

Government of Jammu & Kashmir
Housing & Urban Development Department
Civil Secretariat, Jammu/Srinagar

Commissioner,
Municipal Corporation,
Jammu

Commissioner,
Municipal Corporation,
Srinagar

Director,
Urban Local Bodies,
Jammu

Director,
Urban Local Bodies,
Kashmir

No. HUD/Lit/SMC/124/2018/NGT

Dated-26-08-2020

Subject:- Implementation of Guidelines for "Environmental Management of Dairy Farms and Gaushalas" as per order passed by Hon'ble NGT on 20.05.2020 in the matter of O.A. No. 46/2018, Nugehalli Jayasimha Vs Govt. of NCT of Delhi.

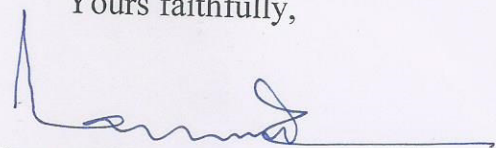
Sir/Madam,

I am directed to enclose herewith communication received from Pollution Control Board wherein approved guidelines by Hon'ble NGT with time frame for execution of various activities by concerned Local Bodies to ensure Environmental Management of Dairy Farms and Gaushalas. As such, requested to ensure compliance to be done by Local Bodies within time frame given against each activity briefed as below-

S.No.	Activity/Compliance	Timeframe as per CPCB guidelines
1	Inventorisation of the dairy farms and gaushalas located within jurisdiction of local body as per modified Inventory Performa given as Annexure-A in the guidelines (To be submitted to Pollution Control Board for further submission to CPCB).	Every calendar year. (Annual basis) By first week of January every year
2	Publication of Public Notice in newspapers and website for preferably online registration of dairy farms and gaushalas as per municipal law.	At the earliest, with time bound directions to Dairy Farms & Gaushalas
3	Uploading on website and circulation of "Form A"(as prescribed under guidelines) to all dairy farms and gaushalas for further compilation by JKPCB.	At the earliest with time bound directions to Dairy Farms and Gaushalas Compiled status of compliance to be submitted every six months to PCB
4	Monitoring of dairy farms and gaushalas on regular basis to ensure compliance of environmental norms as per CPCB guidelines.	Continuous Activity
5	Environmental Audit of atleast two Dairy Farms and two Gaushalas, randomly selected for each district of J&K (Nodal Officers for each district may be nominated by department to conduct audit in collaboration with concerned PCB divisional officers).	Every six months

The detailed guidelines for Dairy Farms and Gaushalas are also available on JKPCB website: www.jkspcb.nic.in. The compliance in this regard be furnished to this office within a week's time positively.

Yours faithfully,



**Deputy Secretary(Legal),
Housing & Urban Dev. Department**



J&K Pollution Control Board

Jammu

Winter office: November-April

Parivesh Bhawan, Gladni,
Transport Nagar, Narwal,
Jammu. (J&K) 180006
Phone/Fax 0191-2476925

email: membersecretaryjkspcb@gmail.com

Summer Office: May-October

Sheikh-ul-Alam Campus,
Behind Govt. Silk Factory,
Rajbagh, Srinagar (J&K) 190008
Phone/Fax 0194-2311165

The Principal Secretary,
Housing & Urban Development Department,
Civil Secretariat, J&K.

Hon'ble NGT MATTER
O.A 46/2018

No.: JKPCB/LS/207/1012-1019

Date: 24/08-2020

Sub: Implementation of Guidelines for Environmental Management of Dairy Farms and Gaushalas as per order passed by Hon'ble NGT on 20.05.2020 in the matter of O.A

No. 46/2018, Nugehalli Jayasimha Vs Govt. of NCT of Delhi.

Ref: Hon'ble NGT directions dated 20.05.2020 in the matter of O.A. 46/2018.

Sir,

Kindly refer to the Hon'ble NGT directions dated 20/05/2020 under reference and find enclosed here with the Guidelines approved by Hon'ble NGT with time frame for execution of various activities by concerned Local Bodies to ensure environmental management of waste generated in **Dairy Farms and Gaushalas**.

Further, as per the Regulatory / Monitoring mechanism under said guidelines, it is requested to ensure compliance done by local bodies within timeframe given against each activity briefed as below:

S.No.	Activity / Compliance	Timeframe as per CPCB guidelines
1.	Inventorisation of the dairy farms and gaushalas located within jurisdiction of local body as per modified Inventory Performa given as Annexure -A in the guidelines (To be submitted to Pollution Control Board for further submission to CPCB).	Every calendar Year (Annual basis) By first week of January every year
2.	Publication of Public Notice in newspapers and website for preferably online registration of dairy farms and gaushalas as per municipal law.	At the earliest, with time bound directions to Dairy Farms & Gaushalas
3.	Uploading on website and circulation of " Form A " (as prescribed under guidelines) to all dairy farms and gaushalas for further compilation by JKPCB.	At the earliest with time bound directions to Dairy Farms and Gaushalas Compiled status of compliance to be submitted every six months to PCB.
4.	Monitoring of dairy farms and gaushalas on regular basis to ensure compliance of environmental norms as per CPCB guidelines	Continuous Activity
5.	Environmental Audit of atleast two Dairy Farms and two Gaushalas , randomly selected for each district of J&K. (Nodal Officers for each district may be nominated by department to conduct audit in collaboration with concerned PCB divisional officers)	Every six months

The detailed guidelines for Dairy farms and Gaushalas are available on JKPCB website: www.jkspcb.nic.in.

Encl:- Hon'ble NGT order with guidelines.

Yours faithfully,

1 Aug 24/8/2020

(B.M. Sharma)

Member Secretary
PCB, Jammu

Copy for information to :

- Commissioner Secretary to Govt. Deptt. of Forest, Ecology and Environment for information, please.
- Commissioner, Jammu Municipal Corporation, Jammu / Srinagar Municipal Corporation, Srinagar.
- Director, Urban Local Bodies, Jammu / Kashmir.
- Regional Director, J&K Pollution Control Board, Jammu/ Kashmir for information and follow up as per directions.

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

(By Video Conferencing)

Original Application No. 46/2018

(With Report dated 12.05.2020)

Nuggehalli Jayasimha

Applicant(s)

Versus

Government of NCT of Delhi

Respondent(s)

Date of hearing: 20.05.2020

CORAM:

**HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON
HON'BLE MR. JUSTICE SHEO KUMAR SINGH, JUDICIAL MEMBER
HON'BLE DR. NAGIN NANDA, EXPERT MEMBER**

Applicant(s):

Mr. Aditya Singra and Ms. Priyanka Bangari, Advocates

Respondent(s):

Mr. Satish Kumar, Advocate for CPCB
Mr. Rajkumar, Advocate for DPCC
Mr. Daleep Dhyani and Mr. Pradeep Misra, Advocates for
UPPCB
Ms. Puja Kalra, Advocate for North MCD and SDMC
Mr. Balendu Shekhar, Advocate for EDMC

ORDER

1. This order may be read in continuation of order dated 24.01.2020, on the subject of remedial action for compliance of environmental norms by the dairies throughout India.
2. The matter has been dealt with earlier by this Tribunal and directions have been issued from time to time with a view to enforce the statutory mandate under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981 and the Environment (Protection) Act, 1986 for

compliance of environmental norms. Against the order of the Tribunal dated 08.07.2019, to which reference will be made in the later part of this order, *Civil Appeal No. 7285/2019* filed by the SDMC was dismissed by the Hon'ble Supreme Court. As earlier noted, the issue was also dealt with by the Delhi High Court in *Common Cause v. UOI*, (2007 SCC Online (Del) 863), wherein Municipal Corporation of Delhi was directed to formulate a licensing policy under Section 417 of the Delhi Municipal Corporation Act, 1957. While issuing such direction, the High Court noticed unsatisfactory state of affairs. The High Court observed that the dairies need to be relocated on account of hazard of stray cattle on the roads and trauma faced by the cattle in the cities on account of traffic. Reference was also made to the filth, squalor and outbreak of diseases. As a short-term measure, preventive steps were required for hygiene and protection of environment. Our attention has been drawn to a policy framed by the MCD on 17.07.2010 prohibiting keeping of cattle in any premises without license. Authorised dairy areas were specified and standards and measures were also specified. Reference has also been made to the report of an Expert Committee constituted by the Indian Council for Agricultural Research, Government of India, dated 01.11.2016 under the Chairmanship of Dr. Arjava Sharma, Director, ICAR-NBAGR, Karnal. The report dealt with sustainable management of unproductive cattle. The report specifies land requirement, feeding requirement, labour requirement and health management.

3. Vide order dated 01.04.2019, the Tribunal considered the allegation of air, water and soil pollution by the dairy industries in Delhi. It was alleged that solid and liquid waste releasing gaseous emissions

was generated and dumped by the dairies in Delhi into the drains, meeting the river Yamuna, resulting contamination of river Yamuna. The waste clogged the drainage system which was becoming breeding ground for mosquitoes and other insects and thus creating health hazard. Waste generated was also resulting in discharge of Ammonia and Nitrogen oxides in the air and nitrate in soil and ground water. The odour from dairies negatively impacted the air quality. Ammonia wafted into the air from manure lagoons. Gases known as volatile organic compounds were created by the huge piles of feed. The foul smell from the dairy caused migraine, severe headache and people had no option but to inhale the impure/foul air present in the atmosphere. In the light of inspection reports dated 04.12.2015 and 15.12.2015, prepared by the Animal Welfare Board of India, it was noted that there was rampant use of Schedule H drugs, oxytocin injections, syringes, plastic bottles and other veterinary drugs etc. which are disposed of improperly and in unscientific manner, in violation of Bio-medical Waste Management Rules, 2016. The dairies were not following waste management practices. There was also violation of Food Safety and Standards (Licence and Registration of Food Businesses) Regulations, 2011.

4. The Tribunal also noted various articles on the subject¹ which highlight adverse consequences on the environment due to illegal and unscientific dairy activities. It was also observed that there was

¹ "Delhi is major contributor of population in Yamuna" published in "The Hindu" dated 17.04.2007, "Feeding on plastic poses high risk to lives, output of stray cattle" published in "Indian Today" dated 08.05.2017, "Serious farm population breaches rise in UK and many go unprosecuted" published in "Guardian" dated 21.05.2017, "How growth in Dairy is affecting the environment" published in "The New York Times" dated 01.05.2015 and "Stray cows clog South Delhi roads" published in "The Times of India" dated 05.08.2012 and research papers titled "Nitrogen pollution by dairy cows and its mitigation by dietary manipulation", "Impact of Dairy Effluent on Environment-A Environmental Science and Engineering (Subseries: Environmental Science)", apart from other documents and photographs.

violation of various provisions of the Delhi Municipal Corporation Act, 1957.

5. After quoting the observation from the report of the Committee, the stand of the Delhi Pollution Control Committee (DPCC) that it was not concerned with the subject despite the violation being clearly acknowledged was rejected in view of statutory provisions of the Water (Prevention and Control of Pollution) Act, 1974, (Water Act), the Air (Prevention and Control of Pollution) Act, 1981 (Air Act) and Environment (Protection) Act, 1986 and rules framed thereunder. It was noted that though various authorities of the Delhi Government were parties and represented by Counsel, no authority came forward to take the responsibility and none of the Counsel made any suggestion for enforcement of law. In this background, the Tribunal by order dated 01.04.2019 directed the Chief Secretary of Delhi to call a meeting of all concerned and fix their accountability. The Tribunal also noted that the DPCC had failed to perform its statutory duties under the Water Act, the Air Act and the Environment Protection Act, 1986 (EP Act) in preventing polluting activities, prosecuting the polluters and recovering compensation for restoration of the environment from the polluters. The Tribunal also required DPCC, South Delhi Municipal Corporation (SDMC) and North Delhi Municipal Corporation (North DMC) to pay sum of Rs. 10 Lakhs each as an interim compensation and furnish a performance guarantee of Rs. 10 Lakhs each with the Central Pollution Control Board for taking necessary steps within three months for restoration of the environment. The amount could be recovered from the erring officer and polluters. The Chief Secretary, Delhi was to furnish an action taken report.

6. The matter was further reviewed on 08.07.2019 in the light of the report of the DPCC dated 03.07.2019. Commenting on the said report, this Tribunal found that DPCC was trying to avoid responsibility by taking untenable plea that only Municipal Corporations or other Departments were to monitor the pollution caused by the dairies. Accordingly, DPCC was directed to enforce its statutory obligation of closing polluting activities, prosecute the polluters and recover compensation on 'Polluter Pays' principle. **The Tribunal also directed CPCB to undertake a study and lay down appropriate guidelines for management and monitoring of environmental norms by dairies throughout country.** The observations of the Tribunal are reproduced for ready reference:

"1 to 6 xxx

xxx

xxx

7. *We find that in spite of observations in the earlier order of this Tribunal as well as repeated orders in large number of cases, the DPCC seems to be avoiding its statutory responsibilities under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981 and to cover up their inaction, is passing the order of imposition of fines on other statutory bodies, without any jurisdiction. Learned Counsel for the Delhi Government as well as DPCC have not been able to show any legal authority for doing so. While the DPCC may take action on 'Polluter Pays' principle against polluting activities of any statutory body, it has no authority to recover compensation for alleged inaction by such statutory authorities. Such authorities are not authorized to enforce the Water (Prevention and Control of Pollution) Act, 1974 or Air (Prevention and Control of Pollution) Act, 1981 which DPCC itself has to enforce. Even if they have overlapping powers under other statute, the DPCC cannot avoid its obligation under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981. It is undisputed that the dairies are operating in violation of Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981 as already noted in the order of this Tribunal dated 01.04.2019. The DPCC is required to ensure that the polluting activities, without consent to operate, are stopped by way of prohibitory order, prosecution and*

recovery of compensation which has not been done. Just as local bodies cannot fine DPCC for its utter failure, DPCC also cannot shift its onus and responsibility to local bodies and absolve from its responsibility. It has to proceed against polluters which it is avoiding to do.

8. We find that as per the circular dated 05.03.2016 issued by the MoEF&CC, the dairy industries fall under the 'Orange' category industries. Consent to operate is necessary under Section 21 of the Air (Prevention and Control of Pollution) Act, 1981 and Section 25 of the Water (Prevention and Control of Pollution) Act, 1974. Under the Environment (Protection) Rules, Schedule-I, read with Rule-3, lays down the norms for discharge by various activities or operations. Entry 56 deals with 'dairies' (industrial units) and provides for standards of effluents and violation of such standards.

9. Faced with the above, learned Counsel for the DPCC has undertaken to withdraw the notices issued to other statutory authorities and not to indulge in such illegal activities in future.

10. We find that the action of the DPCC is inadequate. Under Section 15 of the NGT Act, 2010, this Tribunal has to deal with enforcement of statutes mentioned in Schedule-I which include Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981 and the Environment (Protection) Act, 1986. Such violations may also be overlapping with the other statutory violations for which concerned statutory authorities have to take action on that ground. The local bodies have the responsibilities under the SWM Rules, 2016² but on that ground, the DPCC cannot avoid its responsibility. Local bodies must perform their statutory duties.

11. In view of above, while disapproving the above illegal action of DPCC as well as its inaction, we expect the DPCC now to enforce its concerned statutory obligations by closing polluting activities, prosecuting the polluters and recovering compensation from the polluters in accordance with law and to furnish a further report to this Tribunal by e-mail at judicial-ngt@gov.in before the next date.

12. We may note that livestock is a major source of methane emissions and studies on the subject show that the problem in India is severe. Results of a recent study ³show that the Indian livestock emitted 15.3

²See Rule 3(46) read with Rule 15 of the Solid Waste Management Rules, 2016.

³ Study carried out by the Indian Institute of Technology Delhi and the Deenbandhu Chhotu Ram University of Science and Technology, Murthal in Ecotoxicology and Environmental Safety, Climate change impact of livestock CH₄ emission in India: Global Temperature change Potential (GTP) and surface temperature response, <https://www.sciencedirect.com/science/article/pii/S0147651317305766>, Volume 147, January 2018, Pages 516-522.

million tonnes of methane in 2012⁴. Enteric methane emission from Indian livestock contributed 15.1% of total global enteric methane emission. In India, contribution of enteric methane was 91.8% of the total GHG emissions, followed by manure methane (7.04%) and manure Nitrous Oxide (1.15%) in the year 2010⁵. The livestock sector in India has the potential to cause surface temperatures to surge up to 0.69 millikelvin over 20 year time period which is roughly 14 per cent of the total increase caused by the global livestock sector. Methane has a warming potential 20 times higher than carbon dioxide. Globally, livestock sector generates 65 percent of human-related nitrous oxide, which has 296 times the Global Warming Potential (GWP) of CO₂. Most of this comes from manure.⁶ While the dairy industry is covered by 'Orange category' under the circular dated 05.03.2016 issued by the MoEF&CC, no such guidelines are said to be existing for management and rearing of livestock. Needless to say that such activity have potential of causing air and water pollution as already noted in the context of Delhi. Accordingly, instead of limiting the scope of remedying the compliance of environment norms by dairies to Delhi, we consider it necessary to expand the same for the whole country. Let the CPCB undertake a study in the matter and lay down appropriate guidelines for management and monitoring of environmental norms by the dairies throughout India and furnish a report in the matter by e-mail at judicial-ngt@gov.in before the next date. The local bodies in all the States/ UTs be required to file inventory of dairies in their respective jurisdiction so that state PCB can compile such information in their respective reports furnished to CPCB."

7. Thereafter, vide order dated 24.01.2020, this Tribunal considered the action taken report filed by the DPCC that it has issued notice for closure under the Water Act and the Air Act and also directed disconnection of electricity and water supply. Show cause notice has also been issued for enforcement of the guidelines prepared by the CPCB. The local bodies have been asked to perform their duties. The Tribunal then considered the reports dated 18.08.2019 and 22.01.2020 filed by the CPCB as follows:

⁴ Id.

⁵ <https://www.ajias.info/journal/view.php?number=4850>.

⁶ <http://www.fao.org/newsroom/en/news/2006/1000448/index.html>

“9. CPCB has filed two reports. First report is dated 18.09.2019, to the effect that an expert group was constituted. After discussion and interaction with the stakeholders, Guidelines for Environmental Management of Dairy Farms and Gaushalas were finalized. As per available statistics, prepared by the CPCB population of adult female bovine in the country is 13,32,71,000. Many dairy farms and gaushalas discharge the cattle dung along with wastewater into the drains, leading to clogging, which ultimately reach rivers and creates water pollution. Also, these clogged drains become breeding ground for mosquitoes, creating health hazards and odour nuisance. The dung produces many gases/compounds such as Carbon dioxide, Ammonia, Hydrogen sulphide, Methane, etc. which are emitted into the atmosphere and are responsible for degradation of air quality. The greenhouse gases, mainly Methane and Carbon dioxide, produced by dung also impact the climate. Disposal of cow/buffalo dung is the biggest challenge in dairy farms and gaushalas. However, cattle dung, if effectively utilised, can be an excellent resource of manure & energy and reduce the adverse impact on environment. The cattle dung contains many beneficial constituents which may be used as fuel source either by direct combustion or converted to biogas, soil conditioner, fertilizers, material for wall plastering, construction of granaries, livestock & fish feeding, etc. The draft Guidelines stipulate solid waste management, waste water management, air quality management, monitoring mechanism to be adopted by the local authorities/ Corporations/ PCBs/ PCCs. The guidelines also prescribed a Performa for monitoring by the local authorities/Corporations for preparing inventories of dairies farm and gaushala.

10. Second report dated 22.01.2020 is to the effect that the inventory Performa was circulated to the PCBs/PCCs to which response was received from 31 States/UTs. No response was received from Andhra Pradesh, Maharashtra, Manipur, Uttarakhand and Delhi. 20 States provided the details while 11 States/UTs have yet to provide details. Observations and conclusion in the report are :-

“3.0 Observations:

Following are the observations based on the information as received from SPCBs/PCCs about dairies and gaushalas operating in the States/ UTs:

- i. The total number of dairies operating in 19 States/UTs is 93,033 (ninety three thousand

& thirty three) and total number of animals in these dairies is 7,04,127 (seven lakh, four thousand, one hundred & twenty seven).

ii. There are 960 dairy colonies/clusters in 19 States/UTs.

iii. The total number of gaushalas operating in 20 States/UTs is 6,462 and total number of animals in these gaushalas is 3,51,592.

iv. The total amount of dung generated/produced by animals in dairies and gaushalas in the 20 States/UTs is 2,58,688 ton/day and 13,698 ton/day, respectively.

v. In general, the methods used in States/UTs for disposal/utilization of cattle dung include using dung as manure in fields, vermi-composting, biogas generation, etc.

vi. SPCBs/PCCs have not provided the information about disposal/utilization of wastewater.

4.0 Conclusion:

i. The local authorities/corporations should carry out inventory of all the dairy farms and gaushalas located in their jurisdiction in the prescribed performa. The same should be updated and shared with the concerned SPCB/PCC on regular basis.

ii. The dairies and gaushalas operating in the States/UTs should follow the "Guidelines for Environmental Management of Dairy Farms and Gaushalas."

11. xx xx xx

12. xx xx xx

13. We may note that the matter is dealt with under the Environment (Protection) Rules, 1986 (EP Rules). With reference to Rule 3 thereof, general standards have been laid down in Schedule 6 in part A and part B.

14. We may now deal with the reports of the CPCB. The first report relates to Guidelines. We find that the draft Guidelines do not specifically mention the mandate of the Water and the Air Act. The issue has already been dealt with by this Tribunal. While sanitation may be an issue to be dealt with by local bodies, the Water Act, the Air Act

and the EP Act are special laws dealing with the environment which do not stand excluded by application of other Municipal Laws. Regulatory regime of the Water Act, the Air and the EP Act is required to be followed and enforced by the State PCBs/PCCs, independent of the powers of local bodies to enforce the municipal laws. Precautionary and Sustainable Development principles are over arching principles which are not only enforceable by this Tribunal under Section 20 of the National Green Tribunal Act, 2010, but are also part of the Article 21 of the Constitution, which is a Fundamental Right, creating reciprocal obligation on all State authorities. **Thus, the Guidelines prepared by the CPCB need to be revised by specifying that State Boards/Committees must enforce 'consent mechanism' and, in particular, follow an appropriate siting policy in the light of the carrying capacity of the area for commercial dairy activities, having potential for air and water pollution. Dairy activities have been categorized as 'Orange' category as per the laid down guidelines.**

15. The second report relating to analysis of action taken by all States/UTs is incomplete for want of data. For this purpose, we direct that all the local bodies may furnish relevant information to the State PCBs within one month from today. Private operators, including cooperative societies or other entities, not falling within the jurisdiction of Local Bodies, may also furnish the requisite information to the State PCBs within the same time. **The State PCBs may, apart from compiling information and forwarding the same to the CPCB, perform their statutory obligations under the Water Act, the Air Act and the EP Act for enforcing environmental norms by such dairy activities with a view to protect the environment and the public health. The State PCBs/PCCs may publish an appropriate notice on the subject within two weeks from today requiring furnish of information and also adopting all necessary safeguards in the matter. Thereafter, the State PCBs/PCCs may furnish factual and action taken reports in the matter to the CPCB latest by 30.04.2020. CPCB may compile the data received and file a comprehensive report before this Tribunal by e-mail at judicial-ngt@gov.in before the next date.**

A copy of this order be forwarded to CPCB, SPCBs/ PCCs, Chief Secretaries of all the States/UTs. The SPCBs/PCCS may forward a copy of this order to all the local bodies in their respective jurisdiction within one week from today.

Since the issue being dealt with is an issue in rem and enforcement is left to the statutory bodies, we do not find it necessary to consider individual matters in these proceedings which may be dealt with by the concerned

statutory authorities in accordance with law.⁷ Accordingly, the private parties will stand deleted from the memo of parties."

(emphasis supplied)

8. Accordingly, the CPCB has filed a status report on 12.05.2020 in the light of recommendations of Expert Group recommending issuance of guidelines for Environment Management of Dairy Farms and Gaushalas. Apart from the draft guidelines annexed to the report, CPCB has also furnished status of inventory of Dairy Farms and Gaushalas in compliance of Hon'ble NGT order. The report states that except Manipur and Delhi, response has been received from 34 States/UTs. 28 States/UTs have provided the details, while six States are in the process. The observations of CPCB in this regard are:

- i. The total number of dairies operating in 26 States/UTs are 2,73,437 (two lakhs, seventy-three thousand, four hundred & thirty-seven) and total number of animals in these dairies are 21,34,018 (twenty-one lakhs, thirty-four thousand & eighteen).
- ii. There are 2793 dairy colonies/clusters in 26 States/UTs.
- iii. The total number of gaushalas operating in 28 States/UTs are 5,964 and total number of animals in these gaushalas are 4,36,727.
- iv. The total amount of dung generated/produced by animals in dairies and gaushalas in the 28 States/UTs are 2,60,922 tons/day and 1,49,945 tons/day, respectively.
- v. In general, the methods used in States/UTs for disposal/utilization of cattle dung include using dung as manure in fields, vermi-composting, biogas generation, fish feed, fuel for cremation etc.

⁷ In *M.C Mehta Vs. Union of India & Ors.*, (2001) 3 SCC 756 - Para 8, the Hon'ble Supreme Court observed that while issuing a direction in rem, all affected individuals need not be heard. (The said case concerned shifting of diesel to CNG by all the bus operators and plea that all the bus operators were required to be individually heard was rejected.)

- vi. SPCBs/PCCs have not provided the information about disposal/utilization of wastewater, however, Chhattisgarh, Kerala and Mizoram states that wastewater being used for fodder cultivation.
- vii. The area-wise inventory of dairies and gaushalas in the States/UTs are provided at Annexure-V. The dairies in urban, peri-urban and rural are 6%, 3% and 91% respectively whereas the animals in them are 12%, 4% and 84 % respectively. The gaushalas in urban, peri-urban and rural area are 47%, 5% and 48% respectively whereas animals in them are 23%, 13% and 64% respectively."

9. With regard to direction to State PCBs/PCCs to issue a public notice with a view to protect environment, it is stated that out of 36 States/UTs, 12 have published such notices. Conclusion in the report are:

"4. Conclusion:

- i. The local authorities/corporations should carry out inventory of all the dairy farms and gaushalas located in their jurisdiction in the prescribed performa. The same should be updated and shared with the concerned SPCB/PCC on annual basis (calendar year wise).
- ii. All the dairy farms and gaushalas should be registered with the local bodies/corporations preferably through online mode. The local bodies/corporations should display the same at their websites.
- iii. The dairy farms (having animal population of 10 & above animals) and gaushalas should obtain consent to establish and consent to operate under Water Act, 1974 as well as Air Act, 1981 from the concerned SPCBs/PCCs.
- iv. The local bodies/ SPCBs/ PCCs/ Gram Panchayat in the States/UTs shall ensure that dairies and gaushalas operating should follow the "Guidelines for Environmental Management of Dairy Farms and Gaushalas."

10. At this stage, we may refer to the salient features of the information compiled by the CPCB and the proposed guidelines. Statistics provided is as follows:

"The dairies/gaushalas may be categorised on the basis of nos. of animals (adult cows & female buffaloes) in a dairy/gaushala i.e. Category-I (upto 25 animals), Category-II (26-50 animals), Category-III (51-75 animals), Category-IV (76-100 animals) and Category-V (above 100 animals).

As per the Livestock Census, carried out by the Department of Animal Husbandry, Dairying & Fisheries, Ministry of Agriculture and Farmers Welfare, the year-wise livestock population of adult female bovine is as follow:

Sl. No.	Year	Adult Cows	Adult Female Buffaloes	Total Cows & Buffaloes
1	195	5,44,00,00	2,10,00,000	7,54,00,000
2	195	4,73,00,00	2,17,00,000	6,90,00,000
3	196	5,10,00,00	2,43,00,000	7,53,00,000
4	196	5,18,00,00	2,54,00,000	7,72,00,000
5	197	5,34,00,00	2,86,00,000	8,20,00,000
6	197	5,46,00,00	3,13,00,000	8,59,00,000
7	198	5,92,00,00	3,25,00,000	9,17,00,000
8	198	6,21,00,00	3,91,00,000	10,12,00,000
9	199	6,44,00,00	4,38,00,000	10,82,00,000
10	199	6,44,00,00	4,68,00,000	11,12,00,000
11	200	6,45,00,00	5,10,00,000	11,55,00,000
12	200	7,30,00,00	5,45,00,000	12,75,00,000
13	201	7,67,00,00	5,66,00,000	13,33,00,000
14	2019	8,14,00,000	5,50,00,000	13,64,00,000

Also, as per the Livestock Census carried out by the Department of Animal Husbandry, Dairying & Fisheries, Ministry of Agriculture and Farmers Welfare, in 2019, the state-wise total population of adult female bovine is as follow:

Sl. No.	State/UT	Adult Cows	Adult Female Buffaloes	Total Cows & Buffaloes
1.	Andhra Pradesh	19,80,000	31,61,000	51,41,000
2.	Arunachal	1,02,000	2,000	1,04,000
3.	Assam	38 18,000	1,38,000	39,56,000
4.	Bihar	71,47,000	36,70,000	1,08,17,000
5.	Chhattisgarh	33,79,000	3,83,000	37,62,000
6.	Goa	30,000	14,000	44,000
7.	Gujarat	44,94,000	56,71,000	1,01,65,000
8.	Haryana	9,45,000	21,00,000	30,45,000
9.	Himachal	9,32,000	3,69,000	13,01,000

10	Jammu &	12,31,000	4,02,000	16,33,000
11	Jharkhand	34,58,000	4,35,000	38,93,000
12	Karnataka	40,63,000	16,71,000	57,34,000
13	Kerala	6,90,000	8,000	6,98,000
14	Madhya Pradesh	73,42,000	52,96,000	1,26,38,000
15	Maharashtra	56,99,000	33,19,000	90,18,000
16	Manipur	77,000	10,000	87,000
17	Meghalaya	3,33,000	3,000	3,36,000
18	Mizoram	21,000	1,000	22,000
19	Nagaland	21,000	3,000	24,000
20	Odisha	31,94,000	1,52,000	33,46,000
21	Punjab	15,25,000	22,76,000	38,01,000
22	Rajasthan	68,19,000	70,15,000	1,38,34,000
23	Sikkim	68,000	0	68,000
24	Tamil Nadu	48,20,000	2,61,000	50,81,000
25	Telangana	14,93,000	21,86,000	36,79,000
26	Tripura	3,03,000	3,000	3,06,000
27	Uttarakhand	8,22,000	4,96,000	13,18,000
28	Uttar Pradesh	92,07,000	1,57,32,000	2,49,39,000
29	West Bengal	72,73,000	1,93,000	74,66,000
30	A & N Islands	16,000	1,000	17,000
31	Chandigarh	8,000	8,000	16,000
32	Dadar & Nagar	4,000	1,000	5,000
33	Daman & Diu	1,000	0	1,000
34	Delhi	Not	Not available	Not available
35	Lakshadweep	1,000	0	1,000
36	Puducherry	37,000	2,000	39,000
37	All India	8,13,53,000	5,49,82,000	13,63,35,000

11. The report mentions environmental issues as follows:

2. Environmental Issues in Dairy Farms and Gaushalas

The major environmental issues of dairy farms and gaushalas are discharges of dung and urinal wastewater. The poor handling of dung and wastewater causes odour problem also. A Bovine animal, on an average, weigh 400 kg and discharges 15-20 kg/day of dung and 15-20 litres/day of urine.

Many dairy farms and gaushalas discharge the cattle dung along with wastewater into the drains, leading to clogging, which ultimately reach to rivers and create water pollution. Also, these clogged drains become breeding ground for mosquitoes creating health hazards and odour nuisance. The dung produces many gases/compounds such as carbon dioxide, ammonia, hydrogen sulphide, methane, etc. which emitted into the atmosphere and responsible for odour issue.

The disposal of cow/buffalo dung is the biggest challenge in dairy farms and gaushalas. However, cattle dung, if effectively utilised, can be a resource of manure & energy. The cattle dung contains many beneficial constituents which may be used as fuel source either by direct combustion (dung wood) or converted to biogas, soil conditioner, fertilizers, material for wall plastering, construction of granaries, livestock & fish feeding, etc."

(emphasis supplied)

12. The guidelines are:

"3. Guidelines for Waste Management in Dairy Farms and Gaushalas:

3.1 Solid Waste Management

The solid wastes produced from dairy farms and gaushalas are basically organic in nature, consisting of cattle dung, feed residue, bedding, etc. The waste produced is not hazardous in nature but its proper handling and disposal needs attention. The guidelines for the management of solid wastes are as follow:

- i. Dairies and gaushalas should collect dung from the floor of the shed at regular interval, so as to keep the floor clean. The surrounding areas should also be cleaned regularly to prevent obnoxious smell in the area.*
- ii. Dairy premises and its surrounding areas should be properly sanitized and disinfected, e.g. by sprinkling crushed lime, regularly.*
- iii. The solid wastes should be collected & stored properly for its treatment.*
- iv. Dairies and gaushalas should dispose the biomedical wastes (vaccines, vials, medicines, syringes, etc.) as per the provisions of "Biomedical Waste Management Rules, 2016".*
- v. Dairies and gaushalas should not wash dung & fodder residue etc. into drains in order to avoid clogging of drains. The local bodies/corporations/SPCBs should ensure that untreated wastes are not discharged outside the dairy premises.*
- vi. Dairies and gaushalas should have adequate infrastructure to ensure proper handling, treatment and disposal of solid wastes and wastewater. They may set-up individual or common treatment facilities wherein cluster. The local government bodies/corporations/SPCBs should facilitate the dairies/gaushalas/ entrepreneurs/ NGOs in setting up of individual or common treatment facilities.*

vii. The following methods for disposal/ utilisation of solid wastes (dung) may be adopted:

a. Composting/Vermicomposting: Composting is a manure management practice to reduce the impact on the environment. Composting is the biological decomposition and stabilization of organic material. The process produces a final product that is stable, free of pathogens, reduced odours and can be applied on the land. Vermicomposting is the method of preparing compost with the use of earthworms that enriches soil quality by improving its physicochemical and biological properties. It is becoming popular as a major component of organic farming system.

b. Biogas/Compressed biogas (CBG) production (anaerobic digestion): Biogas plants are the best way to handle the dung waste. Biogas is generated in the process of biodegradation of organic materials under anaerobic conditions which may be utilised for cooking and power generation. The Biogas plant provides the digested organic manure for crops. Biogas can be processed and filled in cylinders. The bio-gas may be further purified to remove hydrogen sulphide (H_2S), carbon dioxide (CO_2) & water vapour and compressed (known as Compressed Bio Gas, CBG) which has methane (CH_4) content of more than 90% as per BIS standard IS 16087:2016. CBG has calorific value and other properties similar to CNG and hence can be utilized as green renewable fuel as replacement of CNG in automotive, industrial and commercial areas.

c. Manufacture of dung wood to be used as fuel: The cattle dung can be used as fuel as a replacement of firewood. The cattle dung can be dewatered and converted to value added products such as logs, powder etc. by mechanized/semi-mechanized machines. This option can be easily adopted at dairy farms and gaushalas in economical manner, creating substantial value & no damage to the environment.

3.2 Wastewater Management

The guidelines for the management of wastewater are as follow:

i. Dairies and gaushalas should take necessary steps for the judicious usage of water for drinking & bathing of cattles and other services including floor cleaning, however, the same should not exceed 150 litres/day/cattle.

- ii. Dairies and gaushalas should ensure that the wastewater, being discharged, is adequately treated so as to meet the standards as prescribed by SPCBs/PCCs.
- iii. Dairies and gaushalas should ensure that the wastewater does not percolate through ground and pollutes the groundwater. The flooring of the shed should be properly paved (impervious) with a wastewater collection system. However, the floor should not be slippery in order to ensure safety of animals.

3.3 Air Quality Management

The guidelines for the management of air quality/emissions (includes gaseous emissions, odour and dust) from dairy farms and gaushalas are as follow:

- i. The animal housing should be adequately ventilated allowing sufficient supply of fresh air to remove humidity, dissipate heat and prevent build-up of gases such as methane, carbon dioxide, ammonia, etc.
- ii. Dairy farms and gaushalas should follow good housekeeping practices like maintaining proper sanitary conditions, protecting dung from unwanted pests/insects in order to minimize odour nuisance.
- iii. The floor, feeding, water and air spaces available for each animal should be adequate for standing, resting, loafing, movement, feeding, watering and ventilation. The space requirements should be provided as per the standards prescribed by the Bureau of India Standards (BIS).
- iv. Dairy farms and gaushalas should improve/modify the quality and dosage of feed/forage/supplements in order to reduce enteric methane generations from livestock. It is beneficial to animal health/nutrition and reduced impact on environment. They should obtain ration advisory for the same from any of the agricultural institutes/departments like Krishi Vigyan Kendra, State Dairy Department, Animal Husbandry Department, NDRI, NDDB, etc.
- v. Dairy farms and gaushalas should plant trees or develop green belts to provide a barrier against the spread of foul smell or noise originating from them.

4. Siting Policy:

The siting policy for dairy farms and gaushalas are as follow:

- i. Dairy farms and gaushalas should be located outside city/village boundaries and away from residential dwellings, hospitals, schools.
- ii. Dairy farms and gaushalas should not be located in flood prone areas, subject to flooding at 1-in-25-year or more frequent levels in order to avoid contamination of water bodies.
- iii. Dairy farms and gaushalas should not be located in areas with shallow groundwater depth of about 10 to 12 feet and in particular in alluvium areas in order to avoid groundwater contamination.
- iv. Dairy farms and gaushalas may be allowed to follow minimum distance criteria given below which may be subject to vary with the local conditions:
 - a. National and State Highways: 200 meters from National Highway and 100 meters from State Highway in order to avoid odour nuisance and road accident caused due to cattle.
 - b. Major drinking water reservoir on catchment side: 500 meters in order to avoid water contamination due to leakages/spillages from the dairy farms and gaushalas.
 - c. Drinking water source like wells, summer storage tanks, other tanks (drinking water): 100 meters in order to avoid water contamination.
 - d. Major watercourses like River and Lake: 500 meters in order to avoid water contamination.
 - e. Canals: 200 meters in order to avoid water contamination.

5. Regulatory/ Monitoring Mechanism:

- i. The local authorities/corporations should carry out inventory of all the dairy farms and gaushalas located in their jurisdiction in the prescribed performa given at Annexure-II. The same should be updated and shared with the concerned SPCB/PCC on annual basis (calendar year wise).
- ii. All the dairy farms and gaushalas should be registered with the local bodies/corporations preferably through online mode. The local bodies/corporations should display the same at their websites.

- iii. *The dairy farms (having animal population of 10 & above animals) and gaushalas should obtain consent to establish and consent to operate under Water Act, 1974 as well as Air Act, 1981 from the concerned SPCBs/PCCs.*
- iv. *SPCBs/PCCs should provide training and consultation to the Gram Panchayat for implementation of guidelines in their jurisdiction. Gram Panchayat should ensure the implementation of the guidelines by dairy farms and gaushalas falling under their jurisdiction for handling and management of the wastes.*
- v. *The concerned local bodies/corporations/SPCBs/PCCs should monitor the dairy farms and gaushalas on regular basis to ensure the proper disposal of cattle dung and wastewater to check compliance of environmental norms. The SPCBs/PCCs will considered the carrying capacity of the surroundings while allowing a new establishment and laying down the environmental norms.*
- vi. *Hands on practical trainings on environment/waste management & treatment technologies, scientific feeding for enteric methane reduction, waste to wealth management programme, etc. should be provided to dairy workers/entrepreneurs by the local bodies/SPCBs/PCCs on regular interval.*

(emphasis supplied)

13. We are of the view that the guidelines proposed may be finalized and enforced as per the mandate of the statute which will bind the States PCBs/PCCs. Compliance thereof may be monitored by the CPCB. The CPCB may evolve appropriate monitoring mechanism in this regard, including a provision for audit of compliance atleast once in six months.
14. With regard to siting policy, atleast minimum distance must be specified from habitations, water bodies, etc. as well as inter-se distance of such establishments, consistent with the carrying capacity of the area, as may be necessary for protection of

environment. Needless to say that any violation of environment norms under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981 and the Environment (Protection) Act, 1986 has to be dealt with by the concerned PCB/PCC/Local Body by way of stopping polluting activities, recovering compensation and initiating prosecution. It will be appropriate that broad and indicative compensation regime is expressly specified by the CPCB. While local bodies may undertake the exercise of preparing inventory as per applicable Municipal law, the State PCBs/PCCs must also not avoid their responsibility of enforcing the mandate of the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981 and the Environment (Protection) Act, 1986.

15. Guidelines may be finalized and issued by the CPCB within one month from today. Compliance reports be sought from the State PCBs/PCCs within two months thereafter. A consolidated report based on the information received may be filed by the CPCB on or before 30.09.2020. Report be sent by e-mail at judicial-ngt@gov.in preferably in the form of searchable PDF/OCR Support PDF and not in the form of Image/PDF.

16. Since CPCB is to monitor the issue and furnish consolidated report, it is not necessary for individual local bodies or PCBs/PCCs to appear before this Tribunal.

List for further consideration on 08.10.2020.

Adarsh Kumar Goel, CP

Sheo Kumar Singh, JM

Dr. Nagin Nanda, EM

May 20, 2020
O.A. No. 46/2018
DV



“Guidelines for Environmental Management of Dairy Farms and Gaushalas”



Central Pollution Control Board

**(Ministry of Environment, Forest and Climate Change, Govt. of India)
Parivesh Bhawan, East Arjun Nagar
Delhi-110032**

(July 2020)

1. Introduction

India ranks first among the world's milk producing Nations since 1998 and has the largest bovine population in the World. Dairying has become an important secondary source of income for millions of rural families and has assumed the most important role in providing employment and income opportunities particularly for marginal farmers.

Dairy farms are the establishment which in-house milching animals to produce milk for distribution and processing dairy products in milk processing plants. Gaushalas are the establishment which in-house weak, sick, injured, handicapped and abandoned homeless cattle/cows to rehabilitate them.

The dairies/gaushalas may be categorised on the basis of nos. of animals (adult cows & female buffaloes) in a dairy/gaushala i.e. Category-I (upto 25 animals), Category-II (26-50 animals), Category-III (51-75 animals), Category-IV (76-100 animals) and Category-V (above 100 animals).

As per the Livestock Census, carried out by the Department of Animal Husbandry, Dairying & Fisheries, Ministry of Agriculture and Farmers Welfare, the year-wise livestock population of adult female bovine is as follow:

Sl. No.	Year	Adult Cows	Adult Female Buffaloes	Total Cows & Buffaloes
1	1951	5,44,00,000	2,10,00,000	7,54,00,000
2	1956	4,73,00,000	2,17,00,000	6,90,00,000
3	1961	5,10,00,000	2,43,00,000	7,53,00,000
4	1966	5,18,00,000	2,54,00,000	7,72,00,000
5	1972	5,34,00,000	2,86,00,000	8,20,00,000
6	1977	5,46,00,000	3,13,00,000	8,59,00,000
7	1982	5,92,00,000	3,25,00,000	9,17,00,000
8	1987	6,21,00,000	3,91,00,000	10,12,00,000
9	1992	6,44,00,000	4,38,00,000	10,82,00,000
10	1997	6,44,00,000	4,68,00,000	11,12,00,000
11	2003	6,45,00,000	5,10,00,000	11,55,00,000
12	2007	7,30,00,000	5,45,00,000	12,75,00,000
13	2012	7,67,00,000	5,66,00,000	13,33,00,000
14	2019	8,14,00,000	5,50,00,000	13,64,00,000

Also, as per the Livestock Census carried out by the Department of Animal Husbandry, Dairying & Fisheries, Ministry of Agriculture and Farmers Welfare, in 2019, the state-wise total population of adult female bovine is as follow:

Sl. No.	State/UT	Adult Cows	Adult Female Buffaloes	Total Cows & Buffaloes
1.	Andhra Pradesh	19,80,000	31,61,000	51,41,000
2.	Arunachal Pradesh	1,02,000	2,000	1,04,000
3.	Assam	38,18,000	1,38,000	39,56,000
4.	Bihar	71,47,000	36,70,000	1,08,17,000
5.	Chhattisgarh	33,79,000	3,83,000	37,62,000
6.	Goa	30,000	14,000	44,000

7.	Gujarat	44,94,000	56,71,000	1,01,65,000
8.	Haryana	9,45,000	21,00,000	30,45,000
9.	Himachal Pradesh	9,32,000	3,69,000	13,01,000
10.	Jammu & Kashmir	12,31,000	4,02,000	16,33,000
11.	Jharkhand	34,58,000	4,35,000	38,93,000
12.	Karnataka	40,63,000	16,71,000	57,34,000
13.	Kerala	6,90,000	8,000	6,98,000
14.	Madhya Pradesh	73,42,000	52,96,000	1,26,38,000
15.	Maharashtra	56,99,000	33,19,000	90,18,000
16.	Manipur	77,000	10,000	87,000
17.	Meghalaya	3,33,000	3,000	3,36,000
18.	Mizoram	21,000	1,000	22,000
19.	Nagaland	21,000	3,000	24,000
20.	Odisha	31,94,000	1,52,000	33,46,000
21.	Punjab	15,25,000	22,76,000	38,01,000
22.	Rajasthan	68,19,000	70,15,000	1,38,34,000
23.	Sikkim	68,000	0	68,000
24.	Tamil Nadu	48,20,000	2,61,000	50,81,000
25.	Telangana	14,93,000	21,86,000	36,79,000
26.	Tripura	3,03,000	3,000	3,06,000
27.	Uttarakhand	8,22,000	4,96,000	13,18,000
28.	Uttar Pradesh	92,07,000	1,57,32,000	2,49,39,000
29.	West Bengal	72,73,000	1,93,000	74,66,000
30.	A & N Islands	16,000	1,000	17,000
31.	Chandigarh	8,000	8,000	16,000
32.	Dadar & Nagar Haveli	4,000	1,000	5,000
33.	Daman & Diu	1,000	0	1,000
34.	Delhi	Not available	Not available	Not available
35.	Lakshadweep	1,000	0	1,000
36.	Puducherry	37,000	2,000	39,000
37.	All India	8,13,53,000	5,49,82,000	13,63,35,000

2. Environmental Issues in Dairy Farms and Gaushalas

The major environmental issues of dairy farms and gaushalas are discharges of dung and urinal wastewater. The poor handling of dung and wastewater causes odour problem also. A Bovine animal, on an average, weigh 400 kg and discharges 15-20 kg/day of dung and 15-20 litres/day of urine.

Many dairy farms and gaushalas discharge the cattle dung along with wastewater into the drains, leading to clogging, which ultimately reach to rivers and create water pollution. Also, these clogged drains become breeding ground for mosquitoes creating health hazards and odour nuisance. The dung produces many gases/compounds such as carbon dioxide, ammonia, hydrogen sulphide, methane, etc. which emitted into the atmosphere and responsible for odour issue.

The disposal of cow/buffalo dung is the biggest challenge in dairy farms and gaushalas. However, cattle dung, if effectively utilised, can be a resource of manure & energy. The cattle

dung contains many beneficial constituents which may be used as fuel source either by direct combustion (dung wood) or converted to biogas, soil conditioner, fertilizers, material for wall plastering, construction of granaries, livestock & fish feeding, etc.

Now, following guidelines are framed for management of wastes from dairy farms and gaushalas.

3. Guidelines for Waste Management in Dairy Farms and Gaushalas

3.1 Solid Waste Management

The solid wastes produced from dairy farms and gaushalas are basically organic in nature, consisting of cattle dung, feed residue, bedding, etc. The waste produced is not hazardous in nature but its proper handling and disposal needs attention. The guidelines for the management of solid wastes are as follow:

- i. Dairies and gaushalas should collect dung from the floor of the shed at regular interval, so as to keep the floor clean. The surrounding areas should also be cleaned regularly to prevent obnoxious smell in the area.
- ii. Dairy premises and its surrounding areas should be properly sanitized and disinfected, e.g. by sprinkling crushed lime, regularly.
- iii. The solid wastes should be collected & stored properly for its treatment.
- iv. Dairies and gaushalas should dispose the domestic hazardous wastes (vaccines, vials, medicines, syringes, etc.) as per the provisions of "Solid Waste Management Rules, 2016".
- v. Dairies and gaushalas should not wash dung & fodder residue etc. into drains in order to avoid clogging of drains. The local bodies/corporations/SPCBs should ensure that untreated wastes are not discharged outside the dairy premises.
- vi. Dairies and gaushalas should have adequate infrastructure to ensure proper handling, treatment and disposal of solid wastes and wastewater. They may set-up individual or common treatment facilities wherein cluster. The local government bodies/corporations/SPCBs should facilitate the dairies/gaushalas/ entrepreneurs/ NGOs in setting up of individual or common treatment facilities.
- vii. The following methods for disposal/ utilisation of solid wastes (dung) may be adopted:
 - a. Composting/Vermicomposting: Composting is a manure management practice to reduce the impact on the environment. Composting is the biological decomposition and stabilization of organic material. The process produces a final product that is stable, free of pathogens, reduced odours and can be applied on the land. Vermicomposting is the method of preparing compost with the use of earthworms that enriches soil quality by improving its physicochemical and biological properties. It is becoming popular as a major component of organic farming system.
 - b. Biogas/Compressed biogas (CBG) production (anaerobic digestion): Biogas plants are the best way to handle the dung waste. Biogas is generated in the process of biodegradation of organic materials under anaerobic conditions which may be utilised for cooking and power generation. The Biogas plant provides the digested organic manure for crops. Biogas can be processed and filled in cylinders. The biogas may be further purified to remove hydrogen sulphide (H_2S), carbon dioxide (CO_2) & water vapour and compressed (known as Compressed Bio Gas, CBG)

which has methane (CH₄) content of more than 90% as per BIS standard IS 16087:2016. CBG has calorific value and other properties similar to CNG and hence can be utilized as green renewable fuel as replacement of CNG in automotive, industrial and commercial areas.

- c. Manufacture of dung wood to be used as fuel: The cattle dung can be used as fuel as a replacement of firewood. The cattle dung can be dewatered and converted to value added products such as logs, powder etc. by mechanized/semi-mechanized machines. This option can be easily adopted at dairy farms and gaushalas in economical manner, creating substantial value & no damage to the environment.

3.2 Wastewater Management

The guidelines for the management of wastewater are as follow:

- i. Dairies and gaushalas should take necessary steps for the judicious usage of water for drinking & bathing of cattles and other services including floor cleaning, however, the same should not exceed 150 litres/day/cattle.
- ii. Dairies and gaushalas should ensure that the wastewater, being discharged, is adequately treated so as to meet the standards as prescribed by SPCBs/PCCs.
- iii. Dairies and gaushalas should ensure that the wastewater does not percolate through ground and pollutes the groundwater. The flooring of the shed should be properly paved (impervious) with a wastewater collection system. However, the floor should not be slippery in order to ensure safety of animals.

3.3 Air Quality Management

The guidelines for the management of air quality/emissions (includes gaseous emissions, odour and dust) from dairy farms and gaushalas are as follow:

- i. The animal housing should be adequately ventilated allowing sufficient supply of fresh air to remove humidity, dissipate heat and prevent build-up of gases such as methane, carbon dioxide, ammonia, etc.
- ii. Dairy farms and gaushalas should follow good housekeeping practices like maintaining proper sanitary conditions, protecting dung from unwanted pests/insects in order to minimize odour nuisance.
- iii. The floor, feeding, water and air spaces available for each animal should be adequate for standing, resting, loafing, movement, feeding, watering and ventilation. The space requirements should be provided as per the standards prescribed by the Bureau of Indian Standards (BIS) (BIS 12237:1987 & 11799:2005).
- iv. Dairy farms and gaushalas should improve/modify the quality and dosage of feed/forage/supplements in order to reduce enteric methane generations from livestock. It is beneficial to animal health/nutrition and reduced impact on environment. They should obtain ration advisory for the same from any of the agricultural institutes/departments like Krishi Vigyan Kendra, State Dairy Department, Animal Husbandry Department, NDRI, NDDB, etc.
- v. Dairy farms and gaushalas should plant trees or develop green belts to provide a barrier against the spread of foul smell or noise originating from them.

4. Siting Policy: ✓

The siting criteria will be applicable for new establishment, however, the existing establishments should take appropriate pollution control measures as per the guidelines. The siting policy for dairy farms and gaushalas are as follow:

- i. Dairy farms and gaushalas should be located outside city/village boundaries, atleast 200 meters away from residential dwellings and 500 meters away from hospitals & schools.
- ii. Dairy farms and gaushalas should not be located in flood prone areas, subject to flooding at 1-in-25-year or more frequent levels in order to avoid contamination of water bodies.
- iii. Dairy farms and gaushalas should not be located in areas with shallow groundwater depth of about 10 to 12 feet and in particular in alluvium areas in order to avoid groundwater contamination.
- iv. Dairy farms and gaushalas may be allowed to follow minimum distance criteria given below which may be subject to vary with the local conditions:
 - a. National and State Highways: 200 meters from National Highway and 100 meters from State Highway in order to avoid odour nuisance and road accident caused due to cattle.
 - b. Major drinking water reservoir on catchment side: 500 meters in order to avoid water contamination due to leakages/spillages from the dairy farms and gaushalas.
 - c. Drinking water source like wells, summer storage tanks, other tanks (drinking water): 100 meters in order to avoid water contamination.
 - d. Major watercourses like River and Lake: 500 meters in order to avoid water contamination.
 - e. Canals: 200 meters in order to avoid water contamination.
 - f. Inter-se distance between two establishments should be atleast 5 meters for ventilation. Each unit should provide atleast 2.5 meters from each side and develop the green belt.

5. Regulatory/ Monitoring Mechanism:

- i. The local authorities/corporations should carry out inventory of the dairy farms and gaushalas located in their jurisdiction in the modified inventory performa given at **Annexure-A**. The same should be updated and shared with the concerned SPCB/PCC on annual basis (calendar year wise).
- ii. The local bodies/municipal corporations shall publish a public notice in newspapers and on their website for registration of dairy farms and gaushalas as per municipal law. The registration may be done preferably through online mode and same may be displayed at their websites.
- iii. The SPCBs/PCCs shall publish a public notice for dairy farms and gaushalas to obtain consent to establish and consent to operate under Water Act, 1974 as well as Air Act, 1981 as per the categorization of industries. CPCB issued directions on 10.07.2020 under Section 18(1)(b) of the Water (Prevention & Control of Pollution) Act, 1974 and the Air (Prevention & Control of Pollution) Act, 1981 regarding classification of Dairy Farms and Gaushalas into Orange and Green Category, respectively.
- iv. The SPCBs/PCCs/local bodies/municipal corporations shall upload the environmental guidelines and **Form-A** for compliance status of environmental guidelines on their website and also circulate to all the dairy farms and gaushalas. The compiled status of

compliance in the form of report shall be submitted once in six months by SPCBs/PCCs to CPCB for Audit purpose.

- v. The concerned SPCBs/PCCs/local bodies/corporations should monitor the dairy farms and gaushalas on regular basis to ensure the proper disposal of cattle dung and wastewater to check compliance of environmental norms. The SPCBs/PCCs will consider the carrying capacity of the surroundings while allowing a new establishment and laying down the environmental norms.
- vi. The SPCBs/PCCs shall carry out environmental audit of atleast 2 dairy farms and 2 gaushalas, randomly selected from each district of the state/UT and submit the compliance and action taken report to CPCB on half yearly basis.
- vii. CPCB shall carry out environmental auditing of 4 dairy farms and 4 gaushalas in each state/UT, randomly selected based on the information received from SPCBs/PCCs on annual basis.
- viii. In case of any violation of environmental norms under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981 and Environmental (Protect) Act, 1986 by dairy farms and gaushalas, the concerned SPCBs/PCCs should impose environmental compensation as per the CPCB methodology for "Environmental Compensation to be levied on Industrial Units", for damaging the environment and in order to stop polluting activity and initiate prosecution for repeatedly polluting units.
- ix. SPCBs/PCCs should provide training and consultation to the Gram Panchayat for implementation of guidelines in their jurisdiction. Gram Panchayat should ensure the implementation of the guidelines by dairy farms and gaushalas falling under their jurisdiction for handling and management of the wastes.
- x. Hands on practical trainings on environment/waste management & treatment technologies, scientific feeding for enteric methane reduction, waste to wealth management programme, etc. should be provided to dairy workers/entrepreneurs by the local bodies/SPCBs/PCCs on regular interval.

**Status of Compliance of Guidelines for Environmental Management of
Dairy Farm and Gaushalas**

(Encircle the correct one)

1.	Name/ address of Dairy Farm/Gaushala	
2.	Area occupied by Dairy Farm/Gaushala (plot area)	
3.	Contact person (Name, Designation, and Contact No, FAX, e mail)	
4.	Status of registration with local bodies/corporations	Registered / Not-registered
5.	Status of consent to operate from SPCBs/PCCs	Valid/Expired/Applied
6.	Total no. of animals in dairy farm/gaushala a. Adult Cows b. Adult Female Buffaloes c. Calves d. Any other	
7.	Category of dairy farm/gaushala	Category-I (upto 25 animals) Category-II (26-50 animals) Category-III (51-75 animals) Category-IV (76-100 animals) Category-V (above 100 animals)
8.	Total amount of cow/buffalo dung produced (ton per day) by dairy farm/gaushala @ 14 Kg/day/animal	
9.	Methods of disposal/utilization of cattle dung by dairy farm/gaushala	Composting/Vermicomposting Biogas/Compressed biogas (CBG) production Manufacture of dung wood Any other (specify)
10.	Whether wastewater is treated or not?	Yes/No
11.	Methods of disposal/utilization of wastewater by dairy farm	In drain/field

Solid Waste Management		
12.	Is the dung collected from the floor of the shed at regular interval, so as to keep floor clean? Are the surrounding areas cleaned regularly to prevent obnoxious smell?	Yes/No Yes/No
13.	Are the dairy premises and its surroundings areas properly sanitized and disinfected regularly?	Yes/No
14.	Are the solid waste collected & stored properly for its treatment & disposal?	Yes/No
15.	Are the domestic hazardous wastes (vaccines, vials, medicines, syringes, etc.) disposed as per the provisions of "Solid Waste Management Rules, 2016"	Yes/No
16.	Are the dung & fodder residue etc. washed into drain?	Yes/No
Wastewater Management		
17.	Total amount of water used for drinking & bathing of cattles and other services including floor cleaning per day	litres/day
18.	Are any necessary steps taken for judicious usage of water for drinking & bathing of cattles and other services including floor?	Yes/No
19.	Is any wastewater percolate through ground?	Yes/No
20.	Is the flooring of shed properly paved with wastewater collection system?	Yes/No
21.	Whether infrastructure to ensure proper handling & treatment of wastewater?	Individual treatment facility Common treatment facility No treatment
Air Quality Management		
22.	Is the animal housing adequately ventilated?	Yes/No
23.	Are the good housekeeping practices followed?	Yes/No
24.	The space provided for animals by dairy farm/gaushala Covered floor area Open floor area Feeding manger length Water trough length	 m ² m ² m m

25.	Is ration advisory obtained from any of the agricultural institutes/department?	Yes/No
26.	Are the dosage of feed/forage/supplements given as per ration advisory?	Yes/No
27.	No. of trees/plants planted in the premises	
Siting Policy		
28.	Minimum distance from following features: a) Residential Dwelling/Hospital/School b) National Highway/State Highway c) Major drinking water reservoir on catchment side d) Drinking water source like wells, summer storage tanks, other tanks (drinking water) e) River/Lake f) Canal g) Dairy Farm/Gaushala	
29.	Is dairy farm/gaushala located in flood prone area?	Yes/No
30.	Is dairy farm/gaushala located in shallow groundwater depth area?	Yes/No

(Signature of Official)
(Name & Designation of Official)

Inventory Performa for Dairies and Gaushalas in the State/UT

Sl. No.	Description	Urban Area	Peri-urban Area	Rural Area
1.	Total no. of dairies <ul style="list-style-type: none"> • Category-I (upto 25 animals) • Category-II (26-50 animals) • Category-III (51-75 animals) • Category-IV (76-100 animals) • Category-V (above 100 animals) • Total 	<ul style="list-style-type: none"> • • • • • • 	<ul style="list-style-type: none"> • • • • • • 	<ul style="list-style-type: none"> • • • • • •
2.	Total no. of animals in <ul style="list-style-type: none"> • Category-I dairies • Category-II dairies • Category-III dairies • Category-IV dairies • Category-V dairies • Total 	<ul style="list-style-type: none"> • • • • • • 	<ul style="list-style-type: none"> • • • • • • 	<ul style="list-style-type: none"> • • • • • •
3.	Total amount of cow/buffalo dung produced (ton per day) by <ul style="list-style-type: none"> • Category-I dairies • Category-II dairies • Category-III dairies • Category-IV dairies • Category-V dairies • Total 	<ul style="list-style-type: none"> • • • • • • 	<ul style="list-style-type: none"> • • • • • • 	<ul style="list-style-type: none"> • • • • • •
4.	Methods of disposal/utilisation of cattle dung and wastewater by dairies (to be enclosed)			
5.	Total no. of dairy colonies/clusters (list of such dairy colonies/clusters along with the details of no. of dairies, no. of cattles, method of disposal/utilisation of cattle dung & wastewater, etc. to be enclosed)	•	•	•
6.	Total no. of Gaushalas <ul style="list-style-type: none"> • Category-I (upto 25 animals) • Category-II (26-50 animals) • Category-III (51-75 animals) • Category-IV (76-100 animals) • Category-V (above 100 animals) • Total 	<ul style="list-style-type: none"> • • • • • • 	<ul style="list-style-type: none"> • • • • • • 	<ul style="list-style-type: none"> • • • • • •

7.	Total no. of animals in			
	• Category-I Gaushalas	•	•	•
	• Category-II Gaushalas	•	•	•
	• Category-III Gaushalas	•	•	•
	• Category-IV Gaushalas	•	•	•
	• Category-V Gaushalas	•	•	•
	• Total	•	•	•
8.	Total amount of cow dung produced (ton per day) by			
	• Category-I Gaushalas	•	•	•
	• Category-II Gaushalas	•	•	•
	• Category-III Gaushalas	•	•	•
	• Category-IV Gaushalas	•	•	•
	• Category-V Gaushalas	•	•	•
	• Total	•	•	•
9.	Methods of disposal/utilisation of cattle dung and wastewater by Gaushalas (to be enclosed)			

Note:

Urban area: As per the Census of India 2011, the urban area is defined as follows:

- i. All places with a municipality, corporation, cantonment board or notified town area committee, etc.
- ii. All other places which satisfied the following criteria:
 - a. A minimum population of 5,000;
 - b. At least 75 per cent of the male main working population engaged in non-agricultural pursuits; and
 - c. A density of population of at least 400 persons per sq. km.

Peri-urban area: It is an area or habitation located on the perimeter of the urban area having partial or complete influence of urbanization. It undergoes dramatic changes over a given period of time.
