules.

Directions by the Hon'ble High Court

The Hon'ble High Court of Bombay at Goa took Suo Motu cognizance of the Management of Solid Waste in the State of Goa and gave Directions to the State Government, Municipal Councils and the Village Panchayats in Suo Motu Writ Petition 2 of 2007, vide Order dated 13th Aug 2013. The directions to the concerned Village Panchayats include collection of plastic waste from all wards, baling of the collected waste and transport of the baled waste to the site selected by the State Government. Directions were also given to set up adequate composting facilities for disposal of biodegradable waste in few Village Panchayats. The directions also included the clause that construction licenses could not be issued by few Village Panchayats unless the GSPCB certified that collection and baling of plastic waste was being done satisfactorily. Municipal Councils were given directions to set up landfill sites and adequate composting facilities as applicable.

Institutional set-up for Solid Waste Management

As submitted before the Hon'ble High Court, the State of Goa has constituted the following bodies for dealing with various matters pertaining to SWM:

1. A High Level Task Force under the Chairmanship of Hon'ble Chief Minister of Goa to take decisions pertaining to setting up of solid waste management facilities in the State.

2. A Monitoring-Cum-Working Committee (Monitoring Cum Working Committee) on Solid Waste Management under the Chairmanship of the Minister of Environment and Forests to implement provisions of various Acts and Rules pertaining to SWM.
3. A Solid Waste Management Cell under the Department of Science and Technology to provide secretarial assistance to the Monitoring cum Working Committee and to perform tasks pertaining to setting up of the Solid Waste Management facilities in the State.

With regards to reply/suggestions regarding judgement of tribunal with respect to Captain Mall Singh & others v/s. Punjab Pollution Control Board & Others (Application No 70/2012)

Setting up of Solid Waste Management Facilities in the State

As per the Directions given by the Hon'ble High Court, the Government is in the process of establishing two Solid Waste Management Facilities, at Calangute/Saligao in North Goa and at Cacora in South Goa. The facilities have a capacity of 100 TPD, and shall aim at maximum material and energy recovery. Only inert/residual waste shall be sent to the sanitary landfill that is designed to be a part of the facilities. The technologies adopted at these facilities are approved by Central Pollution Control Board. For the Solid Waste Management Facilities, the processing facilities would be based on a Recycle and Sorting Line, segregation, Bio-methanation and In-Vessel Composting. Solid Waste Management Facilities have been planned as a state-of-the-art, modern facility with proper segregation and bio-methanation technology. The proposed facilities include resource recovery through sorting and recycling, i.e. recovery of materials such as paper, glass, metal etc through separation, resource recovery through waste processing i.e. Energy from Biomethanation process, and disposal of waste inerts in engineered sanitary landfills. The facilities will have minimum human intervention, enclosed sheds

and computer controlled/PLC (programmable logical control/SCADA) site control and data acquisition, equipment for handling different types of input material. The functioning of the plant and selection of the technology has been done to address the issues of odour and leachates generation. The electricity produced from the organic fraction of waste will be utilized to power the plant operations. The technology has been approved by NEERI and the Request for proposals have been scrutinized by an expert committee constituted by the Goa State Infrastructure Development Corporation for technical evaluation of the bids. The committee is chaired by Dr. Sharad Kale, Professor at Dr. Homi Bhabha Atomic Research Center, Mumbai and comprises of other experts, scientists from NEERI, professors from Indian Institute of Technology Bombay and BITS Pilani.

These Facilities are also on the same lines as the Integrated Solid Waste Management Facilities in the Punjab plan as these are also proposed on degraded sites being presently utilised for dumping of solid waste and are also proposed to generate electricity. Both the Sites are also identified as Garbage Management Sites after due consultations.

The site is identified as Garbage Management Site in 2008 by the Task Force setup by the State Government for preparation of Regional Plan and notified in 2011.

A request was made by Saligao Civic Forum to shift the site to an alternate location which is 700mts from the existing site. The site was inspected by Officials of the Department of Science, Technology & Environment and Town Country Planning Department. The site was found to be unsuitable and is a green field site.

Site selection has been done considering the fact that the proposed sites have been utilized for unscientific dumping of solid waste for the past several years

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and are therefore degraded & require to be remediated. The Goa State Infrastructure Development Corporation had appointed NEERI for carrying out the EIA studies. A Preliminary Report submitted by M/s NEERI Nagpur states the following

□ Since the site and the surrounding environment is already degraded due to continual unscientific disposal of MSW, CMSWMF is absolutely essential for restoration of environmental quality and should be established at the earliest. The necessary consents for the establishment of CMSWMF may be issued at this stage considering the scientific and environmentally sound management practices adopted and envisaged environmental benefits.

□ In order to minimize/eliminate the adverse environmental impacts, existing MSW lying at the site should be processed on priority basis after the commissioning of CMSWMF.

The site at Cacora is identified as Garbage Management Site in 2008 by the Task Force setup by the State Government for preparation of Regional Plan and notified in 2011.

The Cacora-Curchorem Municipal Council was using it as a garbage management site for disposal of garbage generated within its jurisdiction.

The proposed SWMF at Cacora in South Goa shall cater to the Talukas of Quepem, Canacona, Dharbandora and Sanguem whereas the facility at Calangute/Saligao in North Goa shall cater to the Coastal and other villages of Bardez Taluka including Calangute, Saligao, Pilerne, Parra, Candolim, Baga Belt, Anjuna, Arpora, etc. A similar Greenfield Solid Waste Management Facility is also proposed at Bainguinim (Tiswadi). However the concerned

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Municipal Councils will setup sanitary landfill sites for disposal of inert/residual waste/debris etc.

Collection mechanism for non-biodegradable waste

Meanwhile, the State Government through Monitoring cum Working Committee has taken up the initiative of collection non-biodegradable dry/plastic waste from various Village Panchayats, Municipal Councils, Schools, Industrial Estates, and Defence Establishments, etc. across the State. The Monitoring cum Working Committee has entered into a Memorandum of Understanding with M/s Vasavadatta Cement for disposal of non-biodegradable combustible waste through co-processing in the cement kilns.

The waste collected from various locations across Goa by the Contractor appointed by the Monitoring Cum Working Committee is transported to the Segregation and Baling Stations set up by the Monitoring Cum Working Committee. The segregated Non-Biodegradable Waste reaching the baling stations is baled and transported to M/s Vasavadatta Cement for co-processing.

A total of 2251.12 tons of baled waste (1350.92 Tons of waste has been baled and transported from CCP since (23rd December 2011 till date) and 900.2 Tons from Cacora and Sarvona Baling stations (from 29th October 2013 till date)) for Co-processing.

One Municipal Corporation, 12 Municipal Councils out of 13 and 138 Village Panchayats out of 190 are currently handing over Non-Biodegradable dry waste for the above process.

Legal Provisions

Goa Non-Biodegradable Garbage Control Act 1996

The State Govt. has enacted the Goa Non-Biodegradable Garbage Control Act 1996, wherein littering is considered as an offence and the authorities have been

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empowered to levy fines by way of issue of notifications under the provisions of the said act.

The Government has recently enacted the Second and Third Amendment to the act by which the State government levies a two percent cess on all products marketed in non-biodegradable packaging material and has also made it mandatory for segregation of biodegradable and non-biodegradable waste at source.

A penal provision has been enacted in the third amendment in case of violations with regards to segregation at source.

Plastic to Fuel Technology.

This technology also will be used for setting up Plastic to Fuel Plant of 10 tons per day capacity. On successful completion and performance of this plant more such plants can be then taken up.

Status of Bio Medical Waste, Treatment and Disposal Facility in the State of Goa.

There is no Common Bio Medical Waste Treatment Disposal Facility in the State of Goa. The bio medical waste generated in the State is treated in the Health Care facilities within the premises. The said waste is disposed by the health care facilities after treatment such as Autoclaving or chemical treatment in deep burial pits for Category 1 and 6 waste, in an encapsulation pit for Category 4 waste, Category 7 disposed to registered recyclers and Category 8 and 10 in septic tank/ soak pit/ sewage treatment plants. Sometimes the Category 1, 4 and 6 waste is disposed to the local body for disposal after treatment if the Health Care facility does not have suitable site for disposal of the same within its premises. The major hospitals in the State i.e. Goa Medical and Hospital has incinerator which disposes the waste generated from the

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Hospital itself and also from all the health care facilities in the Jurisdiction of City of Corporation of Panaji.

As per records available with the Board there are total 4,550 beds of the HCF registered with the Board under the Bio Medical Handling Rules 1998. The board has till date issued 398 bio medical waste Authorization. These units generate about 9267.97 kg per day of bio medical waste which is treated and disposed as bio medical waste rules.

There is an utmost need for the State to establish a Common bio medical waste treatment facility at Dharbandora or in any plot allotted by Goa Industrial Development Corporation in its industrial estate on top priority.

Status of Hazardous Waste

There is no Common Hazardous Waste Treatment Disposal Facility in the State of Goa. Presently the incinerable waste generated in the State is transported to Mumbai Waste Management at Taloja for incineration. The State has not established/ operating a Common Hazardous Waste Treatment Disposal Facility, hence the landfillable waste is either sent to co-incineration or stored within premises.

As per the Hazardous Waste Management Rules in compliance to the directions issued from Hon'ble Supreme Court, a land in survey no.193 of Dharbandora taluka of South Goa district has been identified for setting up of CHWSTD. The total area covered is about 2,05,900 sq.mts.

The construction of CHWSTDF has not yet started and is proposed to be established through Hazardous Waste Industrial Association (HWIA) for which Environmental Clearance has already been issued. Hence there is an urgent need

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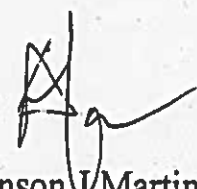
to establish a Common Hazardous Waste Treatment Disposal Facility in the State.

Recommendations:

1. The State has to establish the two solid waste management facilities, one in North Goa and the other in South Goa on top priority.
2. Corporation of City of Panaji has to expedite the establishment of solid waste management facility at Bainguinim.
3. Mormugao Municipal Council has also to establish the landfill site at Verna as identified by the Committee appointed by the Hon'ble High Court Bombay at Goa and Solid Waste Treatment facility at Sada, Vasco.
4. The Common Biomedical Waste Treatment and Disposal Facility has to be established at the earliest at Dharbandora or any other site identified by Goa Industrial Development Corporation within industrial estate on priority.
5. The Common Hazardous Waste Treatment and Disposal Facility has to be established at the earliest at Dharbandora where environmental clearance has already been granted and the site has to be transferred by Goa Industrial Development Corporation to the Industrial Waste Management Association for commencement of work.

h.s.j.

Sanjeev Joglekar
Environmental Engineer



Levinson J Martins
Member Secretary

Goa State Pollution Control Board