

**BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI**

Original Application No. 514/2019

(With report dated 28.02.2020)

In Re: Report received from State Level Monitoring Committee, Kerala, constituted by this Tribunal vide order dated 16.01.2019 in O.A. No. 606/2018, headed by Justice A.V.R. Pillai, former Judge of Kerala High Court, to oversee compliance of directions on the subject of Solid Waste Management.

Date of hearing: 28.02.2020

CORAM: **HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON**
 HON'BLE DR. NAGIN NANDA, EXPERT MEMBER
 HON'BLE MR. SIDDHANTA DAS, EXPERT MEMBER

For Respondent(s): Mr. Jogy Scaria and Mr. Keerthipriyan,
 Advocates for KSPCB.
 Mr. Nishe Rajen Sonker, Advocate for the
 State of Kerala.

ORDER

1. The Issue for consideration is non-compliance of Solid Waste Management Rules, 2016 (SWM Rules, 2016) causing huge pollution at Bharampuram Solid Waste Processing Plant on the outskirts of Kochi city in Kerala.
2. The matter was considered in the light of report dated 23.02.2019, received from Justice A.V. Ramakrishna Pillai, former Judge, Kerala High Court about unscientific dumping of waste. Response of the Kerala State Pollution Control Board dated 03.10.2019 was earlier considered vide order dated 20.11.2019 and it was observed:

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3. *The above report shows a sorry state of affairs. Not only there is violation on environmental norms, there is potential for hazard to public health for which immediate steps are required to be taken.*

4. *Let the Secretary, Local Bodies (Urban Development), Government of Kerala ensure that remedial action is taken in accordance with Solid Waste Management Rules, 2016 and directions of this Tribunal in order dated 20.08.2018 and 16.01.2019 in O.A. No. 606/2018, Compliance of Municipal Solid Waste Management Rules, 2016 and order dated 17.07.2019 in Original Application No. 519/2019, News item published in "The Times of India" Authored by Jasjeev Gandhiok & Paras Singh Titled "Below mountains of trash lie poison lakes" and report filed within one month from today by email at judicial-ngt@gov.in.”*

3. Thereafter, the matter was considered on 24.01.2020 and it was observed:

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4. *Thus, there is hardly any tangible action which may show lack of concern for the environment and the health of the inhabitants and the rule of law. Since even land has not yet been identified, sanction is meaningless. Action could have started on the site of waste itself so that there could be simultaneous remediation of the legacy waste. Period of almost one year has already been gone without meaningful action. It may be noted that Chief Secretary, Kerala appeared in person on 25.04.2019 in pursuance of order dated 16.01.2019. This Tribunal, inter-alia, directed that in view of prescribed timeline under Rule 22 of the SWM Rules, 2016, specified cities, towns and villages may be made models of compliance within six months and the remaining cities, towns and villages may be made fully compliant within one year. The compliance may be monitored by the Chief Secretary personally once every month and by the District Magistrate once every two weeks. Quarterly reports to be furnished to this Tribunal and the Chief Secretary was to appear again personally.*

5. *It may be noted that the matter has been transferred by the Hon'ble Supreme Court to this Tribunal on 02.09.2014 in W.P. 888/1996 after noting constant failures of the authorities in the matter, inter-alia, in (2000) 2 SCC 679 and (2004) 13 SCC 538. The Tribunal gave comprehensive directions vide order dated 22.12.2016.¹ Execution thereof is still continuing. Vide order dated 20.08.2018, all action plans were directed to be prepared by 31.12.2018 and executed latest by 31.12.2019. Further order was passed*

¹ O.A. No. 199/2014 (2016) SCC Online NGT 2981

on 16.01.2019 and thereafter several orders, including orders dated 17.07.2019, 12.09.2019 and 07.01.2020 have been passed. It is in the light of the said orders that Secretary, Local Bodies, Govt. of Kerala was expected to furnish a meaningful report which has not been done. On 10.01.2020, progress was reviewed in the case of some of the States in the presence of their respective Chief Secretaries and directions were issued:

“36. We accordingly direct:

- a. In view of the fact that most of the statutory timelines have expired and directions of the Hon'ble Supreme Court and this Tribunal to comply with Solid Waste Management Rules, 2016 remain unexecuted, compensation scale is hereby laid down for continued failure after 31.03.2020. The compliance of the Rules requires taking of several steps mentioned in Rule 22 from Serial No. 1 to 10 (mentioned in para 12 above). Any such continued failure will result in liability of every Local Body to pay compensation at the rate of Rs. 10 lakh per month per Local Body for population of above 10 lakhs, Rs. 5 lakh per month per Local Body for population between 5 lakhs and 10 lakhs and Rs. 1 lakh per month per other Local Body from 01.04.2020 till compliance. If the Local Bodies are unable to bear financial burden, the liability will be of the State Governments with liberty to take remedial action against the erring Local Bodies. Apart from compensation, adverse entries must be made in the ACRs of the CEO of the said Local Bodies and other senior functionaries in Department of Urban Development etc. who are responsible for compliance of order of this Tribunal.
- b. Legacy waste remediation was to 'commence' from 01.11.2019 in terms of order of this Tribunal dated 17.07.2019 in O.A. No. 519/2019 para 28² even though statutory timeline for 'completing' the said step is till 07.04.2021 (as per serial no. 11 in Rule 22), which direction remains unexecuted at most of the places. Continued failure of every Local Body on the subject of commencing the work of legacy waste sites remediation from 01.04.2020 till compliance will result in liability to pay compensation at the rate of Rs. 10 lakh per month per Local Body for population of above 10 lakhs, Rs. 5 lakh per month per Local Body for population between 5

² The Chief Secretaries may ensure allocation of funds for processing of legacy waste and its disposal and in their respective next reports, give the progress relating to management of all the legacy waste dumpsites. Remediation work on all other dumpsites may commence from 01.11.2019 and completed preferably within six months and in no case beyond one year. Substantial progress be made within six months. We are conscious that the SWM Rules provide for a maximum period of upto five years for the purpose, however there is no reason why the same should not happen earlier, in view of serious implications on the environment and public health.

lakhs and 10 lakhs and Rs. 1 lakh per month per other Local Body. If the Local Bodies are unable to bear financial burden, the liability will be of the State Governments with liberty to take remedial action against the erring Local Bodies. Apart from compensation, adverse entries must be made in the ACRs of the CEO of the said Local Bodies and other senior functionaries in Department of Urban Development etc. who are responsible for compliance of order of this Tribunal.

- c. Further, with regard to thematic areas listed above in para 20, steps be ensured by the Chief Secretaries in terms of directions of this Tribunal especially w.r.t. plastic waste, bio-medical waste, construction and demolition waste which are linked with solid waste treatment and disposal. Action may also be ensured by the Chief Secretaries of the States/UTs with respect to remaining thematic areas viz. hazardous waste, e-waste, polluted industrial clusters, reuse of treated water, performance of CETPs/ETPs, groundwater extraction, groundwater recharge, restoration of water bodies, noise pollution and illegal sand mining.
- d. The compensation regime already laid down for failure of the Local Bodies and/or Department of Irrigation and Public Health/In-charge Department to take action for treatment of sewage in terms of observations in para 31 above will result in liability to pay compensation as already noted above.
- e. Compensation in above terms may be deposited with the CPCB for being spent on restoration of environment which may be ensured by the Chief Secretaries' of the States/UTs.
- f. An 'Environment Monitoring Cell' may be set up in the office of Chief Secretaries of all the States/UTs within one month from today, if not already done for coordination and compliance of above directions which will be the responsibility of the Chief Secretaries of the States/UTs.
- g. Compliance reports in respect of significant environmental issues may be furnished in terms of order dated 07.01.2020 quarterly with a copy to CPCB.

The Chief Secretaries of UP, Punjab and UT Chandigarh may remain present in person for further review tentatively on 24.08.2020.

A copy of this order be sent to Chief Secretaries of UP, Punjab and UT Chandigarh, CPCB and Chairman of Committee constituted by this Tribunal in States of UP, Punjab and UT Chandigarh by e-mail. CPCB may put all Local Bodies and

other concerned Departments of all the States in the country to notice for compliance.”

6. In view of above, the State of Kerala and its authorities have to take meaningful action in above terms.

7. In view of unsatisfactory state of affairs noticed above, let the Secretary, Urban Development, Kerala remain present in person on the next date with tangible progress failing which this Tribunal may be left with no other option except to take stringent measures for enforcement of law as per the provisions of the NGT Act, 2010.”

4. Accordingly the Secretary, Urban Development, Government of Kerala is present in person.

5. A status report has been filed on 27.02.2020 to the effect that certain steps have been taken. The fact remain that there is no progress in terms of actual remedial measures as expected and as required under the Rules.

6. We have also received report dated 22.02.2020 from Justice A.V. Ramakrishna Pillai, former Judge, Kerala High Court, observing as follows:

“The issue at Brahmapuram Waste Treatment Plant cannot be considered in isolation as it is intrinsically connected with the waste management system in the city as well as in the neighbouring local bodies. As already pointed out though Brahmapuram yard is under the management of Kochi Corporation solid waste from five Municipalities and two Panchayaths reaches the yard. The legacy waste dumped at the site is in un-segregated form. The arrival of waste in the yard in the segregated form is of recent origin.

Solid Waste Management Rules, 2016 provides that waste has to be segregated at source, bio-degradable waste has to be composted and recyclable non-bio-degradable waste has to be recycled. Only those waste materials which cannot be recycled, be sent to incineration or land fill.

The State Government in its good intention to have a proper waste treatment system in the State had taken a decision

to install waste to energy (WTE) plants in six different districts in the State, of which one is at Brahmapuram. However, the said announcement has created the scenario where all the stakeholders including the Corporation have started thinking that all waste materials can be incinerated.

It is understood that the proposal for WTE plant at Brahmapuram has obtained environmental clearance. However, it is learnt that financial closure from the service provider is awaited. A barren land on the southern and western side of the septage treatment plant is identified as the site for WTE plant. However, it is a low lying area and it would take a considerable time for bringing the site to the level of the nearby road.

As the SLMC felt that the establishment of WTE plant is a time consuming process, directions were issued to the Corporation to dispose of the legacy waste part by part by means of bio-mining as per the guidelines of the Central Pollution Control Board involving a technical expert and to take necessary arrangements for addressing the present environmental issues till the waste to energy plant comes into existence. It was also directed that if capping of waste is resorted to, it should be confined to inert waste as per the provisions of solid waste management rules, 2016. The said direction was given in the meeting held on 15.3.2019. However, the process of bio-mining is done at the yard at a low pace and as a result, the legacy waste is getting accumulated. Even on the day of last inspection, i.e., 18.2.2020 only three trammel machines were functioning.

The quantity of waste generated in Kochi City alone is estimated as 350 to 400 tonnes per day, while the quantity received at Brahmapuram shows 120 tonnes per day. Some of the uncollected waste is seen treated at source but there is no data of quantity regarding the waste treated at source and its final disposal. It is essential to improve door to door collection to avoid littering and un-acceptable disposal methods. For a healthy solid waste management system door to door collection need to be dovetailed with improved treatment facilities at Brahmapuram.

Here it is apt to note that the major portion of solid waste coming to Brahmapuram is bio-degradable waste. The moisture content of biodegradable waste is nearly 80% of its total weight. If it is assumed that 100 MTs of waste is coming to the plant per day, approximately 60% of the same would be bio-degradable waste, i.e., 60 MTs. Approximately 80% of the same would be moisture as stated above, i.e., 48 MTs. That means nearly half of the waste reaching the plant is water. Out of non-degradable waste only plastic, the maximum of which may be 20%, i.e., 20 MTs has the calorific value which provides energy to create steam. If proper segregation happens at source,

approximately half of this i.e., 10 MTs can be sent for recycling. Thus only 10 MTs of incinerate-able waste would be remaining to be used in WTE plant.

If non-segregated waste including bio-degradable waste is used in WTE plant, the captive energy required to dehydrate the biodegradable waste will make the project highly unviable due to the huge expenditure involved and the local bodies would be driven to the risk of bridging the viability gap.

Lack of segregations will result in valuable reusable and recyclables ending in incineration. Kerala is now an emerging swap shop region where those things not useful are used by someone thereby enhancing the life cycle. However, recycling of plastic, glass, paper, metal, rubber, cloth etc. can happen only if segregation happens at source.

The waste management system in the State including Kochi City requires a radical change. What is required is a holistic, integrated and co-ordinated effort to implement the various provisions of environmental legislations from the grass root level.

The stake holders should consider reduction as the primary object of waste management. The ban imposed by the State Government on single use plastics recently is a welcome change. However, it is the responsibility of the local bodies to see that the same is implemented in letter and spirit.

Awareness programmes for the benefit of waste generators can be under taken with the assistance of bodies like District Legal Service Authority, Suchithw Mission as well as Haritha Kerala Mission. This may help to reduce waste generation in the long run.

Treatment of bio-degradable waste at source can be promoted under the supervision and guidance of the bodies aforesaid. There should be proper records regarding the quantity of wastes treated at source and its final disposal. Unauthorised disposal methods, under the pretext of treating wastes at source, have to be prohibited.

Door to door collection of waste which cannot be treated at source has to be improved to avoid un-acceptable disposal methods.

Proper segregation of waste should happen at source and the waste reaching the treatment yard should be in the segregated condition.

WTE plant is an effective solution in the field of waste management. But such plant should not incinerate BD waste or recyclable NBD waste. The incineration in WTE plants shall be confined to soiled NBD waste, sanitary waste and hospital waste. The use of bio-degradable waste and

recyclable non-bio-degradable waste in WTE plants has to be discouraged.

The planned 500 tonne per day Waste to Energy Plant at Brahmapuram, when commissioned, may solve the problems at present. The quantity of dry waste collected may have to be increased to provide adequate fuel for the plant. The proposed project has a Biological Mechanical Treatment (BMT 'Biodrying') unit for drying mixed waste to produce suitable fuel for the WTE plant. Segregated wet waste is not suitable for direct use in WTE plants.

An anaerobic digester of 100 tpd capacity will have to be installed at Brahmapuram without much delay. The capacity can be increased to 200 tpd with installation of additional digesters as required. Anaerobic digester will allow the treatment of wet waste without creating odour, smell and leach ate.

As the planned WTE plant is unviable for source-segregated wet waste, digesters will have to be provided even after installation of WTE.

Therefore, the Kochi Corporation should take immediate steps for anaerobic digestion of wet waste at Brahmapuram without waiting for the establishment of WTE plant. Simultaneously, the bio mining process of legacy waste has to be continued with full strength and figure, deploying sufficient number of trammel machines and this has to be completed within a time schedule. The remaining inert waste after the separation of city compost can be used in the WTE plant. To prevent the existing environmental threats due to the flow of leach ate as well as the recurrent fire hazards, the directions hither to given by the SLMC to the Corporation are to be implemented.”

7. The Tribunal has also passed orders fixing strict timeline on 10.01.2020 while considering OA No. 606/2018 applicable to all the States as follows:

“a. In view of the fact that most of the statutory timelines have expired and directions of the Hon’ble Supreme Court and this Tribunal to comply with Solid Waste Management Rules, 2016 remain unexecuted, compensation scale is hereby laid down for continued failure after 31.03.2020. The compliance of the Rules requires taking of several steps mentioned in Rule 22 from Serial No. 1 to 10 (mentioned in para 12 above). Any such continued failure will result in liability of every Local Body to pay compensation at the rate of Rs.

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8. We may observe that non-compliance of rules relating to waste disposal results in damage to the environment and public health. Any failure needs to be visited with assessment and recovery of compensation for such damage from the persons responsible for such failure. A study was recently got conducted by CPCB, under orders of this Tribunal requiring such a study by a joint Committee comprising CPCB, NEERI and IIT, Delhi about the monetary cost of damage caused to the environment on account of existence of legacy waste dump site at Gurgaon (Bandhewadi) vide order dated 05.03.2019 in O.A. No. 514/2018. The report of the CPCB filed on 13.02.2020 is that damage on account of the said legacy waste dump site was Rs. 148.46 crore, on account of damage to the air quality, soil and water quality, climate change and disamenity (aesthetic). The damage has been assessed in terms of impact on

health due to release of pollutants in air atmosphere, release of leachate into ground /surface water and soil, due to pollution from the landfill site, damage cost associated with climate change due to carbon di-oxide and methane, damage caused due to aesthetics loss, price depreciation due to disamenity cost etc.

The matter is to be considered further in relation to State of Kerala on 20.03.2020 when the Chief Secretary, Kerala is scheduled to appear in person. The State of Kerala needs to consider action on the pattern of successful models of other states where meaningful steps to deal with the issue have been initiated in consultation with CPCB

List again on 20.03.2020.

Adarsh Kumar Goel, CP

Dr. Nagin Nanda, EM

Siddhanta Das, EM

February 28, 2020
Original Application No. 514/2019
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