BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL,

Principal Bench, New Delhi

Interlocutory Application Nos. 78 of 2023 & 631 of 2023

In

Original Application No. 394 of 2022

Pushpendra Kumar — Applicant

Vs.

Block Development Officer, Kadaura & Ors. — Respondents

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1.	**Compliance Affidavit** on behalf of the Respondent No. 24, The Central Pollution Control Board (CPCB) in compliance of Hon'ble NGT order dated 20.07.2023 in Interlocutory Application Nos. 78/2023 & 631/2023 in O.A. No. 394 of 2022, Pushpendra Kumar Vs. Block Development Officer, Kadaura & Ors.	
2.	**Annexure-1:** Copy of the Hon'ble NGT Order dated 20.07.2023.	
3.	**Annexure-2:** True copy of the CPCB letter dated 14.07.2021 with Revised Guidelines for Environmental Management of Dairy Farms and Gaushala, July, 2021.	
4.	**Annexure-3:** True copy of the CPCB letters dated 03.08.2023, 18.09.2023 and 26.09.2023 to SPCBs/PCCs for providing the status of implementation of Guidelines.	
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(Anamika Sagar)
Scientist E
Central Pollution Control Board
Delhi-110032

Date: 18.10.2023
Place: Delhi

BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI

ORIGINAL APPLICATION NO. 394 OF 2022
WITH
IA NOS. 78 OF 2023 & 631 OF 2023

IN THE MATTER OF:
Pushpendra Kumar **...Applicant**

Vs

Block Development Officer,
Kadaura &
Ors. **...Respondents**

COMPLIANCE AFFIDAVIT ON BEHALF OF RESPONDENT NO. 24, CENTRAL POLLUTION CONTROL BOARD

I, Anamika Sagar, W/o Shri A.K. Sagar, aged about 54 years working as Scientist-'E' in Central Pollution Control Board, Parivesh Bhawan, East Arjun Nagar, Delhi-110032. I am fully conversant with the facts and competent to affirm this Affidavit on behalf of Respondent No. 24, i.e. Central Pollution Control Board (hereinafter referred to as "CPCB") do hereby declare on oath as under: -

1. That this Hon'ble National Green Tribunal, Principal Bench, New Delhi, passed an order dated 20.07.2023 and directed the respondents as follows:

"...We are of the view that the guidelines (2021) framed and circulated may be 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 at least once in six months. With regard to siting policy, at least minimum distance must be specified from habitations, water bodies, etc. as well as inter-se distance of such establishments 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,

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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…"

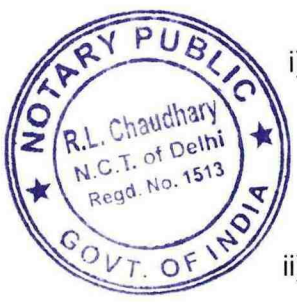
A copy of order dated 20.07.2023 is annexed as **Annexure-1.**

In this regard, it is humbly submitted that CPCB has already incorporated the above points in the revised "Guidelines for Environmental Management of Dairy Farms and Gaushalas" and communicated vide letter dated 14.07.2021 to all the State Pollution Control Boards/Pollution Control Committees (hereinafter referred to as "SPCBs/PCCs") and the Chief Secretary/Administrator of States/UTs for its implementation.

True copy of the CPCB letter dated 14.07.2021 with revised "Guidelines for Environmental Management of Dairy Farms and Gaushalas" is annexed as **Annexure-2**.

2. That in compliance of the aforesaid order, CPCB sought status of implementation of the aforesaid Guidelines from the SPCBs/PCCs vide letters dated 03.08.2023, 18.09.2023 and 26.09.2023. True copy of the CPCB letters are annexed as **Annexure-3**.

It is humbly submitted that following are the findings/summary of information received from SPCBs/PCCs are given below:



i) Information received till date from 12 SPCBs/PCCs, namely; Andhra Pradesh, Bihar, Gujarat, Jammu & Kashmir, Maharashtra, Nagaland, Punjab, Sikkim, Tamil Nadu, Tripura, Uttarakhand and Lakshadweep.

ii) There are 4,59,451 Dairy farms and Gaushalas in the aforesaid States/UTs.

iii) Public notices were published by concerned SPCBs/PCCs.

iv) Guidelines were uploaded on the website of concerned SPCBs/PCCs.

v) There are 7,904 registered Dairy farms and Gaushalas as per local bodies in aforementioned States/UTs.

vi) 72 Dairy farms and Gaushalas have CTE/CTO from concerned SPCBs/PCCs.

vii) The environmental audits were carried out in 337 Dairy farms and 102 Gaushalas by concerned SPCBs/PCCs.

viii) Show cause notices (SCN) were issued by concerned SPCBs/PCCs to the defaulting units.

ix) J&K PCC along with other implementing agencies have organized various training programmes for implementation of the revised Guidelines for Environmental Management of Dairy Farms and Gaushalas issued by CPCB in July, 2021.

Compiled data based on information received from 12 SPCBs/PCCs regarding status of implementation of the aforesaid Guidelines is annexed as **Annexure-4**.

3. That it is also humbly submitted that in compliance of the aforesaid order, CPCB has been carrying out environmental auditing of Dairy farms and Gaushalas in States/UTs as per regulatory mechanism of aforesaid Guidelines. The audit reports of CPCB have been forwarded to the concerned SPCBs/PCCs for taking appropriate actions. True copy of the CPCB letter dated 16.10.2023 is given at **Annexure-5.**

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4. That in light of Interlocutory applications, it is humbly submitted that this answering Respondent has already issued **revised** "Guidelines for Environmental Management of Dairy Farms and Gaushalas" in July, 2021 to all SPCBs/PCCs and the Chief Secretaries of States/UTs for its implementation and sought status of implementation from all SPCBs/PCCs from time to time. Further, it is submitted that SPCBs/PCCs are the regulatory agencies for control of pollution in States/UTs as per the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981 while local authorities are also the regulatory agencies as per the Municipal laws and the Prevention of Cruelty to Animals Act,1960 in case of Gaushalas.

5. That the averment contained in the prayer of the IA regarding to formulate guidelines for catching the cattle by the answering respondent. In reply, it is humbly submitted that since the matter pertains to the Department of Animal Husbandry, Fisheries and Dairying, hence, calls for no response from the Answering Respondent.

6. That this answering Respondent, i.e. Central Pollution Control Board shall abide by any order or direction passed by this Hon'ble Tribunal.

DEPONENT

अनामिका सागर / Anamika Sagar
वैज्ञानिक 'ई' / Scientist 'E'
केंद्रीय प्रदूषण नियंत्रण बोर्ड
Central Pollution Control Board
(पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार)
(M/o Environment, Forest & Climate Change, Govt. of India)
परिवेश भवन, पूर्वी अर्जुन नगर, दिल्ली–110032
Parivesh Bhawan, East Arjun Nagar, Delhi-110032

VERIFICATION

It is verified that the content of this compliance Affidavit which is based on official record and information available in the office are true and correct. Nothing has been concealed therein. Verified on this day 18th of October, 2023 at New Delhi.

NOTARY PUBLIC
R.L. Chaudhary
N.C.T. of Delhi
Regd. No. 1513
GOVT. OF INDIA

DEPONENT

अनामिका सागर / Anamika Sagar
वैज्ञानिक 'ई' / Scientist 'E'
केंद्रीय प्रदूषण नियंत्रण बोर्ड
Central Pollution Control Board
(पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार)
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परिवेश भवन, पूर्वी अर्जुन नगर, दिल्ली–110032
Parivesh Bhawan, East Arjun Nagar, Delhi-110032

ATTESTED
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18 OCT 2023

Annexure-1

Item No. 06 Court No. 1

BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI

(BY HYBRID MODE)

Original Application No. 394/2022
(I.A. No. 78/2023 & I.A. No. 631/2023)

Pushpendra Kumar Applicant

Versus

Block Development Officer, Kadaura & Ors. Respondent(s)

Date of hearing: 20.07.2023

CORAM: HON'BLE MR. JUSTICE SHEO KUMAR SINGH, CHAIRPERSON
HON'BLE MR. JUSTICE ARUN KUMAR TYAGI, JUDICIAL MEMBER
HON'BLE DR. A. SENTHIL VEL, EXPERT MEMBER

Applicant: Mr. Ranjan Kumar Rai, Adv. for Applicant
Respondent: Dr. Rajneesh Dubey, ACS, Animal Husbandry with Mr. Bhanwar Pal Singh Jadon & Mr. Chetan Jadon, Advs. Ms. Chandni Singh, District Magistrate, Jalaun Mr. Ajay Sharma, Member Secretary with Mr. Pradeep Misra & Mr. Daleep Dhyani, Advs. for UPPCB Mr. Atif Suhrawardy, Adv. with Ms. Anamika Sagar, Scientist E, CPCB Mr. Shwetank Sailakwal, Adv. for R - 1 to 13, 15, 19, 21 & 25 Ms. Taqdeeb Sajad, Adv. for R - 18 & 20

ORDER

1. The issue in this application is compliance of CPCB guidelines for the environmental management of gaushalas / dairy farms issued in July, 2020 and manual on Management of gaushalas by ICAR, New Delhi vide order dated 03rd May, 2016.

2. The applicant has submitted that the Chief Secretary, Government of Uttar Pradesh issued order vide notification dated 02.01.2019, to establish Gaushalas in villages (Gram Panchayats) and in Urban Areas (Nagar Nigam/Palika/Panchayat) to solve the problem of stray cattle. Under the above notification, Block Development Officer of each block is appointed as President of all Gaushalas/Nirashrit Ashray Sthals (Stray

Cattle Shelter) running in the villages of the Block while District Magistrate is appointed as President for all Gaushalas/Nirashrit Ashray Sthals running in the District. In compliance with the above notification, 370 Gaushalas have been set up in District Jalaun. The Gaushalas/Nirashrit Ashray Sthals are not following the Solid Waste Management Rules 2016, CPCB guidelines for the Environmental Management of Dairy Farms and Gaushalas, Manual on Management of Gaushalas by Indian Council for Agricultural Research (ICAR) and the Gaushalas/Nirashrit Ashray Sthals are being run in violation of the environmental norms, rules, and regulations. Number of cattle kept in the Gaushalas/Nirashrit Ashray Sthals is higher than the capacity. The Gaushalas/Nirashrit Ashray Sthals are discharging cattle dung and waste water into the canals/drains leading to water clogging/water pollution/contamination of ground water. The Gaushalas/ Nirashrit Ashray Sthals do not have concrete floor and proper shelter to save the cattle from chilly winter and scorching summer. The cows are kept in the open where the dung and urine lies scattered and there is no regular cleaning thereof due to which the cattle get diseases of the foot and the mouth which are spread from one livestock to another. Many livestock died inside these Gaushala/Nirashrit Ashray Sthals. Proper fodder is not served to the cows/stray cattle. Parali of Paddy (stems of residual of crop), which is sometimes rotten, is used as fodder which is harmful for the health of the livestock. None of the Gaushalas/ Nirashrit Ashray Sthals has taken consent to operate from the concerned authorities under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981.

3. The applicant has further submitted that a complete ban was imposed on illegal slaughter houses and slaughtering of animals in the shops vide **order dated 30.01.2014 passed by Hon'ble Supreme Court in Laxmi Narain Modi Vs. Union of India and others (Writ-C309/2003**

with Writ 330/2001, 44/2004) and Order dated 23.12.2014 passed by this Tribunal in O.A. No.339/2013 titled as Krishankant Singh Hoon and another Vs. Union of India and another, but illegal slaughter houses are being run in urban areas and villages of entire district Jalaun and slaughtering of animals ruthlessly/ brutally and sale of the meat in violations of environmental norms is causing sever environmental pollution.

4. The matter was taken up by this Tribunal on 27.05.2022 and a Joint Committee was constituted with directions to submit the factual and Action Taken Report. In compliance thereof, the Joint Committee has submitted the report with following recommendations:

"Recommendations:

After visit of the gaushalas, the Joint committee has the followings recommendations for proper management of these establishments:

1. *All Gaushalas f temporary goashrya sthal located in district Jalaun should comply with the revised "Guidelines for environmental management of dairy farms and gaushalas" published by CPCB in 2021(revised) for environmental issues, waste management and regulatory I monitoring mechanism for gaushalas .The "Manual on Management of Gaushalas" published by the Indian Council of Agricultural Research provides information on minimum infrastructure (housing and ancillary) required for gaushalas, feeding management, protocol for identification and record keeping of animals, segregation and isolation of animals, veterinary care, maintaining hygiene as well as disposal of animal waste.*
2. *In case of any violation of environmental norms under Water (Prevention and Conte. of Pollution) Act, 1974, Air (Prevention and Control of Pollution) Act, 1981 and Environmental (Protect) Act, 1986 by Dairy farms and Gaushalas, concerned SPCBs/PCCs should impose environmental compensation as per CPCB methodology far "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*
3. *They may set-up individual or common treatment facilities where in cluster. Local bodies/corporations/SPCBs should facilitate Dairy farmers/ entrepreneurs/NGOs in setting up of individual or common treatment facilities*

4. *Water should be Judiciously used for battling of bovines and other services including floor cleaning to contain wastewater quantity to 50 litres/day/ bovine*

5. *Shelter management:*

   Proper housing is one of the basic needs for the cattle rehabilitated in these establishments. Adoption of guidelines regarding minimum infrastructure required for gaushalas would provide desirable welfare to the housed animals.

   - *All animals maintained at Gausl-ialas should be given adequate shelter to save them from inclement/harsh weather conditions and enough space to roam around. lie down and stand up again. Animals should be segregated /grouped in various groups based on their age for better management.*
   - *Feed and particularly green fodder were not available in required quantity. Animals are given more dry fodder and little or insufficient green fodder and concentrate cattle feed.*

   - *The specifications for floor space (covered and open), feeding and watering for animals, stores (dry fodder and concentrate), staff quarter, land required for fodder production must be followed as per laid guidelines.*
   - *The flooring under covered area should be pucca (cemented / brick-on-edge. etc) and under open area should be kachcha for proper comfort and rest (follow BIS standards). Pucca flooring with sufficient slope felicitates proper cleaning of shed,*
   - *in view of proper management, the animals must be accommodated in separate sheds or partition as per their category (MiIch, dry, pregnant, growers, calves, adult males, etc). All the sheds must be properly ventilated*
   - *Isolation shed should be at one corner of the gaushala to accommodate infected animals which may become source of infection to the other healthy animals.*

6. *Feeding management*

   All the cattle should be provided feed in adequate quantities and of adequate nutritional quality to meet their requirements for good health and welfare.

   - *The ration should be formulated to become balanced as per requirement of the different category of animals.*

   - *The ration should be comprised of green fodder, dry fodder, concentrate mixture (energy, protein, fat, minerals & vitamins) and salt as per recommendations, Fresh water availability must be ensured to all the animals*

- *Sufficient feeding and watering area as per specifications should be provided in the gaushalas*

7. Health management

- *Proper animal health care facilities (veterinary dispensary along with medicines, trevis, isolation shed, etc) must be ensured to minimize pain, injury and disease in the gaushalas.*
- *Regular vaccination (as per vaccination schedule), deworming, control for ecto-parasites and screening of animals for TB. JD and Brucellosis should be followed in the herd.*

8. Plantation of trees or green belts, wherever feasible, to provide a barrier against spread of foul smell or noise originating from them.

9. Local authorities/corporations should carry out inventory of Dairy farms and Gaushalas located in their jurisdiction

10. 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 laws. Registration may be done preferably through online mode and same may be displayed at their websites

11. All the meet shops /slaughter houses may obtain valid license from concerned authorities and follow guidelines for keeping clean surrounding environment of Jalaun District

12. SPCB shall publish a public notice for 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 in Orange and Green Category, respectively.

13. 13.SPCBilocal bodiesimunicipal corporations shall upload Environmental Guidelines on their website and also circulate to all Dairy farms and Gaushalas.

14. 14. SPCB/focal bodies/corporations should monitor dairy farms and gaushalas on regular basis.

15. 15.SPCB will consider carrying capacity of surroundings while allowing a new establishment and laying down environmental norms.

16. 16. SPCB should provide training and consultation to Gram Panchayat for implementation of guidelines in their jurisdiction. Gram Panchayat should ensure implementation of guidelines by Dairy farms and Gaushalas falling under their jurisdiction for handling and management of wastes.

5. The District Magistrate Jalaun attended the proceedings through Video Conference and submitted that there was huge disturbance due to stray cows who were old and left on roads as they were no more useful for the owners. To counter this problem State Government came up with a notification to capture these cows and put them in make shift gaushalas. In compliance of the aforesaid notification various temporary gaushalas were made in different blocks in district Jalaun and are regularly monitored by the competent officer. The Block Development Officer was appointed as a Nodal Officer to purchase fodder for the cows through e-tendering and to take care.

6. Principal Secretary, Government of Uttar Pradesh also attended the proceedings through Video Conference and submitted that necessary directions have been issued to the District Magistrate to make arrangements for temporary gaushalas which can accommodate 1000-2000 cows. A provision has been made for sudden inspection to ensure the proper management of the gaushalas and during the inspection certain irregularities were found and directions were issued to remediate it immediately. Principal Secretary has further submitted that orders has been issued to identify the land for gaushalas.

7. Following action has also been taken by the District Magistrate for proper management of the gaushalas:

A) That as per record, on 01.07.2022a letter was sent to all the BDO's, all Executive officer's, Chief Veterinary officers and

all Deputy chief Veterinary officers of the district Jalaun apprising the fact that around 41906 Cattle Breeds (Gauvansh) are protected in various Gaushalas of the district and the issue of unprotected Gauvansh and also the conditions of Gaushalas in coming rainy season were highlighted. In order to protect the Gauvansh and Gaushalas. The directions were issued in the letter to take various measures for protection from sky lighting, fodder shortages and medical issues. Which are as follows:-

Preparation of kharanja and platform to avoid water logging in Gaushalas,

Proper shed and tirpal in Gaushalas for rain protection

Proper cleaning of Gauvansh sitting Platform/floor and charhi area in Gaushalas.

Proper HS vaccination of Gauvansh for protection from diseases andinsecticide, spraying of Gaushalas form protection from mosquitoes and other infections

Installation of lightning conductor to protect Gauvansh from sky lighting in Gaushalas.

Prepare for Flood situation based on the historical data and follow the guidelines of National disaster management guidelines — management of floods and develop Animal Care Management Preparedness Plan (ACFMP) as per the guidelines of State Disaster Management Authority of Uttar Pradesh.

8. 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, Civil Appeal No. 7285/2019 filed by the SDMC was dismissed by the Hon'ble Supreme Court. 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. Authorized 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. 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 inspects andthus 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 subject which highlight adverse consequences on the environment due to illegal and unscientific dairy activities. It was also observed that there was violation of various provisions of the Act.

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 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 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.

6. The matter was further reviewed in the light of the report. Commenting on the said report, this Tribunal found that PCB 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, PCB 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. While the PCB 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 PCB itself has to enforce. Even if they have overlapping powers under other statute, the PCB

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. The PCB 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. *We find that the action of the State PCB 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, 2016 but on that ground, the PCB cannot avoid its responsibility. Local bodies must perform their statutory duties.*
10. *In view of above, while disapproving the above illegal action of PCB as well as its inaction, we expect the PCB 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. 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*1 *3show that the Indian livestock emitted 15.3 million tonnes of methane in 2012*2*. 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.6While 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.*

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

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[1] Study carried out by the Indian Institute of Technology Delhi and the DeenbandhuChhotu 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, January2018, Pages 516-522.

2 Id.

5https://www.ajas.info/journal/view.php?number=4850.

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

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.

At this stage, we may refer to the salient features of the CPCB 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	***1951***	***5,44,00,00***	***2,10,00,000***	***7,54,00,000***
2	***1956***	***4,73,00,00***	***2,17,00,000***	***6,90,00,000***
3	***1961***	***5,10,00,00***	***2,43,00,000***	***7,53,00,000***
4	***1966***	***5,18,00,00***	***2,54,00,000***	***7,72,00,000***
5	***1972***	***5,34,00,00***	***2,86,00,000***	***8,20,00,000***
6	***1977***	***5,46,00,00***	***3,13,00,000***	***8,59,00,000***
7	***1982***	***5,92,00,00***	***3,25,00,000***	***9,17,00,000***

8	1987	6,21,00,00	3,91,00,000	10,12,00,000
9	1992	6,44,00,00	4,38,00,000	10,82,00,000
10	1997	6,44,00,00	4,68,00,000	11,12,00,000
11	2003	6,45,00,00	5,10,00,000	11,55,00,000
12	2007	7,30,00,00	5,45,00,000	12,75,00,000
13	2012	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:

SI. 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*

9. *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)

10. 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, vails, 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 (H2S), carbon dioxide (CO2) & 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*

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/corporation 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. GramPanchayat 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)

9. We are of the view that the guidelines (2021) framed and circulated may be 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 at least once in six months. With regard to siting policy, at least minimum distance must be specified from habitations, water bodies, etc. as well as inter-se distance of such establishments 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.

10. Learned counsel for the applicant has further submitted that the guidelines issued by the CPCB and orders and directions/notifications issued by the Government of Uttar Pradesh had not been strictly complied with and a monitoring mechanism was initiated by the State of UP to monitor compliances of the environmental rules by constituting a Committee known as Oversight Committee, Lucknow consisting one Judicial Member and one Executive/Expert Member from the cadre of retired Chief Secretary or Principal Secretary and the Committee is already functioning and compliances are being monitored and reported to this Tribunal.

12. In the relief clause (F), it has been prayed that the matter of compliance of CPCB guidelines, prevention of Cruelty to Animals, transport of animal's rules, prevention of cruelty to animals (slaughterhouse) rules, etc should be given to this Committee and the Committee will obtain and examine the report submitted by the authorities concerned and will submit the report to the Tribunal for consideration. Accordingly, the Committee headed by (presently Justice SVS Rathore), Oversight Committee, Lucknow is authorized and directed to examine and monitor the compliance of the order in coordination with the PCB and department concerned and to submit the report independently within three months. Committee to continue till further order.

13. Additional Chief Secretary, State of U.P has further submitted that the guidelines issued by the CPCB are strictly followed and government has taken a policy of Goverdhan Yojnaana providing certain state aid and steps are being taken to protect the cows and to take strict action against the smugglers/violator of law. He sought 30 days' time to submit the further action taken report. Further Action Taken Report on equipping and

maintaining gaushalas for good health – hygiene and maintaining environment as well as utilizing the stray cattle's for meaningful purposes be filed in six weeks.. Personal appearance of officers attended today through VC are exempted.

List it on **19th October, 2023**

Sheo Kumar Singh, CP

Arun Kumar Tyagi, JM

Dr. A. Senthil Vel, EM

July 20, 2023
PU

"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

Revised
(July 2021)

CONTENT

1. Background

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

Dairy farms are establishment which in-house milching animals to produce milk for distribution or supplying milk to milk processing plants (other than own consumption).

Gaushalas are establishment which in-house weak, sick, injured, handicapped and abandoned homeless cattle/cows to rehabilitate them. Different terminology is used for Gaushalas in different states like Gosadans, Pinjrapole, etc.

As per 20th Livestock Census carried out by Department of Animal Husbandry, Dairying & Fisheries, Ministry of Agriculture and Farmers Welfare, in 2019, state-wise total population of bovine by sex and in urban & rural area is as follow:

Sl. No.	State/UT	Male Bovine	Female Bovine	Total Bovine in Rural Area	Total Bovine in Urban Area	Total Bovine
1.	A & N Islands	10,899	29,239	37,916	2,222	40,138
2.	Andhra Pradesh	15,73,589	92,45,997	1,03,97,667	4,21,919	1,08,19,586
3.	Arunachal Pradesh	3,06,246	4,13,583	7,03,018	16,811	7,19,829
4.	Assam	33,77,705	79,53,249	1,11,05,707	2,25,247	1,13,30,954
5.	Bihar	18,15,419	2,13,02,355	2,23,53,630	7,64,144	2,31,17,774
6.	Chandigarh	3,370	22,247	8,927	16,690	25,617
7.	Chhattisgarh	52,00,444	59,58,232	1,07,13,966	4,44,710	1,11,58,676
8.	Dadar & Nagar Haveli	27,015	13,718	39,223	1,510	40,733
9.	Daman & Diu	587	1,627	1,637	577	2,214
10.	Delhi	34,868	2,13,707	2,39,796	8,779	2,48,575
11.	Goa	18,081	69,373	78,940	8,514	87,454
12.	Gujarat	25,20,220	1,76,56,667	1,93,89,940	7,86,947	2,01,76,887
13.	Haryana	7,48,898	55,47,807	58,27,031	4,69,674	62,96,705
14.	Himachal Pradesh	4,99,630	19,76,892	24,47,638	28,884	24,76,522
15.	Jammu & Kashmir	5,45,636	27,10,666	31,55,710	1,00,592	32,56,302
16.	Jharkhand	51,33,373	74,39,992	1,21,84,691	3,88,674	1,25,73,365
17.	Karnataka	20,39,509	94,14,055	1,08,00,819	6,52,745	1,14,53,564
18.	Kerala	2,07,111	12,36,389	13,15,665	1,27,835	14,43,500
19.	Lakshadweep	785	1,724	2,509	0	2,509
20.	Madhya Pradesh	71,00,049	2,19,57,910	2,76,69,875	13,88,084	2,90,57,959
21.	Maharashtra	53,06,297	1,42,89,699	1,88,97,723	6,98,273	1,95,95,996
22.	Manipur	87,062	1,82,699	2,37,699	32,062	2,69,761
23.	Meghalaya	3,53,580	5,65,704	9,11,065	8,219	9,19,284
24.	Mizoram	15,775	35,992	38,434	13,333	51,767
25.	Nagaland	59,057	58,016	1,09,716	7,357	1,17,073
26.	Odisha	42,66,720	60,95,574	1,00,34,984	3,27,310	1,03,62,294
27.	Puducherry	4,695	69,684	57,322	17,057	74,379

28.	Punjab	3,47,572	61,99,835	60,99,440	4,47,967	65,47,407
29.	Rajasthan	30,06,285	2,46,24,661	2,65,18,272	11,12,674	2,76,30,946
30.	Sikkim	36,209	1,18,164	1,51,972	2,401	1,54,373
31.	Tamil Nadu	8,14,996	92,22,459	89,12,712	11,24,743	1,00,37,455
32.	Telangana	19,09,034	65,49,811	81,46,252	3,12,593	84,58,845
33.	Tripura	1,24,505	6,21,657	7,08,228	37,934	7,46,162
34.	Uttar Pradesh	45,52,599	4,74,83,827	4,95,30,075	25,06,351	5,20,36,426
35.	Uttarakhand	5,50,595	21,67,900	25,34,526	1,83,969	27,18,495
36.	West Bengal	44,35,306	1,52,73,592	1,91,76,146	5,32,752	1,97,08,898
All India		**5,70,33,721**	**24,67,24,703**	**29,05,38,871**	**1,32,19,553**	**30,37,58,424**

2. Categorization of Dairy Farms and Gaushalas

Dairy Farms/Gaushalas are categorised on basis of nos. of bovine animals in a Dairy/Gaushala located in urban, peri-urban & rural area.

2.1 Dairy Farms

According to inventory received from SPCBs/PCCs and it is analysed that 60-70% Dairy Farms are having upto 25 animals, 15-20% Dairy Farms are having upto 100 animals and 15-20% Dairy Farms are having more than 100 animals. Therefore, they have been categorized as small, medium & large Dairy farm, respectively. It has been analysed that 5-10%, 5-10% and 80-90% Dairy Farms located in urban, peri-urban & rural area, respectively.

2.2 Gaushalas

Similarly, inventory received from SPCBs/PCCs for Gaushalas and it is analysed that 15-20 % Gaushalas having upto 100 animals and 80-85% Gaushalas having more than 100 animals. Therefore, Gaushala having upto 100 animals, 1000 animals & more than 1000 animals can be categorized as small, medium & large Gaushala, respectively. It has been analysed that 50-55%, 5-10% and 35-45% Gaushalas located in urban, peri-urban & rural area, respectively.

3. Environmental Issues in Dairy Farms and Gaushalas

Major environmental issues of Dairy farms and Gaushalas are related to disposal of dung and urinal wastewater. Poor handling & disposal of dung and wastewater causes water pollution & odour problem. A Bovine animal, on an average, weigh 400 kg and discharges 15-20 kg/day of dung and 12-14 litres/day of urine. Solid wastes produced from Dairy farms and Gaushalas are bovine dung, feed residue, etc. which are organic and non-hazardous in nature but requires proper handling and disposal.

3.1 Dairy Farms

3.1.1 Urban & Peri-urban Area

Majority of Dairy Farms are in clusters. Issue of disposal of dung & wastewater from Dairy farms is predominant in urban & peri-urban area where it is discharged in drains, leading to clogging, which ultimately reach to and pollute rivers. These clogged drains become

breeding ground for mosquitoes creating health hazards and odour nuisance. Wastewater is generated from floor cleaning, bathing of animals, urine, etc. and disposed of without treatment into drains. Dung produces many gases/compounds such as carbon dioxide, ammonia, hydrogen sulphide, methane, etc. which emitted into atmosphere and responsible for odour.

3.1.2 Rural Area

Dairy farms located in rural area are run by small & marginal farmers which produces milk for self-consumption and excess sell in local market. Dung being utilized as a manure in field. Problem arises when dung is stored for very long time and create odour. Wastewater generated majorly from urine which is generally disposed of without treatment into land due to unpaved floor or goes to nearby drain.

3.2 Gaushalas

3.2.1 Urban & Peri-urban Area

Dung is generally stored for very long time and creating odour issues. Sometimes, it finds its way to drains also. Dung is utilised as a manure in field and also in making dung wood/dung cakes. Wastewater is generated from floor cleaning, bathing of animals, urine, etc. Bathing of animal is done occasionally & floor cleaning is done mechanically. The urine usually discharges in drain without any treatment. However, it is also utilized for medicinal uses. Therefore, wastewater generated per bovine animal from Gaushalas is comparatively lower than Dairy Farms.

3.2.2 Rural Area

Dung is being utilised as a manure in field and also used as fuel for domestic purpose. Problem arises when it stored for very long time and creating odour issues. Wastewater is generated from floor cleaning, bathing of animals, urine, etc. Bathing of animal is done occasionally & floor cleaning is done mechanically. The urine usually discharges in drain without any treatment. However, it is also utilized for medicinal uses.

4. Methods for Disposal/Utilisation of Dung

Disposal of bovine dung is biggest challenge in dairy farms and gaushalas. However, bovine dung, if effectively utilised, can be a resource of manure & energy. Bovine dung may be used for many purposes i.e. for combustion (dung wood) or for producing biogas or as soil conditioner or as fertilizers or as material for wall plastering, etc. Following methods for disposal/utilisation of solid wastes (dung) may be adopted:

a. *Composting/Vermicomposting*: Composting is a manure management practice to reduce impact on the environment. Composting is 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 land as manure. Vermicomposting is method of preparing compost with 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*: Biogas plants are best way to handle dung waste. Biogas is generated in process of biodegradation of organic materials under anaerobic conditions which may be utilised for cooking and power generation. Biogas plant generated digested organic manure for crops. Biogas can be processed and filled in cylinders. 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 or dung cake to be used as fuel*: Bovine dung can be used as fuel as a replacement of firewood. Bovine dung can be dewatered and converted to value added products such as logs, powder etc. by mechanized/semi-mechanized machines.

Following options for disposal/utilization of dung may be adopted by Dairy Farms and Gaushalas:

Sl. No.	Dairy Farms/ Gaushalas	Methods for Disposal/Utilization of Dung
1.	Small Dairy Farms	• Composting/vermicomposting, or • Manufacture of dung wood/dung cake, or • Combination of both
2.	Medium Dairy Farms	• Combination of any of three methods for disposal/utilization of dung
3.	Large Dairy Farms	• Biogas/compressed biogas production or • Combination with any of remaining method
4.	Dairy Farms in Rural Area	• Composting/vermicomposting, or • Manufacture of dung wood/dung cake
5.	Dairy Farms in Cluster	• Common Biogas/compressed biogas production, and • Any of remaining method at individual level
6.	Small & Medium Gaushalas	• Combination of any of three methods for disposal/utilization of dung
7.	Large Gaushalas	• Biogas/compressed biogas production or • Combination with any of remaining method

5. Guidelines for Waste Management in Dairy Farms

Following guidelines are framed for management of wastes from Dairy farms. These guidelines are applicable to establishment which are discharging their wastes into environment. These establishments shall also follow existing laws, rules, guidelines, directions and standard operating procedures issued by different organizations.

5.1 Guidelines for Waste Management in Dairy Farms located in Urban & Peri-urban Area

5.1.1 Solid Waste Management

Guidelines to be followed for management of solid wastes are as under:

i. Dung from floor of shed should be collected at regular interval, so as to keep floor clean. Surrounding areas should also be cleaned regularly to prevent obnoxious smell in area.
ii. Premises and its surrounding areas should be properly sanitized and disinfected, e.g. by sprinkling crushed lime.
iii. Dung & fodder residue etc. should not be washed into drains in order to avoid clogging of drains. Local bodies/corporations/SPCBs should ensure that untreated wastes are not discharged outside premises.
iv. Collected solid wastes should be stored properly for its utilization.
v. Small Dairy Farms may adopt dung for manufacture of dung wood/dung cake or composting/vermicomposting or combination of both methods for disposal/utilization of solid wastes. In case of cluster, biogas/compressed biogas production may be adopted for disposal/utilization of solid wastes in association with entrepreneurs or local dairy farmers association. Local bodies/corporations/SPCBs should facilitate Dairy farmers/entrepreneurs/NGOs in setting up of individual or common utilization facilities.
vi. Medium & Large Dairy Farms may adopt a combination of disposal/utilization methods like manufacturing of dung wood or biogas generation or vermicomposting. However, Large Dairy Farms may setup biogas/compressed biogas production facility either by themselves or in association with entrepreneurs.
vii. Domestic hazardous wastes (vaccines, vails, medicines, syringes, etc.) should be disposed as per provisions of "Solid Waste Management Rules, 2016". If they have their own medical facilities then wastes should be disposed as per provisions of "Bio-medical Waste Management Rules, 2016".

5.1.2 Wastewater Management

Guidelines for management of wastewater are as follow:

i. Water should be judiciously used for bathing of bovines and other services including floor cleaning to contain wastewater quantity to 100 litres/day/bovine.
ii. Adequate infrastructure should be provided to ensure proper handling, treatment and disposal of wastewater. They may set-up individual or common treatment facilities where in cluster. Local bodies/corporations/SPCBs should facilitate Dairy farmers/ entrepreneurs/NGOs in setting up of individual or common treatment facilities.
iii. Wastewater should be adequately treated so as to meet standards as prescribed by SPCBs/PCCs.
iv. Flooring of shed should be properly paved (impervious) with a wastewater collection system. However, floor should not be slippery in order to ensure safety of animals.

5.1.3 Air Quality Management

Guidelines for management of air quality/emissions are as follow:

i. Animal housing should be 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. Good housekeeping practices like maintaining proper sanitary conditions, protecting dung from unwanted pests/insects should be followed in order to minimize odour nuisance.
iii. Floor, feeding, water and air spaces available for each animal should be adequate for standing, resting, loafing, movement, feeding, watering and ventilation. Space requirements should be provided as per Bureau of Indian Standards (BIS) (refer BIS: 12237-1987 given at **Annexure-I**).
iv. It is suggested to obtain ration advisory for improving/modifying quality and dosage of feed/forage/supplements from any of agricultural institutes/departments like Krishi Vigyan Kendra, State Dairy Department, Animal Husbandry Department, NDRI, NDDB, etc. in order to reduce enteric methane generations from livestock. It is beneficial to animal health/nutrition and reduced impact on environment.
v. Plantation of trees or green belts, wherever feasible, to provide a barrier against the spread of foul smell or noise originating from them.

5.1.4 Siting Policy

Siting criteria will be applicable for new establishment. Existing establishments should take appropriate environmental friendly practices as per Guidelines. Dairy farm shall be setup as per siting policy/guidelines of local administration and may follow criteria as below:

i. It should be located in area wherever permissible and atleast 100 meters away from residential dwellings, health centres/hospitals & schools in order to avoid odour problem,
ii. Atleast 200 meters away from water spread area of major watercourses like Lake, canal and major drinking water sources,
iii. Away from flood plain area of River and areas having shallow groundwater.
iv. Atleast 5 meters of inter-se distance between two establishments (each establishment should provide 2.5 meters from each side) for ventilation should be provided and developed green belt.

5.2 Guidelines for Waste Management in Dairy Farms located in Rural Area

5.2.1 Solid Waste Management

i. Dung should be collected & stored properly for its utilization. It should be used as compost in field or in making dung wood or vermi-compost. Biogas production may be practiced wherein cluster as a source of energy for rural area.

ii. Dung & fodder residue should not be washed into drains in order to avoid clogging of drains and surrounding areas should also be cleaned regularly to prevent obnoxious smell in area.
iii. Provisions of "Solid Waste Management Rules, 2016" should be followed for disposal of domestic hazardous wastes (vaccines, vails, medicines, syringes, etc.).

5.2.2 *Wastewater Management*

i. Water should be judiciously used to contain wastewater quantity to 100 litres/day/ bovine.
ii. Floor should be paved and wastewater should be collected and utilized for agriculture purpose. Floor should not be slippery in order to ensure safety of animals.
iii. Wastewater should be adequately treated so as to meet standards as prescribed by SPCBs/PCCs.

5.2.3 Air Quality Management

i. Animal housing should be ventilated allowing sufficient supply of fresh air to remove humidity, dissipate heat and prevent build-up of gases.
ii. Good housekeeping practices should be followed in order to minimize odour nuisance.
iii. Floor, feeding, water and air spaces available for each animal should be adequate for standing, resting, loafing, movement, feeding, watering and ventilation. Space requirements should be provided as per Bureau of Indian Standards (BIS) (refer BIS: 11799-2005 given at **Annexure-II**).
iv. It is suggested to obtain Ration advisory for improving/modifying quality and dosage of feed/forage/supplements from any of agricultural institutes/departments like Krishi Vigyan Kendra, State Dairy Department, Animal Husbandry Department, NDRI, NDDB, etc. to reduce enteric methane generations from livestock.
v. Plantation of trees or green belts, wherever feasible, to provide a barrier against spread of foul smell or noise originating from them.

5.2.4 Siting Policy

Siting criteria will be applicable for new establishment. Existing establishments should take appropriate environmental friendly practices as per Guidelines. Dairy farm shall be setup as per siting policy/guidelines of local administration.

These should be located away from residential dwellings/hospitals/schools in order to avoid odour issue as per siting norms of local administration. It should be atleast 100 meters away from water spread area of major drinking water sources in order to avoid contamination of water bodies. These should be away from flood plain areas of River and areas having shallow groundwater.

Atleast 5 meters of inter-se distance between two establishments for ventilation, this space of 5 meters (2.5 meters from each side from each unit) shall be developed for green belt.

6. Guidelines for Waste Management in Gaushalas

Following guidelines are framed for management of wastes from Gaushalas located in urban, peri-urban & rural area. These guidelines are applicable to establishment which are discharging their wastes into environment. These establishments shall also follow existing laws, rules, guidelines, directions and standard operating procedures issued by different organizations.

6.1 Solid Waste Management

Guidelines to be followed for management of solid wastes are as under:

i. Dung from floor of shed should be collected at regular interval, so as to keep floor clean. Surrounding areas should also be cleaned regularly to prevent obnoxious smell in area.
ii. Premises and its surrounding areas should be properly sanitized and disinfected, e.g. by sprinkling crushed lime.
iii. Dung & fodder residue etc. should not be washed into drains in order to avoid clogging of drains. Local bodies/corporations/SPCBs should ensure that untreated wastes are not discharged outside premises.
iv. Solid wastes should be stored properly for its utilization in dung wood manufacturing or biogas generation or vermicomposting. In case of small & medium scale Gaushalas, a combination any of methods may be adopted for utilization of dung wherein large scale Gaushalas may setup biogas generation facility at its own or in partnership with entrepreneurs.
v. Domestic hazardous wastes (vaccines, vails, medicines, syringes, etc.) should be disposed as per provisions of "Solid Waste Management Rules, 2016". If they have their own medical facilities then the wastes should be disposed as per provisions of "Bio-medical Waste Management Rules, 2016".

6.2 Wastewater Management

Guidelines for management of wastewater are as follow:

i. Water should be judiciously used for bathing of bovines and other services to contain wastewater quantity to 50 litres/day/bovine. (As water utilized by Gaushala is less in comparison to Dairy Farm due to occasional bathing & mechanized floor cleaning).
ii. Adequate infrastructure should be set-up to ensure proper handling, treatment and disposal of wastewater. Local bodies/corporations/SPCBs should facilitate Gaushala owners/ entrepreneurs/NGOs in setting up of treatment facilities.
iii. Wastewater should be adequately treated so as to meet standards as prescribed by SPCBs/PCCs or utilized for various medicinal purpose.
iv. Flooring of shed should be properly paved (impervious) with a wastewater collection system. However, floor should not be slippery in order to ensure safety of animals.

6.3 Air Quality Management

Guidelines for management of air quality/emissions are as follow:

i. Animal housing should be ventilated allowing sufficient supply of fresh air to remove humidity, dissipate heat and prevent build-up of gases.
ii. Good housekeeping practices like maintaining proper sanitary conditions, protecting dung from unwanted pests/insects should be followed in order to minimize odour nuisance.
iii. Floor, feeding, water and air spaces available for each animal should be adequate for standing, resting, loafing, movement, feeding, watering and ventilation. Space requirements should be provided as per Bureau of Indian Standards (BIS) (refer BIS: 11942-1986 given at **Annexure-III**).
iv. It is suggested to obtain Ration advisory for improving/modifying quality and dosage of feed/forage/supplements from any of agricultural institutes/departments like Krishi Vigyan Kendra, State Dairy Department, Animal Husbandry Department, NDRI, NDDB, etc. to reduce enteric methane generations from livestock.
v. Plantation of trees or green belts, wherever feasible, to provide a barrier against spread of foul smell or noise originating from them.

6.4 Siting Policy

Siting criteria will be applicable for new establishment. Existing establishments should take appropriate environmental friendly practices as per Guidelines. Gaushala shall be setup as per siting policy/guidelines of local administration.

These should be located atleast 100 meters away from residential dwellings/schools/hospitals in order to avoid odour issue and away from the water spread area of major drinking water sources. These should be away from flood plain areas of River and areas having shallow groundwater. Atleast 5 meters of inter-se distance between two establishments for ventilation, this space of 5 meters (atleast 2.5 meters from each side from each unit) shall be developed for green belt.

7. Regulatory/ Monitoring Mechanism for Dairy Farms & Gaushalas

i. Local authorities/corporations should carry out inventory of Dairy farms and Gaushalas located in their jurisdiction in inventory performa given at **Annexure-IV** and same should be updated & shared with concerned SPCB/PCC on annual basis (calendar year wise).
ii. 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 laws. Registration may be done preferably through online mode and same may be displayed at their websites.
iii. SPCBs/PCCs shall publish a public notice for Dairy farms & 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 in Orange and Green Category, respectively.
iv. SPCBs/PCCs/local bodies/municipal corporations shall upload Environmental Guidelines on their website and also circulate to all Dairy farms and Gaushalas.

v. Concerned SPCBs/PCCs/local bodies/corporations should monitor dairy farms and gaushalas on regular basis to ensure proper disposal of bovine dung and wastewater to check compliance of environmental norms. SPCBs/PCCs will consider carrying capacity of surroundings while allowing a new establishment and laying down environmental norms.

vi. SPCBs/PCCs shall carry out environmental audit of atleast 2 Dairy farms and 2 Gaushalas, randomly selected from each district of State/UT and submit compliance and action taken report to CPCB on half yearly basis.

vii. SPCBs/PCCs shall submit status of compliance of guidelines by Dairy farms and Gaushalas located in their jurisdiction in form of report once in six months to CPCB for Audit purpose.

viii. CPCB shall carry out environmental auditing of 4 Dairy farms and 4 Gaushalas in each State/UT, randomly selected based on information received from SPCBs/PCCs on annual basis.

ix. In case of any violation of environmental norms under Water (Prevention and Control of Pollution) Act, 1974, Air (Prevention and Control of Pollution) Act, 1981 and Environmental (Protect) Act, 1986 by Dairy farms and Gaushalas, concerned SPCBs/PCCs should impose environmental compensation as per 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.

x. SPCBs/PCCs should provide training and consultation to Gram Panchayat for implementation of guidelines in their jurisdiction. Gram Panchayat should ensure implementation of guidelines by Dairy farms and Gaushalas falling under their jurisdiction for handling and management of wastes.

xi. 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 & Gaushala workers/entrepreneurs by local bodies/ SPCBs/PCCs on regular interval.

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UDC 631·223·24·012

IS : 12237 - 1987

(Reaffirmed 2004)

Indian Standard

RECOMMENDATIONS FOR LOOSE HOUSING SYSTEM FOR ANIMALS

Livestock Structures and Equipment Sectional Committee, AFDC 17 [Ref : Doc : AFDC 17 (2816)]

1. Scope — This standard recommends the layout and constructional details of loose housing system for animals.

1.1 Various features covered in this standard are primarily meant for herd size of 50 adult cows or buffaloes.

2. Terminology — For the purpose of this standard, the following definitions shall apply.

2.1 *Loose Houst* — Animal house comprising of an open paddock or yard with a shelter having common watering and feeding facilities and in which animals are kept untied.

2.2 *Paddock or Yard* — An open area surrounded by walls, fences or rails for accommodating cattle. This area is meant to provide open air exercise to the animals.

2.3 *Shelter*—This is a covered area, normally one-third of the area of the paddock and is located in the middle or along one side of the latter. This is the area where the animals may take protection from direct sun or rain.

2.4 *Feeding Arrangements*—These comprise of common manger normally situated along the long axis of the covered area or sometimes an additional one in the open area.

2.5 *Watering Arrangements* — These comprise of water tanks made as partitioned portions of feed manger or as separate units in the open area.

3. Selection of Site

3.1 The housing system should meet the provisions given under **3.1** to **3.4** of IS : 11786-1986 'Recommendations for cattle housing for an average farmer'.

3.2 The site shall be such that the longer axis of the wall of the shed should be oriented east to west in all areas except temperate Himalayan and hilly regions. In coastal and desert areas, the longer axis of the shed shall be oriented across the prevailing wind direction in order to protect the roof from being blown off by high wind and at the same time to provide sufficient air movement in the shed. In sub-mountainous region, the buildings should be so sited as to avail of the natural aeration and drying. The site shall be away from other buildings.

4. Herd Size—A 50-cow or buffalo dairy farm normally comprises of 35 to 40 cows, buffaloes, 10 to 15 dry animals, 35 to 40 male and female or 15 to 20 female calves, 20 to 26 growing female stock of 1 to 3 years age, 1 or 2 bulls and 2 or 3 pair of bullocks.

5. Building Units — In general, the buildings can be grouped into following three categories:

a) Buildings in which there is maximum labour activity, frequent handling of animals and need for closer and constant supervision, such as milking shed, milch animal shed, down-calver sheds (maternity pens), suckling calf shed and milk house.

b) Buildings in which there is lesser labour activity, no routine handling of animals and less need for closer supervision, such as dry animal-cum-bullock shed, young stock shed and bull shed.

c) Ancillary sheds where no animals are housed but activities relating to feeding and management of stock are performed, such as stores for ration and dry fodder, chaffing shed and silos.

6. Layout

6.1 *Arrangement of Buildings* — Economization of space without sacrificing free flow of air and natural lighting or making conditions crampy for animals, should be the broad guideline in arranging the different buildings on a dairy farm. As far as possible, buildings within each group may be

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arranged together, with the buildings of group mentioned under 5(a) getting the most central and most approachable area. The buildings of group mentioned under 5(c) should be close to or have easy access to the feeding area of the animal shed.

Note — Shady trees planted and protected in the open area and around the buildings are essential ingredient of loose housing system.

6.2 Typical layouts comprising the various units are given in Fig. 1 and 2 for guidance.

Note — These layouts can be modified depending upon size and shape of available land, topography of land, finances, special needs, etc. However, such modifications may not be contrary to the general principles given in 5, 6 and 7.

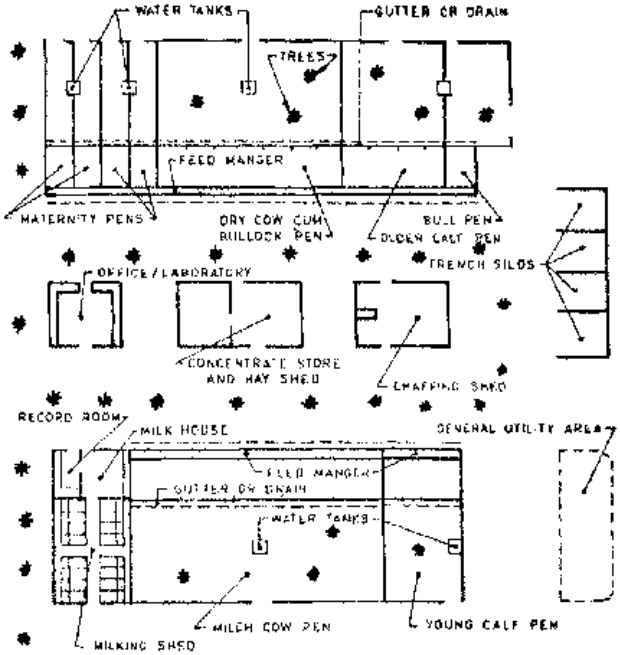


FIG. 1 LAYOUT SHOWING THE FUNCTIONAL DETAIL OF LOOSE HOUSING IN THREE ROWS

7. Description of Sheds

7.1 *Milking Shed* — This is a fully covered barn type building in which lactating cows are milked. It should be located at a central place with all other buildings arranged around it. There should be individual standings or stalls or stanchions in two rows in a tail-to-tail arrangement. Each standing can be used for milking 3 to 5 cows or buffaloes in one hour under hand milking conditions; the number of standings required on a farm, thus, will be about one-fourth of the number of milch animals. The length and width of the standing shall be decided according to the size of the animals and may vary from 1·5 to 1·7 m in length and 1·05 to 1·20 m in width. The width of the central passage shall be 1·5 to 1·8 m. The central passage shall have a gentle slope from the centre outwards towards the drain. There shall be two continuous mangers, one on each side along the heads of standing rows and a 0·75 m wide feeding alley beyond each manger. There shall be a shallow U-shaped drain 20 cm wide, one on either side of the central passage.

7.1.1 The floor of the standing should be paved with a slope of 1 in 40 towards drains. There should be walls along the length and at each end of the shed to support the beams or the roof. The roof of the shed should be gabled. The eaves of the roof shall project out at least 50 cm away from the side walls. The side walls need not necessarily be complete; large open spaces may be left in the side walls at suitable intervals. When walls are complete up to the roof, as is necessary intervals. When walls are complete up to the roof, as is necessary in cooler and/or heavy rainfall areas, there shall be windows and ventilators at suitable places in the walls.

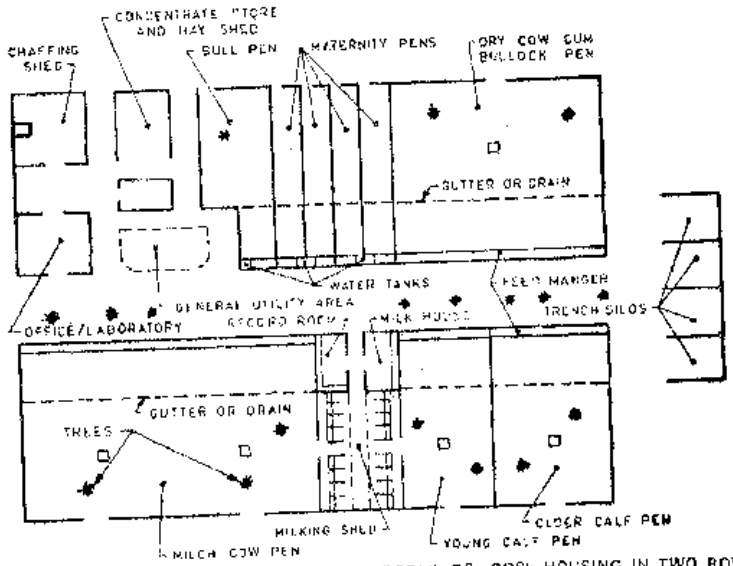


FIG. 2 LAYOUT SHOWING THE FUNCTIONAL DETAIL OF LOOSE HOUSING IN TWO ROWS

7.1.2 Some device should be arranged to secure individual animal by neck in each standing. The milking barn may, if necessary, be extended to accommodate down-calvers as well as calves. Milch animal, that are in heat, can be left after milking in the standings and inseminated right there.

7.2 *Sheds for Milch Dry Animals* — These are sheds for housing milch animals and dry animals separately. On small farms, a partition can be raised in one shed for housing dry animals separately. On farms with only a few animals, all the animals, milking or dry can be housed together.

7.2.1 These are simple sheds comprising a covered portion and an adjoining open paddock. The manger and water tank should also be provided. The covered area should preferably be of cement concrete, brick-on edge, stone slab, *Moorum* or *Kunkar*, flooring may be used.

7.3 *Maternity Pens* — Pregnant cows are to be transferred into maternity pens or calving boxes two to three weeks before the expected date of calving. The number of calving boxes of maternity pens required is about 5 percent of the number of breedable female stock on the farm. These should be located near the living quarters of farmer and/or milking barn so that the down-calvers are constantly observed. The pens can be constructed either in a row or in groups of two or four.

7.3.1 The dimensions of each calving pen shall be about 3 × 4 m for covered area and another 3 × 4 m for the open paddock. The covered area shall have a 1·25 m high wall all around, barring a 1·2 m wide gate opening into the open lot. A manger and a water trough of proper size should be constructed in each pen. The floors shall be *Moorum*, brick-on-edge or cement paved with a 1 in 40 slope towards the drain.

7.4 *Sick Animal Sheds* — Sheds more or less similar to maternity pens in structure shall be located well away from the other sheds so that these sheds are inaccessible to other animals.

7.5 *Calf Shed* — The calf shed can be located either at the end or on the side of the milking barn. This facilitates calves to their dams quickly at milking time (if weaning is not practised), and hand feeding of milk to calves if weaning is practised. If there is a large number of calves, the calf shed shall form a separate unit, but shall be located near to milking barn, so that calves of different age groups can be housed separately.

7.5.1 The dimensions of calf shed depend on the number of calves to be housed. The dimensions of mangers and water troughs shall conform to specifications given in **8.2**. Floors shall be of cement concrete in covered area and brick-on-edge in open area.

7.6 *Young Stock Shed* — Older heifer calves from about six months of age to breeding age are to be housed separately from the suckling calves. Generally, no male calves are kept on farms beyond six months of age. When a large number of young stock is there, they should be divided into different age groups and each group housed separately.

7.6.1 When their number is small, the young stock shed may be an extension of the dry animal shed or it may be a separate unit nearer to it. In the latter case, this shed shall be constructed in a single row. The constructional details of this shed are the same as for cow sheds except for the difference in dimensions of mangers and water troughs.

7.7 *Bull Sheds* — The bull sheds should be constructed towards one end of the farm. There shall be one shed for each bull, the number of bulls required being one for every 50 breedable females on the farm, if natural breeding is practised. When artificial insemination service facilities are available nearby, there may be no necessity to keep bulls on the farm. The bull shed shall have covered area of 3 × 4 m dimensions, leading into a paddock of 120 m^2.

7.8 *Trees* — Shady trees, preferably quick growing, may be chosen for planting in and around animal sheds. Leaves and pods of many of these can be used as cattle feed. The following species may be considered:

a) *Acacia arabica*
b) *Acacia leucophloea*
c) *Madhuca longifolia* or *Madhuca indica*
d) *Cassia fistula*
e) *Cordia dichotoma*
f) *Erythroxylon monogynum*
g) *Ficus bengalensis*
h) *Ficus religiosa*
j) *Helicteres isora*
k) *Kydia calycina*
m) *Leucaena leucocephala*
n) *Mangifera indica*
p) *Salix tebrasperma*
q) *Syzygium jabolanum*
r) *Tamarindus indica*
s) *Wrightia tictoria*

7.8.1 As far as possible, existing trees of the site proposed for construction should not be destroyed but incorporated within the layout. Further, trees should be planted at pre-determined spots within the layout even before the construction is completed, and the same may be nurtured and protected by tree guards.

8. Constructional Details

8.1 *Floor* — It shall be in accordance with 7.1.1 of IS : 11799-1986 'Recommendations for cattle housing for a rural milk producer'.

8.2 *Manger* — The manger shall meet the provisions of 7.1.2 of IS : 11799-1986 except that the wooden planks are not recommended for its construction.

8.3 *Water Supply* — Water troughs or tanks should be constructed in each shed for the convenience of animals. The water troughs should be built with reinforced concrete, bricks with cemented junctions, stone slabs with cemented joints or plain thick galvanized iron sheets. The water tanks may be round (generally in larger pens) or rectangular and shall be located at a convenient place in the shed. Its dimensions shall be more or less the same as for mangers for different classes of livestock. A two metre wide paved platform shall be provided adjacent to the water troughs. In smaller pens, a tank can be made by raising an impervious partition towards one end of the continuous manger. Each water tank should have one hydrant, the outflow from which may be controlled by a float valve. The hydrant can also be left without a tap, and water let into the troughs at regular intervals so that the water trough may get filled as the animals empty them. Hydrants with spouts to attach a hose pipe should also be fixed in each shed at convenient places. The pens and animals (buffaloes) can be washed by flushing water through a hose. Wherever possible, the water supply pipe lines should run underground.

8.4 Manure Disposal

8.4.1 *Liquid manure* — The liquid manure and wash water should be taken out of the shed by a shallow U-shaped gutter or drain located longitudinally to the long axis of the shed at the junction of the open and the covered area. Outside the shed, liquid manure from each shed can be lead by means of drains (preferably closed or sub-terrain drains) to a main farm drain. This main drain leads liquid waste ultimately to a liquid manure storage tank through an inspection chamber and a settling chamber. The drains should be constructed out of the same materials as that of floors. The width of the drains may vary between 30 to 40 cm. A slop of 1 to 40 should be provided to the drains towards storage tank so that the liquid may flow down easily. Shallow U-shaped drains are preferable. Drains in a row of pens should be made continuous by routing them through holes in the intervening partition walls.

8.4.2 *Solid manure* — When solid manure is collected separately, it should be stored properly in manure pits so that the same gets well decomposed. Manure pits should be located as far off as possible from animal habitations after duly considering the labour required in transporting manure from the sheds to the pits. This is necessary as a safeguard against foul odours existing near milk parlours and as a measure against fly menace. For reasons of hygiene, manure pits should be at a minimum distance of 10 m from wells, rivers and tanks and from the boundary of the adjoining land property. Further, they must be impermeable to water. The size and the number of manure pits required depend on the production of manure on the farm. Total manure storage capacity may be planned on 33 kg per day or 0·045 m³ on per animal basis.

8.5 *Pillars* — Provisions given in **7.3** and **7.3.1** of IS : 11799-1986 should be followed.

8.6 *Walls and Roofs* — These should be in accordance with **7.2** and **7.4** of IS : 11799-1986, respectively.

8.7 *Paddock and Shelter* — The paddock and shelter of each shed should form an integrated unit so that the animals can move freely to any part of the paddock shelter combine. The sheltered regions should be paved while the paddock may be left unpaved, but well rammed. The space per animal shall be as given in Table 1.

TABLE 1 SPACE OF PADDOCK AND SHELTER

Sl No.	Category of Animal	Paddock (Open Area) m²	Shelter (Covered Area) m²	Maximum Number of Animals to be Kept in Each Shelter
i)	Buffalo	9	4	40
ii)	Cow	7	3·5	40
iii)	Young stock	4	2	30
iv)	Calf	2	1	30
v)	Calving pen	12	12	1
vi)	Bull	25	12	1

8.7.1 *Manger and water trough* — Manger and water through may be constructed in paddocks with reinforced cement concrete, brick with cement mortar or stone slabs with cement joining. A 2 m wide paved platform shall be provided away from trough to withstand the heavy treading of animals and permit easy washing and cleanliness.

8.8 *Fencing* — It shall be in accordance with **8.2** of IS : 11799-1986.

8.9 *Gate* — A gate of suitable type and size may be provided taking care that they are hinged firmly and raised well above the ground. Braces shall be positioned vertically.

9. Ancillary Structures

9.1 *Milk House* — Milk collection, recording, testing and cooling facilities as well as facilities for cleanning and stacking of milking pails and milk cans have to be provided in this house. This floor space can accommodate the milk recording equipment, milk cooling device in the form of bulk cooler, can racks, milking pail rack, sinks, washing outfit and furniture of the milk recorder. On very large farms, the different components of the milk house, that is recording-cum-milk cooling room, milk utensils and equipment room and washing room, may be constructed as separate units. The doors and the windows of the milk house shall be made fly-proof. The flooring of the room shall be of cement concrete, impervious and reinforced with iron strips located at suitable distances to make it hard wearing. The walls should be lined with white glazed tiles up to a height of 1·5 m. A suitable platform or concrete slab in the form of bench shall be provided for keeping the milk testing apparatus.

9.2 *Stores* — There shall be one main concentrate store-cum-feed mixing room at a distant place but it is advisable to have a small ration room near the milking barn for storing prepared concentrate mixture temporarily for a day or two. On smaller farms, one feed store near the milking barn would be sufficient. The feed room shall be damp-proof and rodent-proof.

9.3 *Silo* — Suitable size trench silo may be provided.

9.4 *Hay/Straw Shed* — Shed, preferably with walls on three sides may be provided for storing straw or hay. Storing hay or straw as stacks in the open results in excessive wastage in the form of spoilage and deterioration. Sometimes, a simple shed with gabled roof is used. The hay shed shall be away from animal sheds because of fire hazards. On larger farms, the hay sheds can be made into a sort of self-feeding hay bunks by placing movable wooden partition on one side edge of the hay shed so that the animals can eat hay at will from only the portions accessible through this wooden partition and do not spoil the hay excessively.

9.5 *Chaffing Shed* — A shed for chaffing the fodder with chaffing machine or ensilage cutter is erected. The shed may have provisions for power supply to the machine.

9.6 *Office Room* — Depending upon the size of the farm, an office room may be provided. The office room may also be used for keeping medicines and instruments required for treating sick animals. A toilet may also be provided. A visitors' room may be attached to the office room.

9.7 *Trevis or Cattle Crutch* — A cattle trevis may be provided in the general utility area for securing animals for insemination, treatment, etc.

9.8 *Seggretion Room* — Provision may be made for a seggretion room for keeping new animals introduced in the herd for some initial days before their mixing up with the herd.

9.9 *Lighting* — Provision of lighting shall be made; in case electricity is available, a 25 W bulb for each 10 m^2 space or 60 W bulb for each 20 m^2 space or equivalent tube light may be provided.

9.10 *Biogas Plant* — A bio-gas plant of suitable size may be installed so that the farm wastes (biomass) can be used to produce gas for use on the farm.

EXPLANATORY NOTE

Animal housing helps in moderating the range of microenvironment to which the animals are exposed and optimizes their production by protecting them from extreme climates. Normally, the animal housing consists of either barn system or loose system.

This standard covers the details of loose housing which is becoming now more popular. A number of Indian Standards on barn system of housing have already been published.

In the preparation of this standard, assistance has been derived from the Department of Livestock Production and Management, Haryana Agricultural University, Hissar.

Printed at Printograph, New Delhi India.

IS 11799 : 2005

भारतीय मानक

ग्रामीण क्षेत्रों में पशु-आवास के लिए अनुशंसाएँ

(पहला पुनरीक्षण)

Indian Standard

RECOMMENDATIONS FOR CATTLE HOUSING IN RURAL AREAS

(First Revision)

ICS 65.040.10

BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

Price Group 5

May 2005

Livestock Feeds, Equipment and System Sectional Committee, FAD 5

FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Livestock Feeds, Equipment and System Sectional Committee had been approved by the Food and Agriculture Division Council.

Proper housing is an important feature in raising the production capabilities of animals, in addition to good breeding, feeding, selection and disease control. It is conducive to good health, comfort protection from inclement weather and the animals are capable of utilizing their genetic abilities and feed for optimum production.

Cattle raising and dairying is practiced in the country by various interests. Generally these interests are : (a) an average farmer who has not more than a pair of bullocks and two or three milch animals with their calves; (b) a rural milk producer normally having a total of about 20 animals including about 12 milch animals, their followers and a pair of bullocks; (c) *GAUSHALAS* and other organized milk producers; and (d) large dairy farms.

This standard was published in 1986, covering recommendations for cattle housing for rural milk producer. This revision has been taken up to enlarge the scope of the standard by incorporating the recommendations for cattle housing for an average farmer (IS 11786:1986 'Recommendations for cattle housing for an average farmer') and updating the referred standard.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

RECOMMENDATIONS FOR CATTLE HOUSING IN RURAL AREAS

(First Revision)

1 SCOPE

This standard covers recommendations for layout and constructional details of a cattle shed meant for an average farmer normally having three milch animals with their calves and a pair of bullock and rural milk producer normally having 20 animals which may include about 12 milch animals, their followers and a pair of bullocks.

2 REFERENCES

The following standards contain provisions which through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below:

IS No.	*Title*
258 : 2000	Potash alum — Specification (*second revision*)
712 : 1984	Specification for building limes (*third revision*)
797 : 1982	Common salt for chemical industries (*third revision*)
3583 : 1988	Specification for burnt clay paving bricks (*second revision*)
3622 : 1977	Specification for sand stone (slabs and tiles) (*first revision*)

3 TERMINOLOGY

For the purpose of this standard, the following definitions shall apply.

3.1 Paddock or Yard — An open area surrounded by walls, fences or rails for accommodating cattle. This area is meant to provide open air exercise to the animals. It generally contains manger(s) or trough(s) with or without ties to control animals for different purpose.

3.2 Standard (Stall) — The floor space provided within a shed for an individual animal to stand or lie.

4 SELECTION OF SITE

4.1 The shed shall be located on dry, elevated and well-drained area with consideration for future expansion.

4.2 The shed shall preferably be located at a place where there are enough suitably placed trees to serve as wind-breaks and to provide shade. In order to break the wind, it is recommended that a row of trees be also planted across the directions of wind at the boundary of the farm.

4.3 The site shall be away from public road but easily accessible throughout the year.

4.4 The site shall be such that arrangement could be made for adequate and good water supply.

4.5 The site shall be such that the long axis of the shed could be oriented east to west in all areas except temperate Himalayan and hilly regions. In desert areas, the shed shall be oriented across the prevailing direction of the wind in order to protect the roof from being blown off by high wind.

4.5.1 In coastal areas the shed shall be oriented along the prevailing wind direction in order to protect the roof from being blown off by high wind and at the same time to provide sufficient air movement in the shed. In sub-mountainous region, the buildings should be so sited as to avail of the natural aeration and drying.

5 HERD SIZE

A typical herd for an average farmer has been assumed to have about 5 animals comprising 3 milch animals, their followers and a pair of bullocks whereas for rural milk producer it is about 20 animals comprising 12 milch animals of which about 8 may be in milk. The remaining eight animals may include the followers of adult animals and a pair of bullocks.

6 SHED AND LAYOUT

6.1 For an Average Farmer

An average farmer having not more than three milch animals with calves and a pair of bullocks generally makes use of an existing wall for constructing the cattle shed. The construction of shed under this interest, therefore, has been suggested assuming that a lean to type roof could be built against an existing wall. Arrangement of adequate water supply and light shall be made in the shed. The typical layout of such a shed to accommodate five animals is shown in Fig. 1. The two side walls should be of height not more than

1.2 m. The height of main wall (*see A* in Fig.1) shall be minimum of 2.5 m.

6.2 For a Rural Milk Producer

The shed shall consist of standings for accommodating adult animals and the young stock. At the far end of the shed, there shall be a room for accommodating calves and a separate calving box. The paddock or yard for adult and young stock and calves may be separate on either side of the standings. The calves and the down calver shall have separate paddocks or yards for themselves laid adjacent to the calf room and calving box.

6.2.1 The layout and overall dimensions of each of the units (*see* **6.2**) may be as given in Fig. 2 and Fig. 3.

7 CONSTRUCTION

7.1 Standing

For an average farmer the standings shall be constructed in such a way that the animals are kept facing towards the wall. The manger shall be adjacent to the wall. The length, width and area of cow shed and buffalo shed capable of accommodating one to four cattle is given in Table 1.

For a rural milk producer the standings shall be constructed in such a way that the animals are arranged in rows. The length and width of each standing shall be decided depending upon the size of the animals. The length and width of each standing shall be decided depending upon the size of the animals. The length and width of each standing may vary from 1.5 m to 1.7 m and 1.0 m to 1.2 m per animal respectively. In coastal region, sometimes buffaloes with spreading horns are found; in that case the width per animal may vary from 1.2 m to 1.3 m

7.1.1 *Floor of Standings*

The floor may be either of *MOORUM KANKAR* and sand, cement concrete, stone slabs or bricks-on-edge. The details of laying these floorings may be as given in Annex A. A plinth of at least 15 cm shall be provided for the floor. The surface of the cement concrete or stone flooring shall be grooved to make it non-slippery for animals. For larger animals, the grooves shall be formed in a square of 15 cm × 15 cm and for calves 10 cm × 10 cm (*see A* in Fig. 4). The width of the groove shall be 12 mm and depth 10 mm. The groove shall be of 'U' shape. A slope of 1 in 60 towards the drain shall be provided in order to keep the floor properly drained after washing. Steel rings may be provided on the floor near the manger for tying the animals.

7.1.2 *Manger*

The manger shall be continuous type. The manger shall be made of stone slabs, wooden plank or brick-in-lime or cement mortar. The flooring material of the manger shall be the same as for the floor but the surface shall be finished smooth. All the corners of the manger shall be rounded off and finished smooth. The dimensions of the manger (*see* Fig. 5) shall be as given in Table 2. In case the mangers are of brick, the fore curb should be topped with angle iron.

7.2 Walls

The wall shall be of brick or stone slab laid in cement mortar. The wall may be cement-plastered from inside. The thickness of the wall shall be at least 20 cm. All walls shall be solid up to 1.25 m height from the floor level and shall be constructed in honey comb pattern above that height in order to provide sufficient air movement in the shed. The rest of the portion of the wall may be left open by a series of wire-netted windows. In desert areas, the solid portion may extend up to 1.8 m in height. In case of lean-to type system, the end walls above the solid portion may be left open or provided with a series of wire-netted windows.

Table 1 Space Norms for Cattle Shed

(*Clause* 7.1)

All dimensions in metres.

No. of Cattle	Cow Shed		Buffalo Shed		Remarks
	Length	Width	Length	Width	
(1)	(2)	(3)	(4)	(5)	(6)
1	2.5	3.0	2.7	3.4	Along with calf
2	4.2	3.0	5.2	3.4	Along with calves
3	5.7	3.0	7.3	3.4	Along with calves
4	5.6	3.0	6.8	3.4	For cattle
	2.0	1.5	2.4	1.9	For calves

7.3 Pillars

One pillar shall be placed at intervals of every two or three standings depending on the width of each standing. Pillars may be made from any of the following materials and their minimum dimensions shall be as indicated against each:

a)	Brick	45 cm × 35 cm (*see* Note 1) or 40 cm × 30 cm (*see* Note 2)
b)	Mild steel I section	10 cm × 10 cm
c)	Stone masonry	30 cm × 30 cm
d)	Iron pipes, dia	10 cm
e)	Timber	
	1) Square	10 cm × 10 cm
	2) Round	15 cm dia

NOTES

1 In case of 22.5 cm × 11.25 cm brick, 2 lengths and 3 widths shall be used.

2 In case of 20 cm × 10 cm (modular) brick, 2 lengths and 3 widths shall be used.

3 All iron structures shall be suitably painted for protection against corrosion.

7.3.1 All edges in rectangular pillars shall be rounded off a finished smooth.

7.4 Roof

The roof shall be of lean-to type or gabled type. The roof material may either be asbestos cement sheets, galvanized steel sheets, asphalt roofing material; or locally available material. Where necessary, particularly in hot climate, asbestos cement or galvanized steel roofs may be overlaid with a 8 cm to 10 cm thick thatch to lessen the stress of extreme climate. In areas where locally available materials are used, gunny sacks treated with cement lime mixture (*see* 7.4.1) may be used. The roof shall be supported by steel or wooden trusses or by a series of central pillars. The pitch of the roof may range from 22 to 30 degrees depending upon the material used. Wooden purlins may be spaced up to 1.3 m apart. The eaves of the roof shall project out (*see A* in Fig. 2 and 3) at least 50 cm away from the pillars and in the regions where extreme climatic conditions prevail, the eaves of the roof may project out to 75 cm from the pillars in order to afford protection to the animals from direct sun and rain. The eaves should be 2.2 mm high from ground level (*see B* in Fig. 2 and 3).

7.4.1 *Preparation of Cement Lime Mixture*

Stir thoroughly 12 parts by volume of cement and three parts by volume of lime (*see* IS 712) salt (*see* IS 797) and one-half part by volume of alum (*see* IS 258) and stir until all ingredients are well mixed. Apply the mixture evenly with the help of a brush on the inner surface of the gunny sack. Give

Table 2 Dimensions of Manger

(*Clause* 7.1.2)

All dimensions in centimetres.

Sl No.	Particulars	Stone Slab	Wooden Plank	Brick Laid in Cement or Lime	Ref to Fig. 1
(1)	(2)	(3)	(4)	(5)	(6)
i)	Height of the manger wall, *Min*	75	75	75	*A*
ii)	Height of fore curb, *Max*				
	a) For adults	50	50	50	*B*
	b) For calves	30	30	30	*B*
iii)	Thickness of fore curb, *Min*	4	3	10	*C*
iv)	Inner width of the manger, *Min*				
	a) For adults:				
	1) One way feeding	60	60	60	*D*
	2) Two way feeding	120	120	120	*D*
	b) For calves: one way feeding	40	40	40	*D*
v)	Depth of manger, *Min*:				
	a) For adults	40	40	40	*E*
	b) For calves	15	15	15	*E*

two coats of the mixture on the outer surface of the gunny sack. Stretch the gunny sack and dry in the sun until it becomes stiff.

7.5 *Drains*

The drain shall be laid in the shed at the back of the standing. In case of gabled type roof, two drains shall be laid outside the shed, one on each side of the standing. The drain shall be made of brick in cement mortar or of stone and shall be of 'U' shape with a depth of 6 cm at the bottom. The slope of the drain shall be 1 in 40 to 1 in 60. The width of the drain (*see* C in Fig. 2 and 3) may vary between 30 cm and 40 cm. The drain may be led to a common urine pit having a depth not exceeding 40 cm or to the field if slope permits. The urine pit may be circular or rectangular.

7.6 Special Constructional Requirements for a Rural Milk Producer

7.6.1 *Water Supply*

There shall be an adequate supply of potable water in the shed. For this purpose, a trough of reinforced cement concrete or brick-in-cement should be provided. The size of the trough shall depend upon the daily requirement of water calculated at the rate of 50 litres per livestock per day. The water troughs should be provided with railing on its sides so that the animals may not try to step in the water trough and contaminate it.

7.6.2 *Calf-Room*

A part of the standing at the far end of the shed shall be partitioned suitably for housing calves. Generally, a floor space of 1.2 m^2 to 1.5 m^2 is recommended per calf. There shall be a manger adjacent to the wall of the room. A wall covering half the height of the room shall be provided in order to separate the calf-room from its adjoining yard.

7.6.3 *Calving-Box*

A separate unit shall be provided for housing one down-calver. The calving-box shall be adjacent to the calf-room and at the end of the standings. The box shall be separated from the calf-room as well as from the rest of the shed by a suitable partition. The dimensions of the calving-box shall be 2.8 m × 4 m. There shall be cement concrete manger and water trough in one corner of the box. The width of the manger and the water trough shall be at least 60 cm.

8 OTHER REQUIREMENTS FOR A RURAL MILK PRODUCER

8.1 Paddock or Yard

8.1.1 The design of the paddock or open yard may be made while using the common wall of the residence of the average farmer. There shall be a paddock with the following minimum space per animal for various categories of animals:

a)	Buffalo	8 m^2
b)	Cow	7 m^2
c)	Young stock	4 m^2
d)	Calf	2 m^2
e)	Calving	12 m^2

8.1.2 There shall be feeding and water troughs within the paddock.

8.2 Fencing

8.2.1 The wall of bricks or stone slabs or a railing or wires may constitute fence. The railings may be of 35 mm galvanized iron pipe or 5 mm galvanized iron wire and posts to support railings. The posts may be of 5 cm steel pipe, 6 cm × 4 cm angle iron, 8 cm × 5 cm stone slabs or 10 cm × 10 cm timber placed 2 m apart. The posts shall be holed to pass the railings through or it may be riveted or 'U' bolted to the place.

8.2.1.1 The railings for different categories of the animals shall be fixed with the posts as given below:

Height from Ground to Centre of Each Rail	*Calves* cm	*Cows, Young Stock and Buffaloes* cm	*Bull* cm
First rail	30	40	40
Second rail	60	80	80
Third rail	90	120	120
Fourth rail	120	–	150

8.2.2 The wooden horizontal braces or steel horizontal braces shall be placed as given in Fig. 6. Braced steel end or corner posts shall be embedded as given in Fig. 7.

8.3 Ancillary Structure

8.3.1 Provision of milk recording room and ration room, each of approximately 9 m², preferably at fore end of the shed, may be made.

9 LIGHTING

Provision of lighting shall be made. In case electricity is available, 125 W bulb for each 10 m² floor space or 60 W bulb for each 25 m² space or equivalent fluorescent tube light may be provided.

10 WASTE HANDLING

It is suggested that bio-gas plant of suitable size should be installed. The animal waste should be removed from standing/dung alley either by scrapping or direct collection in hand push cart or animal cart and taken to feed the bio-gas plant.

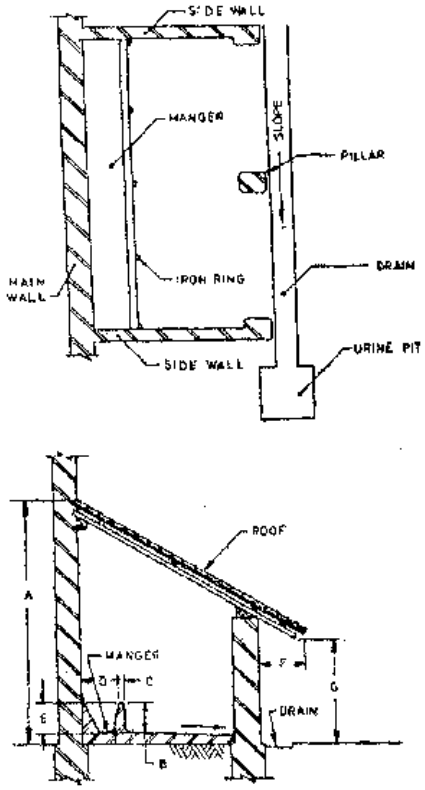


FIG. 1 TYPICAL LAYOUT OF FARM CATTLE SHED

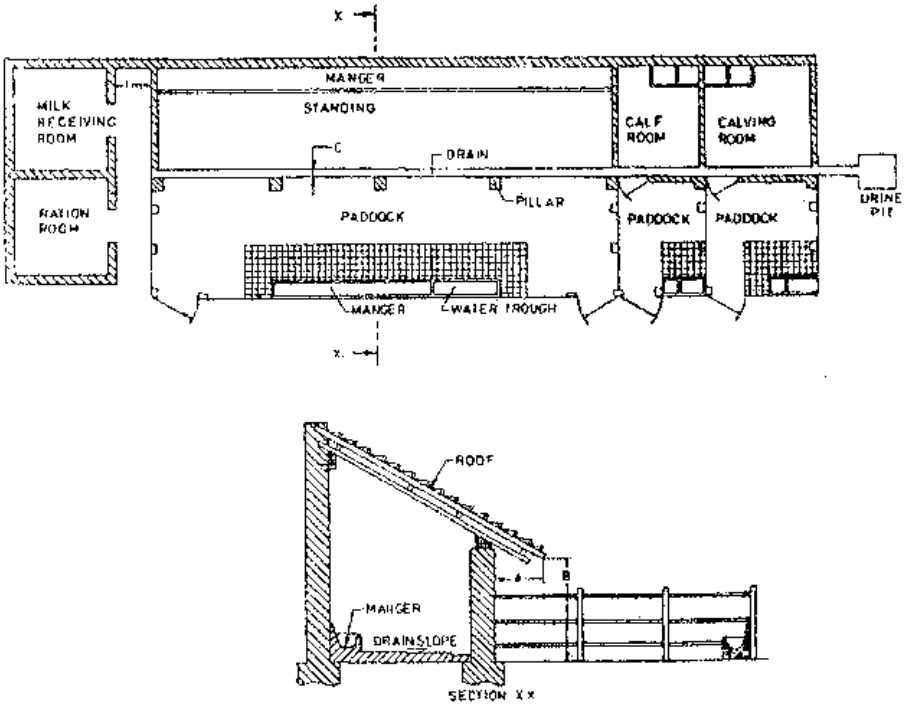


FIG. 2 A TYPICAL LAYOUT OF SHED, LEAN-TO TYPE ROOF

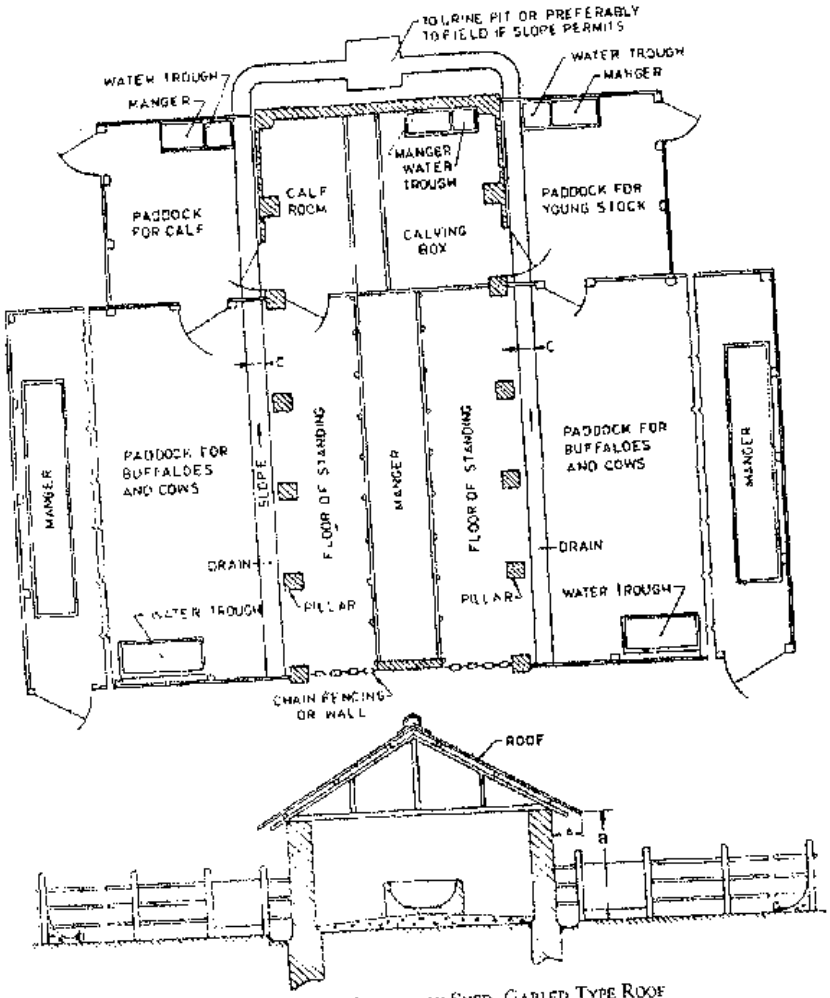
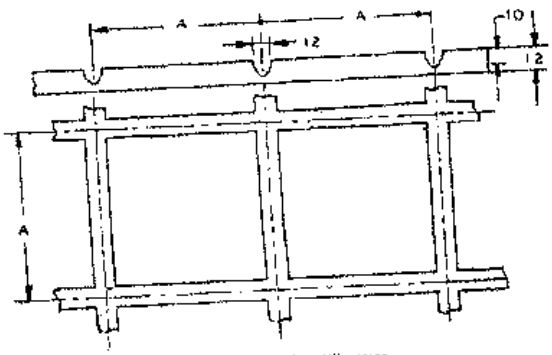
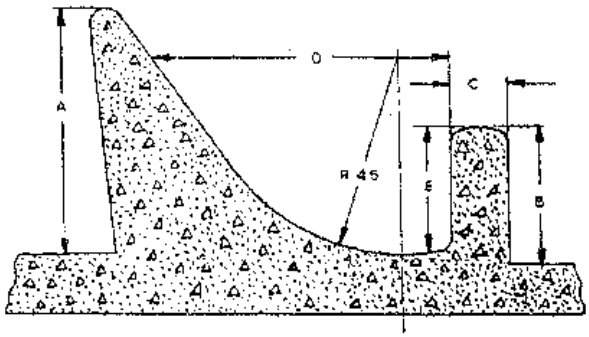


FIG. 3 A TYPICAL LAYOUT OF SHED, GABLED TYPE ROOF



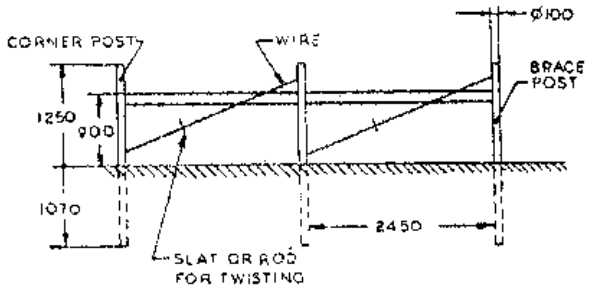
All dimensions in millimetres.

FIG. 4 CROSS-SECTION OF STANDING



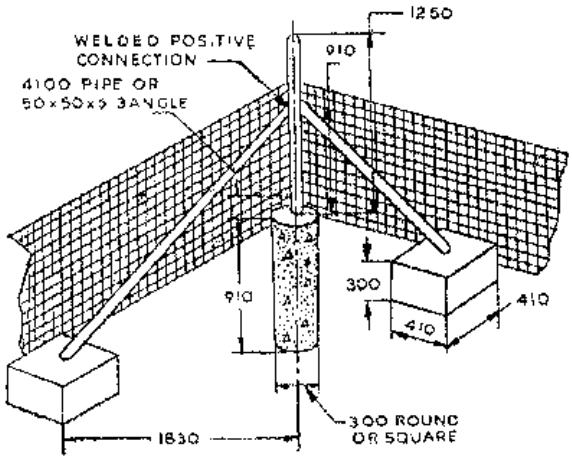
All dimensions in millimetres.

FIG. 5 CROSS-SECTION OF MANGER



All dimensions in millimetres.

FIG. 6 WOOD OR STEEL HORIZONTAL BRACES



All dimensions in millimetres.

FIG. 7 BRACED STEEL END OR CORNER POST

ANNEX A

(*Clause* 7.1.1)

DETAILS OF LAYING DIFFERENT TYPES OF FLOORING OF STANDINGS

A-1 *MOORUM, KANKAR* AND SAND FLOORING

The *moorum, kankar* and sand flooring shall be laid over a subgrade or rubble packing or broken bricks of 15 to 25 cm thick wetted and well rammed. A 15 cm layer of hard *moorum, kankar* and sand (as the case may be) shall be laid over this subgrade with coarser pieces at the bottom and fine ones over at the top. A layer of powder *moorum, kankar* and sand about 3 to 5 cm shall be spread over the top of this layer. Water shall then be sprinkled and the surface shall be well rammed. Water shall again be sprinkled until the floor is fully saturated. The surface shall be rammed, leveled and well consolidated. When the floor is dry, a thick paste of cow dung plaster shall be uniformly spread and it shall be well rammed. A final thin coating of mixture of cow dung (four parts) and cement (one part) shall be applied after the floor has dried up and wiped clean to prevent cracking and panelling. The cow dung plaster shall be applied weekly or fortnightly to keep the floor in good condition.

A-2 BRICK ON EDGE FLOORING

A-2.1 The subgrade for this type of flooring shall be rubble or brick aggregates which shall be hand packed, watered and well rammed. A layer of 10 cm of lime concrete shall be spread over the subbase, well rammed and shall be allowed to set for 7 days. The bricks shall be well burnt and of good quality (*see* IS 3583) and shall be well soaked in water before laying. Bricks shall be laid on about 10 mm thick cement or lime mortar bed and each brick shall be properly bedded on edge and set home by gentle tapping with the handle of trowel or a wooden mallet. Its inside faces shall be buttered with mortar before the next brick is laid and pressed against it. On completion of a portion of flooring the vertical joints shall be fully filled from the top with the mortar.

A-2.2 The surface of the flooring during the laying shall be frequently checked with a straight edge at least 2 m long so as to obtain a true surface with the required slope. The surface of the flooring shall be kept constantly moist for a minimum period of 7 days. In the case of fat lime mortar, curing shall commence two days after the laying of the flooring and shall continue for 7 days. The bricks may be laid in rows having the joints parallel and at right angles to the walls or in 'herringbone' pattern.

A-3 STONE SLAB FLOORING

A-3.1 The stone slabs shall be of good quality, hard, sound and dense (*see* IS 3622). Apart from sandstone any other good quality stone slabs may be used according to the availability of the material. The subgrade shall be prepared as given in **A-2.1** and the lime concrete bed shall be cleaned, wetted and mopped. The bedding for the slabs shall be made with cement mortar 1:4 (1 cement : 4 coarse sand) or with lime mortar (either 1 lime putty : 1 surkhi : 1 coarse sand or 1 lime putty : 2 coarse sand). The average thickness of the bedding mortar under the slab shall be 20 mm. The mortar shall be spread under the area of each slab to the specified thickness. The stone slab shall be washed clean before laying. It shall be laid on top, pressed, tapped with wooden mallet and brought to level with the adjoining slabs. It shall be lifted and laid aside. The top surface of the mortar shall then be corrected by adding fresh mortar at hollows. The edges of the slab already paved shall be buttered with cement slurry. The slab to be paved shall be lowered gently back in position and tapped with wooden mallet till it is properly bedded in level with and close to the adjoining slab with as fine joints as possible. Subsequent slabs shall be laid in the same manner. After each slab has been laid, surplus cement on the surface of the slab shall be cleaned off. The flooring shall be cured for a minimum period of 7 days. The surface of the flooring as laid shall be true to a level and shall be of the desired slope. Slight unevenness at the meeting edges of slabs shall be removed by fine chiseling.

Bureau of Indian Standards

BIS is a statutory institution established under the *Bureau of Indian Standards Act*, 1986 to promote harmonious development of the activities of standardization, marking and quality certification of goods and attending to connected matters in the country.

Review of Indian Standards

Amendments are issued to standards as the need arises on the basis of comments. Standards are also reviewed periodically; a standard along with amendments is reaffirmed when such review indicates that no changes are needed; if the review indicates that changes are needed, it is taken up for revision. Users of Indian Standards should ascertain that they are in possession of the latest amendments or edition by referring to the latest issue of 'BIS Catalogue' and 'Standards: Monthly Additions'.

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Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

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IS : 11942 - 1986

[Superseding IS : 4466 (Part 3)-1968,
IS : 5605 (Part 3)-1970 and
IS : 8845 (Part 3)-1978]

Indian Standard

RECOMMENDATIONS FOR *GAUSHALA* AND OTHER ORGANIZED MILK PRODUCERS

UDC 631·223·24 : 725·42

BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

July 1987

Gr 5

IS : 11942 - 1986

[Superseding IS : 4466 (Part 3)-1968,
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Indian Standard

RECOMMENDATIONS FOR *GAUSHALA* AND OTHER ORGANIZED MILK PRODUCERS

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AMENDMENT NO. 1 DECEMBER 2005
TO
IS 11942 : 1986 RECOMMENDATIONS FOR *GAUSHALA* AND OTHER ORGANIZED MILK PRODUCERS

(*Page* 16, *clause* 10.8) — Substitute the following for the existing text:

'Provision must be made for a suitable foot bath at the entrance gate. Also at the main entrance of the gate, a concrete floor should be constructed. This is to ensure that any vehicle entering the farm will be allowed to pass through the shallow floor which contains medicated solution.'

(FAD 5)

Reprography Unit, BIS, New Delhi, India

IS : 11942 - 1986

Indian Standard

RECOMMENDATIONS FOR *GAUSHALA* AND OTHER ORGANIZED MILK PRODUCERS

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 31 December 1986, after the draft finalized by the Animal Structures and Equipment Sectional Committee had been approved by the Agricultural and Food Products Division Council.

0.2 Proper housing is an important feature in raising the production capabilities of animals, in addition to good breeding, feeding, selection and disease control. It is conducive to good health, comfort and protection from inclement weather and the animals are capable of utilizing their genetic abilities and feed for optimum production.

0.3 Cattle raising and dairying is practised in the country by various interests. Generally these interests are: (a) an Average Farmer who has not more than a pair of bullocks and two or three milch animals with their calves; (b) rural Milk Producers normally having a total of about 20 animals including about 12 milch animals, their followers and a pair of bullocks; (c) *gaushalas* and other organized milk producers; and (d) Large Dairy Farms.

0.4 This standard covers recommendations for shed for *GAUSHALA* and other organized milk producers. It supersedes IS : 4466 (Part 3)-1968*, IS : 5605 (Part 3)-1970†, and IS : 8845 (Part 3)-1978‡. Since India's climatic conditions, unlike most of the principal dairy countries of the world, are very varied, hence shed of cattle would also vary according to the climatic conditions prevailing in a particular region. In order to meet these varied requirements, wherever necessary specific recommendation has been made for (a) plain areas with medium rainfall, (b) arid area, (c) high altitute areas, and (d) heavy rainfall and high humidity areas.

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*Recommendations for farm cattle housing for plain areas with medium rainfall: Part 3 Farm cattle sheds for *GAUSHALAS* and other organized milk producers.

†Recommendations for farm cattle housing for heavy rainfall and high humidity areas: Part 3 Farm cattle sheds for *GAUSHALAS* and other organized milk producers.

‡Recommendations for farm cattle housing for arid areas: Part 3 Farm cattle sheds for *GAUSHALAS* and other organized milk producers.

1. SCOPE

1.1 This standard recommends layout and constructional details of a cattle shed meant for *GAUSHALA* and other organized milk producer.

2. TERMINOLOGY

2.1 For the purpose of this standard, the following definitions shall apply.

2.1 **Paddock or Yard** — An open area surrounded by walls, fences or rails for accommodating cattle. This area is meant to provide open air exercise to the animals. It generally contains manager(s) or trough(s) with or without ties to control animals for different purposes.

2.2 **Standing (Stall)** — The floor space provided within a shed for an individual animal to stand or lie.

3. SELECTION OF SITE

3.1 The shed shall be located on dry, elevated and well-drained area with consideration for future expansion.

3.2 The shed shall preferably be located at a place where three are enough suitably placed trees to serve as wind-breaks and to provide shade. In order to break the wind it is recommended that a row of trees be also planted across the direction of wind at the boundary of the farm.

NOTE — In case there are no shaded trees on the site, these should be planted immediately keeping a minimum distance of 4 m from the shed.

3.3 The site shall be away from public road but easily accessible throughout the year.

3.4 The site shall be such that arrangement could be made for adequate and good water supply.

3.5 The site shall be such that the long axis of the shed could be oriented east to west in all areas except temperate Himalayan and hilly regions. In desert areas, the shed shall be oriented across the prevailing direction of the wind in order to protect the roof from being blown off by high wind.

3.5.1 In coastal areas the shed shall be oriented along the prevailing wind direction in order to protect the roof from being blown off by high wind and at the same time to provide sufficient air movement in the shed. In sub-mountainous region, the buildings should be so sited as to avail of the natural aeration and drying.

4. HERD SIZE

4.1 It is assumed that producers in this interest shall normally maintain a herd of about 130 animals consisting of 40 milch animals, 40 dry animals, two bulls, and the rest comprising followers, as also about three pairs of bullocks.

5. BUILDING UNITS

5.1 The units should comprise sheds (*see* **5.1.1**) for housing different categories of animals and the necessary ancillary structures (*see* **5.1.2**) required for this interest.

5.1.1 *Sheds* — Various types of sheds (*see* **7**) that are required under this interest are as follows:

a) Milch animals shed,
b) Dry animal shed,
c) Down-calver shed,
d) Sick-animal shed,
e) Young stock shed,
f) Calf shed, and
g) Bull shed.

5.1.1.1 There shall be a paddock attached to each of the sheds.

5.1.2 The ancillary structures (*see* **10**) required under this interest shall be as follows:

a) Milk collection, recording and testing room;
b) Utensils room;
c) Ration room;
d) Store;
e) Office room;
f) Fodder processing and storage room;
g) Trevis; and
h) Foot bath.

6. LAYOUT

6.1 A typical layout comprising the various units is given in Fig. 1.

NOTE — The layout with these units could be modified depending upon local conditions like shape, size and topography of available land, size of enterprises, finances, etc.

7. DESCRIPTION OF SHEDS

7.1 Milch Animal Shed — The standings of the milch animal shed shall be of a tail-to-tail system with a central passage. The length and width of the standing shall be decided according to the size of the animal and may vary from 1·5 to 1·7 m in length and 1·0 to 1·2 m in width. In coastal region, sometimes buffaloes with spreading horns are found in that case width per animal may vary from 1·2 to 1·3 m.

7.1.1 The width of the central passage may be 1·8 m. The central passage shall be sloped from the centre outwards towards drains. There shall be a drain on either side of the central passage.

7.1.2 There shall be two continuous manger (*see* **8.2**), one on each side in front of the standings with a cross passage of one metre width at the end of every 8 standings for easy movement.

7.1.3 There shall be pillars (*see* **8.4**) along with length of the sheds to support the beam of the roof. The roof of the shed shall be gabled (*see* **8.6**).

7.1.4 The shed may, if necessary, be extended to accommodate calving (*see* **7.3**) as also calves (*see* **7.6**).

7.2 Dry Animal Shed — The standings of the shed shall be constructed on the head-to-head system with a central manger and if in a single line, facing the wall (*see* Fig. 1). The length and width of each standing shall be in the same range as specified for the milch animals (*see* **7.1**). There shall be a drain behind each line of animals. There shall be pillars along the length of the sheds to support the beam of the roof and walls at each end. The roof of the shed shall be gabled. The dry animal shed may be extended to accommodate the young stock as well (*see* **7.5**).

7.2.1 The bullocks may be accommodated with dry animals or a separate provisions for bullock shed may be made. If a separate provision for bullock shed is made, a cart shed may also be attached to it.

7.3 Calving Animal Shed — The shed shall have two calving boxes for housing animals very close to calving and standings adjacent to the boxes for accommodating heavy-in-calf. Provision for this should generally be made at the rate of 5 percent of the adult females. A calving attendant room may also be provided in the shed.

7.3.1 *Calving Boxes* — The calving boxes shall be adjacent to each other and shall be at the end of the shed separated by a wall from the standings. The wall partition between the two calving boxes may be 1·25 m high. The dimension of each calving box shall be 3 × 4 m. A manger and a water trough, each 0·5 m wide inside, shall be constructed

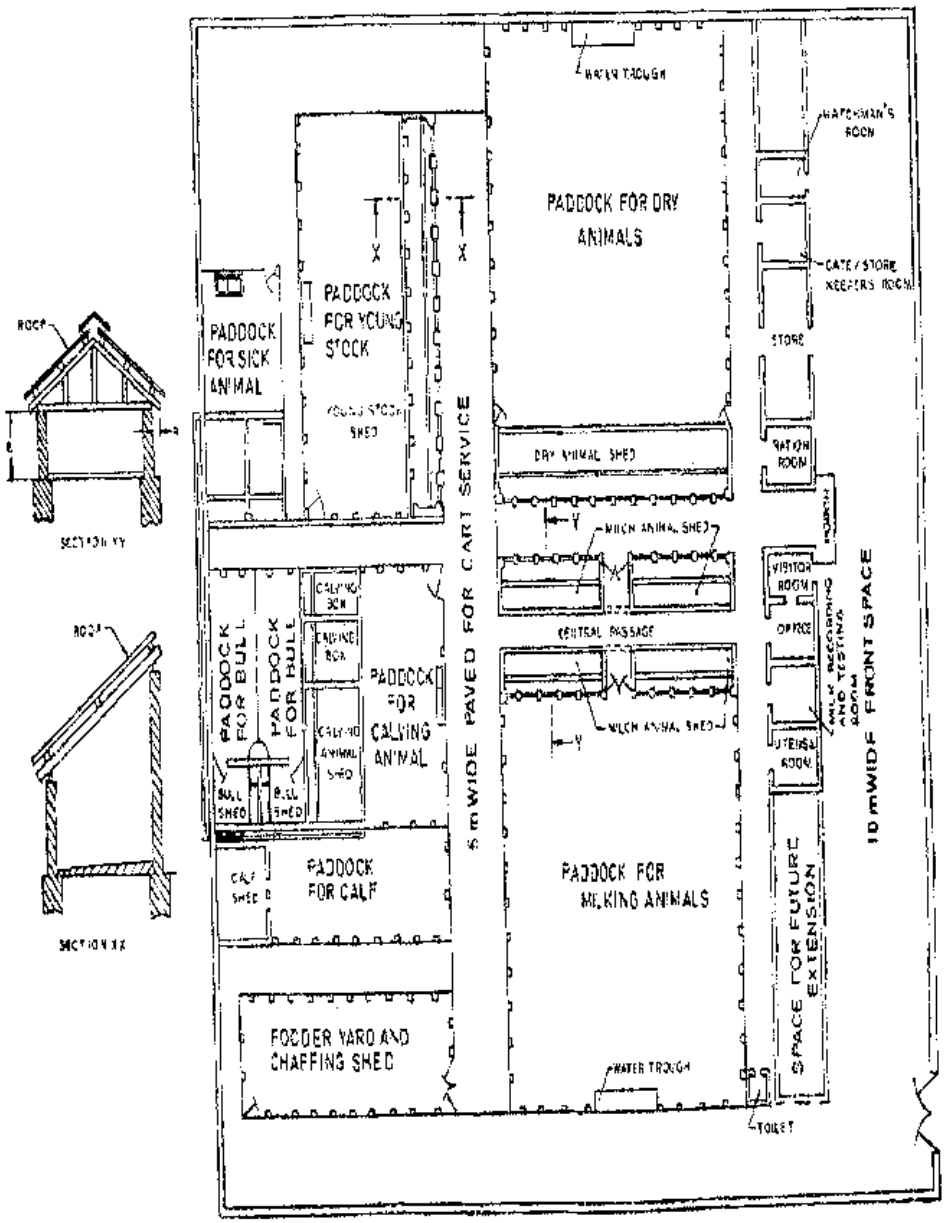


FIG. 1 TYPICAL LAYOUT OF FARM CATTLE SHED FOR GAUSHALAS AND OTHER ORGANISED MILK PRODUCERS (*Continued*)

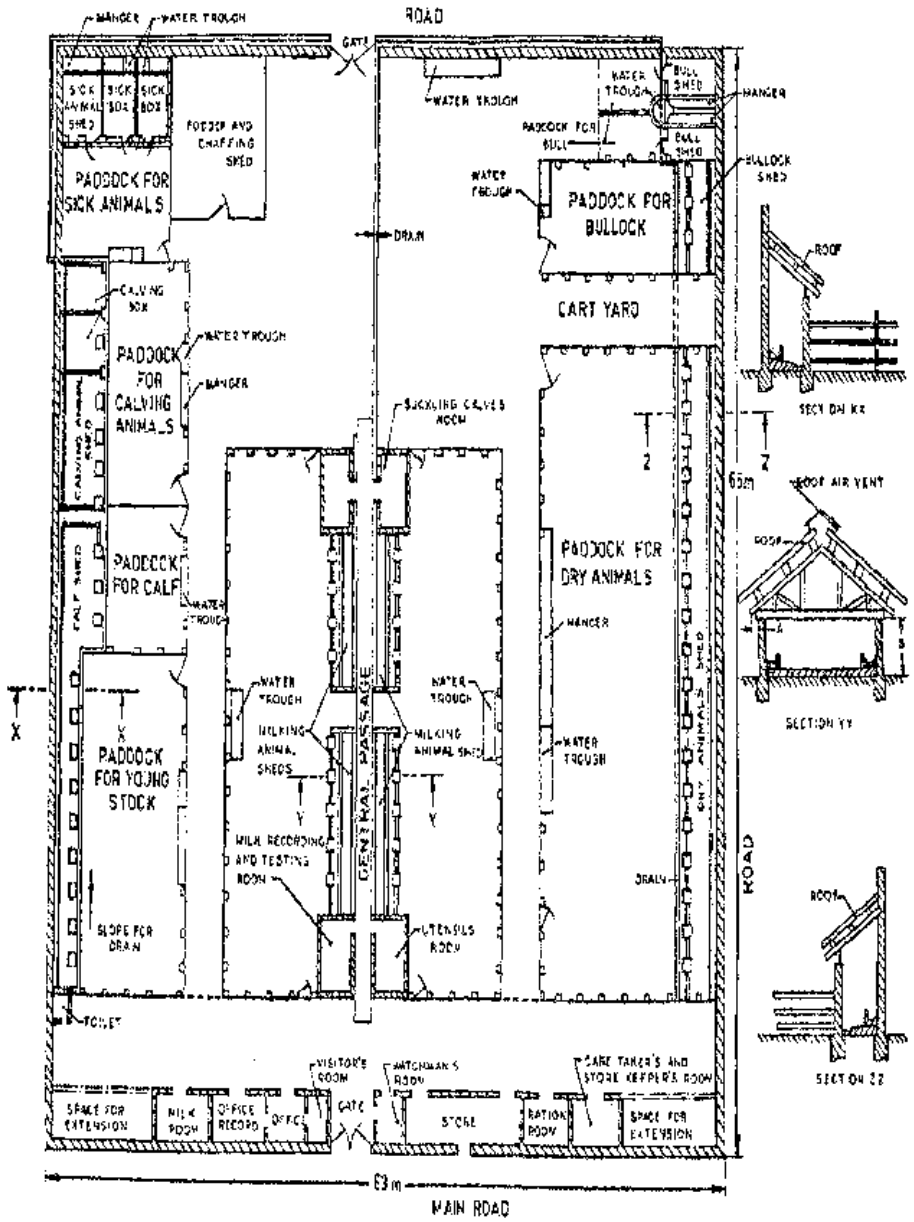


FIG. 1 TYPICAL LAYOUT OF FARM CATTLE SHED FOR GAUSHALAS AND OTHER ORGANISED MILK PRODUCERS

at the two separate corners of each of the calving boxes or a trough throughout the width of the box. A single-leaf door 2 m high and 1·2 m wide shall be provided for each of the calving boxes. The flooring of the calving boxes and standings shall be sloped towards the wall and into a drain running outside the shed.

7.3.2 *Standings* — The standings of the down-calver shed shall be constructed in such a way that animals are kept tethered facing the wall. There shall be a continuous manger along the wall. The length and width of each standing shall be 2·0 m and 1·6 m respectively.

7.4 Sick Animal Shed — The sick animal shed shall be located well away from the other sheds inaccessible to other animals. The dimensions and arrangements for sick animal shed shall be the same as in 7.3.1 and 7.3.2.

7.5 Young Stock Shed — The young stock shed may be an extension of the dry animals shed or a separate unit. In case the young stock shed is a separate unit to economize cost and space, the shed shall be constructed in such a way that young animals are tethered in two rows facing each other with a central manger. The length and width of each standing shall be 1·4 and 1·0 m respectively. The two drains of the shed shall be laid on either side of the standings. The roof of the shed shall be gabled and shall be supported on the length of the shed by a series of pillars and walls at each end. The young stock standings may alternatively be in a single line against a wall and the drains located suitably.

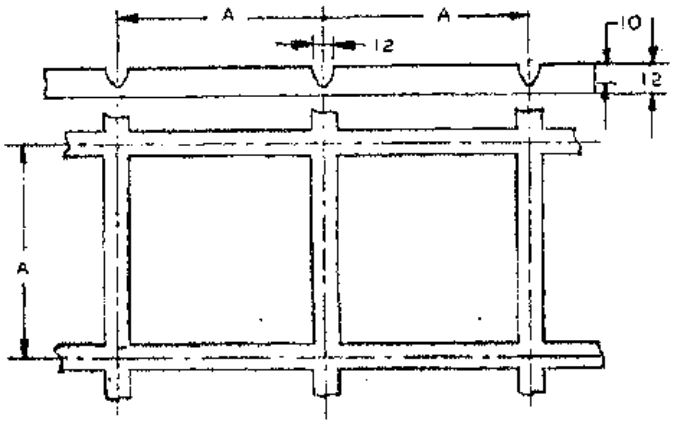
7.6 Calf Shed — The calf shed may be annexed either at the end or on the side to the milch animal shed and the calves may be separated from the milch animals by a suitable partition. If there is a large number of calves, the calf shed may form a separate unit. The dimensions of the calf shed shall depend upon the number of calves. The floor space provided per calf shall be not less than 1 m^2. The calves may be kept loose. The manger shall be constructed along the walls of the three sides of the shed. There shall be a central shallow saucer-shaped drain. The roof may be either lean-to-type or gabled. A water trough shall be provided at one corner of the shed.

7.7 Bull Shed — The bull shed shall have two boxes each measuring 4 × 3 m. The walls may be 1·5 m high. A 0·5 m wide raised manger with feed and water sections shall be provided in each box. The two boxes shall lead to separate paddocks.

8. CONSTRUCTIONAL DETAILS OF SHEDS

8.1 Floor — The floor may be either of *MOORUM*, *KANKAR*, cement concrete, brick-on-edge or stone slabs. The details of laying of flooring

are given in Appendix A of IS : 11786-1986*. In case of cement concrete flooring, the surface shall be properly grooved in order to avoid slipping of the animals. For larger animals, the grooves shall be formed in square of 15 × 15 cm and for calves 10 × 10 cm (*see A* in Fig. 2). The width of the groove shall be 12 mm and depth 10 mm. The groove shall be of U shape. A plinth of at least 15 cm shall be provided for the floor. A slope of 1 in 60 towards the drains shall be provided in order to keep floor properly drained after washing.



All dimensions in millimetres.

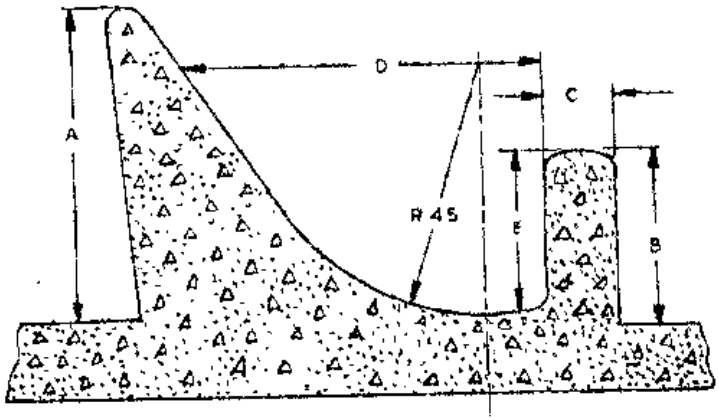
FIG. 2 CROSS-SECTION OF STANDING

8.2 Manger — The manger shall be of continuous type. The manger shall be made of reinforced cement concrete, stone slabs, or brick-in-lime or cement mortar. The flooring material of the manger shall be the same as for the floor but the surface shall be finished smooth. All the corners of the manger shall be rounded off and finished smooth. The dimensions of the manger (*see* Fig. 3) shall be as given in Table 1. In case the mangers are of brick, the fore curb should be topped with angle iron.

8.2.1 *Water Supply* — There shall be an adequate supply of potable water in the shed. One of the ways of supplying water in the shed may be that water trough of 20 cm diameter may be constructed on the manger wall. Water shall be allowed to flow through these troughs so that fresh water may be made available to the animals, calculated at the rate of 50 litres per livestock unit per day. These troughs may be placed between the two standings. The water troughs should be provided with railing on its sides so that the animals may not try to step in the water

*Recommendations of cattle housing for an average farmer.

trough and contaminate it. When a piped water supply is available, a shallow water trough having its slope towards one end, and having a balancing float tank at the other end, ensures fresh water supply.



All dimensions in millimetres.

FIG. 3 CROSS-SECTION OF MANGER

TABLE 1 DIMENSIONS OF MANGER

(*Clause* 8.2)

(All dimensions in cm)

SL No.	PARTICULARS	REINFORCED CEMENT CONCRETE	BRICK LAID IN CEMENT	STONE SLAB	REF TO FIG. 3
(1)	(2)	(3)	(4)	(5)	(6)
i)	Height of manger wall, *Min*	75	75	75	A
ii)	Height of fore curb *Max*				
	a) For adults	50	50	50	B
	b) For calves	30	30	30	
iii)	Thickness of fore curb, *Min*	10	10	4	C
iv)	Inner width of manger, *Min*				
	a) For adults	60	60	60	D
	b) For calves	40	40	40	
v)	Depth of manger, *Min*				
	a) For adults	40	40	40	E
	b) For calves	15	15	15	

8.3 Drains — The drains shall be made of brick in cement mortar or of stone and shall be of shallow U type with a depth of 6 cm at the bottom. The slope of the drain shall be 1 in 100 to 1 in 120. The width of the drains may vary between 30 and 40 cm. Where a long running shed is constructed, connecting drains at right angles should be provided after every 15 standings. The main drain may be led to a common urine pit having a depth not exceeding 40 cm or to the field if slope permits. The urine pit may be circular or rectangular.

8.4 Pillars — One pillar shall be placed at intervals of every two or three standings depending upon the width of each standing. Pillars may be made from any of the following materials and their minimum dimensions shall be as indicated against each:

a) Brick	45 × 35 cm (*see* Note 1), or 40 × 30 cm (*see* Note 2)
b) Mild steel I Section	10 × 10 cm
c) Stone	10 × 10 cm or 8 × 15 cm
d) Iron pipes dia	10 cm
e) Timber (include palmira palm, coconut and bamboo):	
1) Rectangular pillars	10 × 10 cm
2) Round pole, dia	15 cm

NOTE 1 — In case of 22·5 × 11·25 cm bricks, 2 lengths and 3 widths shall be used.

NOTE 2 — In case of 20 × 10 cm (modular) bricks, 2 lengths and 3 widths shall be used.

NOTE 3 — All iron structures shall be suitably painted for protection against corrosion.

8.4.1 All edges in rectangular pillars shall be rounded off and finished smooth.

8.5 Walls — The wall shall be of brick or stone slab laid in cement mortar. The wall may be cement-plastered from inside. The thickness of the wall shall be at least 20 cm, however in case of bull shed it shall be at least 30 cm. All walls shall be solid up to 1·25 m height from the floor level and shall be constructed in honey comb pattern above that height in order to provide sufficient air movement in the shed. The rest of the portion of the wall may be left open by a series of wire-netted windows. In desert areas, the solid portion may extend up to 1·8 m in height. In case of lean-to-type system, the end walls above the solid portion may be left open or provided with a series of wire-netted windows.

8.6 Roof — The roof may be gabled, flat or lean-to-type. The roof may be constructed either of corrugated asbestos sheets or galvanized steel sheets or tiles (Country tiles are not recommended). The roof shall be supported by steel or wooden trusses or by a series of central pillars. The pitch of the roof may range between 22 to 30 degrees depending upon the materials used. Wooden purlins may be spaced up to 1·3 m apart. Generally, the eaves of the roof (*see A* in Fig. 1) shall project out at least 50 cm away from the pillars/walls and in regions where extreme climatic conditions prevail, the eaves of the roof may project up to 75 cm from the pillars/walls in order to afford protection to the animals from direct sun and rain. The eaves should be 2·2 m high from the ground level (*see B* in Fig. 1).

9. PADDOCKS OR YARD

9.1 A paddock shall be attached to every shed for animals to move about freely. There may be trees in the paddock to provide enough shade. A part of the paddock may be paved with bricks laid on edge. The paddock shall have the following minimum space per animal for various categories of animals:

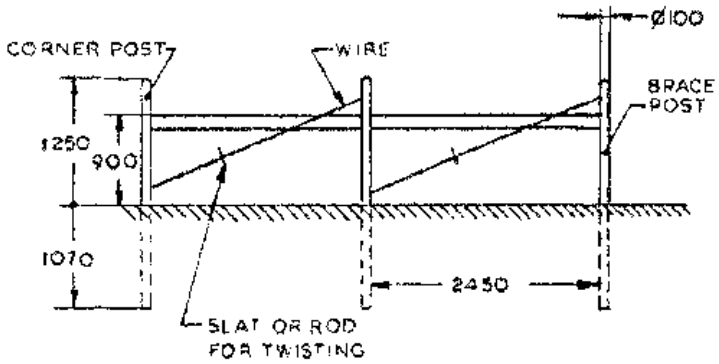
a) Buffaloes	8 m^2
b) Cow	7 m^2
c) Young stock	4 m^2
d) Calf	2 m^2
e) Calving	12 m^2
f) Bull	25 m^2

9.2 Fences

9.2.1 The wall of bricks or stone slabs or a railing or wires may constitute fence. The railings may be of 35 mm galvanized iron pipe or 5 mm galvanized iron wire and posts to support railings. The posts may be of 5 cm steel pipe, 6 × 4 cm angle iron, 8 × 5 cm stone slabs or 10 × 10 cm timber placed 2 m apart. The posts shall be holed to pass the railings through or it may be riveted or 'U' bolted to the place. The railings for different categories of the animals shall be fixed with the posts as given below:

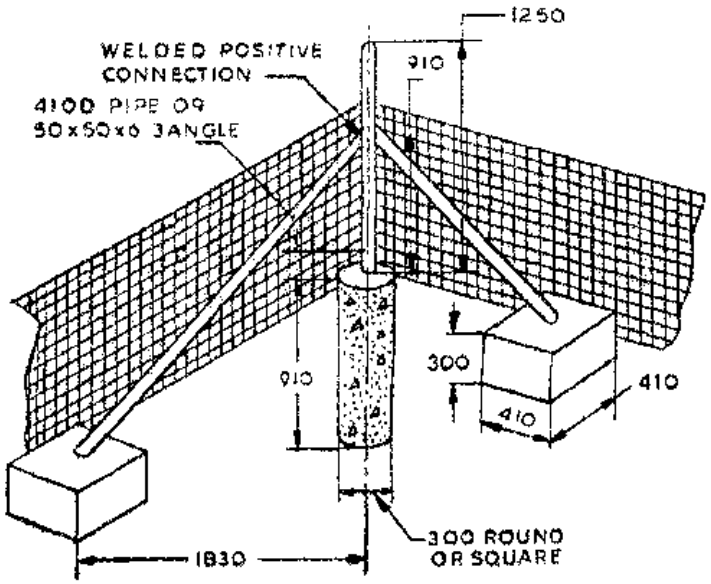
Height from Ground to Centre of Each Rail	*Calves*	*Cows, Young Stock and Buffaloes,*	*Bull*
	cm	cm	cm
First rail	30	40	40
Second rail	60	80	80
Third rail	90	120	120
Fourth rail	120	—	150

9.2.2 The wooden horizontal braces or steel horizontal braces shall be placed as given in Fig. 4. Braced steel end or corner posts shall be embedded as given in Fig. 5.



All dimensions in millimetres.

FIG. 4 WOOD OR STEEL HORIZONTAL BRACES



All dimensions in millimetres.

FIG. 5 BRACED STEEL END OR CORNER POST

9.3 Gate — A gate of suitable type and size may be provided taking care that they are hinged firmly and raised well above the ground. Braces shall be positioned vertically.

9.4 Manger and Water Trough — Manger and water trough may be constructed with reinforced cement concrete, brick with cement mortar or stone slabs with cement joining. A 2-m wide paved platform shall be provided away from trough to with stand the heavy treading of animals and permit easy washing and cleanliness.

10. ANCILLARY STRUCTURES

10.1 Milk Collection, Recording and Testing Room — There shall be a room of 4 × 3 m in or near the milch animal shed for collecting, recording and testing of milk. The door and the windows shall be made fly-proof. The flooring of the room shall be of cement concrete impervious and reinforced with iron strips at suitable distances to make it hard wearing. A suitable platform or a slab shall be provided for testing apparatus. A separate milk room may also be provided for handling milk.

10.2 Utensils Room — There shall be a room of 4 × 3 m for washing and storing milk cans. The flooring of the room shall be of hard-wearing type to withstand the frequent handling of heavy milk cans. The door and windows shall be made fly-proof. The room may be located as near as possible to the milk recording and testing room.

10.3 Ration Room — There shall be a room of at least 4 × 3 m near to the milch animal shed to store feed concentrates temporarily to meet the requirements of the animals for the day. The ration room shall be damp- and rodent proof.

10.4 Store — The store shall be adequate to accommodate feed concentrate required for a period of about 2 months. The space required for storage shall be 0·2 m^2 per livestock unit. The store shall be made damp- and rodent-proof. A store keeper's room may also be attached to the store.

10.5 Office Room — Provision of an office accommodation is generally desirable in *GAUSHALAS* and similar organizations. The office room may also be used for keeping medicines and instruments required for treating sick animals. The dimensions of the office room shall depend upon the space available and the size of the enterprise. A toilet may also be provided. A visitor's room may also be attached to the office room.

10.6 Trevis or Cattle Crutch — A cattle trevis may be provided to secure the animals for rendering first-aid and artificial insemination.

10.7 Adequate provision shall be made for storage of roughages.

10.8 A provision shall be made for a suitable foot bath at the entrance gate.

10.9 Provision may be made for a segregation room for keeping new animals introduced in the herd for some initial days before their mixing up with the herd.

10.10 Lighting — Provision of lighting shall be made in case electricity is available, a 25 W bulb for each 10 m^2 space or 60 W bulb for each 20 m^2 space or equivalent fluorescent tube light may be provided.

10.11 Waste Handling System — Bio-gas plant of suitable size should be installed. The animal waste (dung, urine and other biomass) should be fed to the plant.

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†Eastern : 1/14 C. I. T. Scheme VII M, V. I. P. Road, Maniktola, CALCUTTA 700054	36 24 99
Northern : SCO 445-446, Sector 35-C CHANDIGARH 160036	2 18 43 3 16 41
Southern : C. I. T. Campus, MADRAS 600113	41 24 42 41 25 19 41 29 16
Branch Offices:	
'Pushpak', Nurmohamed Shaikh Marg, Khanpur AHMADABAD 380001	2 63 48 2 63 49
'F' Block, Unity Bldg, Narasimharaja Square, BANGALORE 560002	22 48 05
Gangotri Complex, 5th Floor, Bhadbhada Road, T. T. Nagar, BHOPAL 462003	6 67 16
Plot No. 82/83, Lewis Road, BHUBANESHWAR 751002	6 36 27
53/5 Ward No. 29, R. G. Barua Road, 5th Byelane, GUWAHATI 781003	—
5-8-56C L.N. Gupta Marg, HYDERABAD 500001	23 10 83
R14 Yudhister Marg, C Scheme, JAIPUR 302005	6 34 71 6 98 32
117/418 B Sarvodaya Nagar, KANPUR 208005	21 68 76 21 82 92
Patliputra Industrial Estate, PATNA 800013	6 23 05
Hantex Bldg (2nd Floor), Rly Station Road, TRIVANDRUM 695001	62 27
Inspection Office (With Sale Point):	
Institution of Engineers (India) Building, 1332 Shivaji Nagar, PUNE 411005	6 24 35

*Sales Office in Bombay is at Novelty Chambers, Grant Road, BOMBAY 400007 89 65 28

†Sales Office in Calcutta is at 5 Chowringhee Approach, P.O. Princep Street, CALCUTTA 700072 27 68 00

Printed at Printograph, New Delhi, India

Inventory Performa for Dairy Farms and Gaushalas in the State/UT

Sl. No.	Description	Urban Area	Peri-urban Area	Rural Area
1.	Total no. of dairy farms			
	• Small (upto 25 animals)	•	•	•
	• Medium (upto 100 animals)	•	•	•
	• Large (above 100 animals)	•	•	•
	• Total	•	•	•
2.	Total no. of animals in			
	• Small dairy farms	•	•	•
	• Medium dairy farms	•	•	•
	• Large dairy farms	•	•	•
	• Total	•	•	•
3.	Total amount of bovine dung produced (ton per day) by			
	• Small dairy farms	•	•	•
	• Medium dairy farms	•	•	•
	• Large dairy farms	•	•	•
	• Total	•	•	•
4.	Methods of disposal/utilization of bovine dung and wastewater by dairy farms (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 bovine, method of disposal/utilization of bovine dung & wastewater, etc. to be enclosed)			

6.	Total no. of Gaushalas • Small (upto 100 animals) • Medium (upto 1000 animals) • Large (above 1000 animals) • Total			
7.	Total no. of animals in • Small Gaushalas • Medium Gaushalas • Large Gaushalas • Total			
8.	Total amount of dung produced (ton per day) by • Small Gaushalas • Medium Gaushalas • Large Gaushalas • Total			
9.	Methods of disposal/utilization of 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.

Dairy colonies/cluster: It is defined as the area designated by the government for the purpose of dairy activities.

****

केन्द्रीय प्रदूषण नियंत्रण बोर्ड
CENTRAL POLLUTION CONTROL BOARD
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय भारत सरकार
MINISTRY OF ENVIRONMENT FOREST & CLIMATE CHANGE GOVT OF INDIA

MOST URGENT
HON'BLE NGT MATTER

Speed Post/e-mail

CM-13011/99/2022-LAW-HO-CPCB-HO | 1930-1974

August 03, 2023

To

The Member Secretary
SPCBs/ PCCs
(As per list enclosed)

Subject: Status on Implementation of CPCB revised "Guidelines for Environmental Management of Dairy Farms and Gaushalas" issued in July, 2021 for compliance to Hon'ble NGT order dated 20.07.2023 in OA No. 394/2022 – reg.

Sir,

This is to inform that the Hon'ble NGT vide order dated 20.07.2023 in OA No. 394/2022; Pushpendra Kumar Vs. Block Development Officer, Kadaura & Ors. directed as follows:

"...We are of the view that the guidelines (2021) framed and circulated may be 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 at least once in six months. With regard to siting policy, at least minimum distance must be specified from habitations, water bodies, etc. as well as inter-se distance of such establishments 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..."

CPCB already incorporated the above points in the revised "Guidelines for Environmental Management of Dairy Farms and Gaushalas" and communicated vide letter dated 14.07.2021 to all the SPCBs/PCCs for its implementation.

In view of the above, it is requested to kindly provide the status of implementation of the above referred Guidelines in your state on or before 31.08.2023 in the enclosed format so that same is compiled and submitted to Hon'ble NGT before the next date of hearing. Copy of the Hon'ble NGT order is attached for kind reference.

Yours faithfully

केन्द्रीय प्रदूषण नियंत्रण बोर्ड
नाम Nsimha
दिनांक 4/8/2023

(Anamika Sagar)
Additional Director &
Divisional Head IPC-IV

Encl.: As above

Copy to:

The Regional Director
All Regional Directorates
Central Pollution Control Board
(list enclosed)

: For information & request to follow-up with concerned SPCBs/PCCs, please

(Anamika Sagar)

List of all State Pollution Control Board & Pollution Control Committee

1. The Member Secretary Andhra Pradesh Pollution Control Board D. No. 33-26-14 D/2, Near Sunrise Hospital, Pushpa Hotel Centre, Chalamalavari Street, Kasturibaipet, Vijayawada – 520010	2. The Member Secretary Arunachal Pradesh State Pollution Control Board Govt. of Arunachal Pradesh, Department of Environment & Forest, Paryavaran Bhawan, Yupia Road, PapuNalah, Naharlagun - 791110
3. The Member Secretary Pollution Control Board- Assam, Bamunimaidam, Guwahati – 781021 (Assam)	4. The Member Secretary Bihar State Pollution Control Board Parivesh Bhawan, Plot No. NS-B/2, Paliputra Industrial Area, Patliputra, Patna – 800023 (Bihar)
5. The Member Secretary Chhattisgarh State Environment Conservation Board, Paryavas Bhawan, North Block Sector-19, Naya Raipur - 492002 (Chhattisgarh)	6. The Member Secretary Goa State Pollution Control Board Nr. Pilerne Industrial Estate, Opposite Saligao Seminary, Saligao Bardez– 403511 (Goa)
7. The Member Secretary Gujarat Pollution Control Board Paryavaran Bhavan, Sector 10-A, Gandhi Nagar 382010 (Gujarat)	8. The Member Secretary Haryana State Pollution Control Board C-11, Sector-6, Panchkula- 134109 (Haryana)
9. The Member Secretary Himachal Pradesh State Pollution Control Board Him Parivesh, Phase-III, New Shimla – 171009	10. The Member Secretary J&K State Pollution Control Committee, Parivesh Bhawan, Shiekh-ul-Campus, behind Govt. Silk Factory, Raj Bagh, Srinagar - 190008 (J&K)
11. The Member Secretary Jharkhand State Pollution Control Board T.A. Bldg., HEC, P. O. Dhurwa, Ranchi-834004 (Jharkhand)	12. The Member Secretary Karnataka State Pollution Control Board "Parisara Bhavan", #49,4th & 5th Floor, Church Street, Bangalore 560 001
13. The Member Secretary Kerala State Pollution Control Board Head Office, Pattom, P. O Thiruvananthapuram- 695 004 (Kerala)	14. The Member Secretary Madhya Pradesh Pollution Control Board Paryavaran Parisar, E-5, Arera Colony, Bhopal - 462016 (Madhya Pradesh)

15. The Member Secretary Maharashtra Pollution Control Board, Kalpataru Points, 3rd& 4th Floor, Sion Matunga Scheme Road No.6 Opp. Cine Planet, Sion Circle, Sion (E), Mumbai-400022	**16.** The Member Secretary Manipur Pollution Control Board Lamphalpat, Imphal – 795004 (Manipur)
17. The Member Secretary Meghalaya State Pollution Control Board, "ARDEN", Lumpyngngad, Shillong– 793014 (Meghalaya)	**18.** The Member Secretary Mizoram Pollution Control Board New Secretariat Complex, Khatla, Aizawl – 796001 (Mizoram)
19. The Member Secretary Nagaland Pollution Control Board Signal Point, Dimapur - 797112 (Nagaland)	**20.** The Member Secretary Odisha State Pollution Control Board Paribesh Bhawan, A-118, Nilakantha Nagar, Unit VIII Bhubaneswar–751012 (Odisha)
21. The Member Secretary Punjab Pollution Control Board Vatavaran Bhawan, Nabha Road Patiala 147 001 (Punjab)	**22.** The Member Secretary Rajasthan Pollution Control Board, A-4, Institutional Area, Jalana Dungri, Jaipur 302 004 (Rajasthan)
23. The Member Secretary Sikkim State Pollution Control Board State Land Use & Environment Cell Govt. of Sikkim, Deorali Gangtok – 737102 (Sikkim)	**24.** The Member Secretary Tamil Nadu Pollution Control Board 76, Anna Salai, Guindy Industrial Estate, Race View Colony, Guindy, Chennai–600032 (Tamil Nadu)
25. The Member Secretary Telangana State Pollution Control Board Paryavarana Bhavan, A-III, Industrial Estate, Sanathnagar, Hyderabad–500018 (Telangana)	**26.** The Member Secretary Tripura State Pollution Control Board Parivesh Bhawan, Pandit Nehru Complex P.O. Kunjaban, Gorkhabasti, Agartala – 799 006 (Tripura)
27. The Member Secretary Uttar Pradesh Pollution Control Board IIIrd Floor PICUP Bhavan Vibhuthi Khand, Gomti Nagar, Lucknow – 226 020, (Uttar Pradesh)	**28.** The Member Secretary Uttarakhand Pollution Control Board Gaura Devi Bhawan, 46 B IT Park Sahastradhara, Dehradun – 248 001 (Uttarakhand)

29. The Member Secretary West Bengal Pollution Control Board Paribesh Bhavan, 10-A, Block LA, Sector III, Salt Lake City, Kolkata-700 091 (West Bengal)	**30.** The Member Secretary Andaman & Nicobar Islands Pollution Control Committee, Department of Science & Technology, Dollyganj Van Sadan, Haddo P.O. Port Blair-744102 (Andaman & Nicobar)
31. The Member Secretary Chandigarh Pollution Control Committee Paryavaran Bhawan, Ground Floor, Sector-19 B, Madhya Marg, Chandigarh – 160 019	**32.** The Member Secretary Pollution Control Committee, UTs of Daman, Diu and Dadra & Nagar Haveli Fort Area, Court Compound, Moti Daman - 396 220
33. The Member Secretary Delhi Pollution Control Committee, Government of N.C.T. Delhi 4th Floor, ISBT Building, Kashmere Gate, Delhi-110 006	**34.** The Member Secretary Lakshadweep Pollution Control Committee Department of Science, Technology & Environment, Kavarati-682555
35. The Member Secretary Puducherry Pollution Control Committee 'B' Block, Ground Floor, Chief Secretariat, Puducherry-605 001	**36.** The Member Secretary Ladakh Pollution Control Committee Wildlife Office Building, Near Council Secretariat, Opposite Police Station Housing Colony, Leh-194101 (Ladakh)

List of all Regional Directorates

1. Regional Director (Bengaluru) Central Pollution Control Board A-Block, Nisarga Bhavan 1st and 2nd Floors, 7th D Cross Thimmaiah Road, Shivanagar Bengaluru-560079	2. Regional Director (Bhopal) Central Pollution Control Board Parivesh Bhawan, Paryavaran Parisar E-5, Arera Colony Bhopal – 462016
3. Regional Director (Kolkata) Central Pollution Control Board 'South end Conclave' Block-502 5th & 6th Floor, 1582, Razidanga, Main Road Kolkata-700107	4. Regional Director (Lucknow) Central Pollution Control Board PICUP Bhawan, Vibhuti Khand, Gomti Nagar Lucknow-226020
5. Regional Director (Shillong) Central Pollution Control Board BSNL NE-I, Telecom Circle, CTO Building, Ground Floor, Shillong - 793001	6. Regional Director (Vadodara) Central Pollution Control Board Parivesh Bhawan, Opp. Ward No. 10 VMC Office Subhanpura, Vadodara – 390023
7. Regional Director (Chennai) Central Pollution Control Board 77-A, 2nd Floors, South Avenue Road Ambattur Industrial Esate Ambattur Taluk, Thiruvallur District Chennai-600058	8. Regional Director (Chandigarh) Central Pollution Control Board Second Floor, BSNL Telephone Exchange, Sector-49, Chandigarh - 160047
9. Regional Director (Pune) Central Pollution Control Board Row House No. 1, Nisarg Vihar, Balewadi Pune-411045	

केन्द्रीय प्रदूषण नियंत्रण बोर्ड
CENTRAL POLLUTION CONTROL BOARD
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय भारत सरकार
MINISTRY OF ENVIRONMENT FOREST & CLIMATE CHANGE GOVT OF INDIA

REMINDER

MOST URGENT
HON'BLE NGT MATTER

Speed Post/E-mail

CM-13011/99/2022-LAW-HO-CPCB-HO | 2694-2731 September 18, 2023

To

The Member Secretary
SPCBs/ PCCs
(As per list enclosed)

Subject: Status on Implementation of CPCB revised "Guidelines for Environmental Management of Dairy Farms and Gaushalas" issued in July, 2021 for compliance to Hon'ble NGT order dated 20.07.2023 in OA No. 394/2022 – reg.

Sir,

This has reference to CPCB letter dated 03.08.2023 on the aforesaid subject to provide the status of implementation of above referred Guidelines in your state on or before 31.08.2023. However, the information is yet to receive from your Board.

In view of the above, it is once again requested to provide the status of implementation of the above referred Guidelines in the stipulated format, latest by 25.09.2023, so that same is compiled and submitted to Hon'ble NGT before the next date of hearing.

Yours faithfully

(Anamika Sagar)
Additional Director &
Divisional Head IPC-IV

Nsingh
19/9/2023

o/c

'परिवेश भवन' पर्वी अर्जुन नगर, दिल्ली-110032
Parivesh Bhawan, East Arjun Nagar, Delhi-110032
दूरभाष/Tel : 43102030, 22305792, वेबसाईट/Website : www.cpcb.nic.in

Copy to:

The Regional Director
All Regional Directorates
Central Pollution Control Board
(list enclosed)

: For information & request to follow-up with concerned SPCBs/PCCs, please.

(Anamika Sagar)

List of all State Pollution Control Board & Pollution Control Committee

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7. The Member Secretary Himachal Pradesh State Pollution Control Board Him Parivesh, Phase-III, New Shimla – 171009	8. The Member Secretary Haryana State Pollution Control Board C-11, Sector-6, Panchkula- 134109 (Haryana)
9. The Member Secretary Jharkhand State Pollution Control Board T.A. Bldg., HEC, P. O. Dhurwa, Ranchi-834004 (Jharkhand)	10. The Member Secretary Karnataka State Pollution Control Board "Parisara Bhavan", #49,4th & 5th Floor, Church Street, Bangalore 560 001
11. The Member Secretary Kerala State Pollution Control Board Head Office, Pattom, P. O Thiruvananthapuram- 695 004 (Kerala)	12. The Member Secretary Madhya Pradesh Pollution Control Board Paryavaran Parisar, E-5, Arera Colony, Bhopal - 462016 (Madhya Pradesh)
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15. The Member Secretary Meghalaya State Pollution Control Board, "ARDEN", Lumpyngngad, Shillong– 793014 (Meghalaya)	**16.** The Member Secretary Mizoram Pollution Control Board New Secretariat Complex, Khatla, Aizawl – 796001 (Mizoram)
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25. The Member Secretary West Bengal Pollution Control Board Paribesh Bhavan, 10-A, Block LA, Sector III, Salt Lake City, Kolkata-700 091 (West Bengal)	**26.** The Member Secretary Andaman & Nicobar Islands Pollution Control Committee, Department of Science & Technology, Dollyganj Van Sadan, Haddo P.O. Port Blair-744102 (Andaman & Nicobar)
27. The Member Secretary Chandigarh Pollution Control Committee Paryavaran Bhawan, Ground Floor, Sector-19 B, Madhya Marg, Chandigarh – 160 019	**28.** The Member Secretary Pollution Control Committee, UTs of Daman, Diu and Dadra & Nagar Haveli Fort Area, Court Compound, Moti Daman - 396 220

29. The Member Secretary Puducherry Pollution Control Committee 'B' Block, Ground Floor, Chief Secretariat, Puducherry-605 001	**30.** The Member Secretary Ladakh Pollution Control Committee Wildlife Office Building, Near Council Secretariat, Opposite Police Station Housing Colony, Leh-194101 (Ladakh)

List of all Regional Directorates

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3. Regional Director (Kolkata) Central Pollution Control Board 'South end Conclave' Block-502 5th & 6th Floor, 1582, Razidanga, Main Road Kolkata-700107	4. Regional Director (Lucknow) Central Pollution Control Board PICUP Bhawan, Vibhuti Khand, Gomti Nagar Lucknow-226020
5. Regional Director (Shillong) Central Pollution Control Board BSNL NE-I, Telecom Circle, CTO Building, Ground Floor, Shillong - 793001	6. Regional Director (Vadodara) Central Pollution Control Board Parivesh Bhawan, Opp. Ward No. 10 VMC Office Subhanpura, Vadodara – 390023
7. Regional Director (Chennai) Central Pollution Control Board 77-A, 2nd Floors, South Avenue Road Ambattur Industrial Esate Ambattur Taluk, Thiruvallur District Chennai-600058	8. Regional Director (Chandigarh) Central Pollution Control Board Second Floor, BSNL Telephone Exchange, Sector-49, Chandigarh - 160047

केन्द्रीय प्रदूषण नियंत्रण बोर्ड
CENTRAL POLLUTION CONTROL BOARD
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय भारत सरकार
MINISTRY OF ENVIRONMENT FOREST & CLIMATE CHANGE GOVT OF INDIA

REMINDER-II
MOST URGENT
HON'BLE NGT MATTER

Speed Post/E-mail

CM-13011/99/2022-LAW-HO-CPCB-HO 2910 September 26,2023

To

The Member Secretary
SPCBs/ PCCs
(As per list enclosed)

Subject: Status on Implementation of CPCB revised "Guidelines for Environmental Management of Dairy Farms and Gaushalas" issued in July, 2021 for compliance to Hon'ble NGT order dated 20.07.2023 in OA No. 394/2022 – reg.

Sir,

This has reference to CPCB letters dated 03.08.2023 and 18.09.2023 on the aforesaid subject to provide the status of implementation of above referred Guidelines in your state on or before 25.09.2023. However, the information is yet to receive from your Board.

In view of the above, it is once again requested to provide the status of implementation of the above referred Guidelines in the stipulated format, latest by 03.10.2023, so that same is compiled and submitted to Hon'ble NGT before the next date of hearing i.e. 19.10.2023.

Yours faithfully

(Anamika Sagar)
Additional Director &
Divisional Head IPC-IV

Inventory of Dairy farms & gaushalas not received from the following States/UTs

1. The Member Secretary Andhra Pradesh Pollution Control Board D. No. 33-26-14 D/2, Near Sunrise Hospital, Pushpa Hotel Centre, Chalamalavari Street, Kasturibaipet, Vijayawada – 520010	2. The Member Secretary Arunachal Pradesh State Pollution Control Board Govt. of Arunachal Pradesh, Department of Environment & Forest, Paryavaran Bhawan, Yupia Road, PapuNalah, Naharlagun - 791110
3. The Member Secretary Pollution Control Board- Assam, Bamunimaidam, Guwahati – 781021 (Assam)	4. The Member Secretary Himachal Pradesh State Pollution Control Board, Him Parivesh, Phase-III, New Shimla – 171009
5. The Member Secretary Chhattisgarh State Environment Conservation Board, Paryavas Bhawan, North Block Sector-19, Naya Raipur - 492002 (Chhattisgarh)	6. The Member Secretary Goa State Pollution Control Board, Nr. Pilerne Industrial Estate, Opposite Saligao Seminary, Saligao Bardez–403511 (Goa)
7. The Member Secretary Madhya Pradesh Pollution Control Board, Paryavaran Parisar, E-5, Arera Colony, Bhopal - 462016 (Madhya Pradesh)	8. The Member Secretary Haryana State Pollution Control Board C-11, Sector-6, Panchkula- 134109 (Haryana)
9. The Member Secretary Jharkhand State Pollution Control Board, T.A. Bldg., HEC, P. O. Dhurwa, Ranchi-834004 (Jharkhand)	10. The Member Secretary Karnataka State Pollution Control Board, "Parisara Bhavan", #49.4th & 5th Floor, Church Street, Bangalore 560 001
11. The Member Secretary Odisha State Pollution Control Board, Paribesh Bhawan, A-118, Nilakantha Nagar, Unit VIII Bhubaneswar–751012 (Odisha)	12. The Member Secretary Manipur Pollution Control Board Lamphalpat, Imphal – 795004 (Manipur)
13. The Member Secretary Meghalaya State Pollution Control Board, "ARDEN", Lumpyngngad, Shillong– 793014 (Meghalaya)	14. The Member Secretary Mizoram Pollution Control Board New Secretariat Complex, Khatla, Aizawl– 796001 (Mizoram)
15. The Member Secretary Punjab Pollution Control Board Vatavaran Bhawan, Nabha Road Patiala 147 001 (Punjab)	16. The Member Secretary Rajasthan Pollution Control Board, A-4, Institutional Area, Jalana Dungri, Jaipur 302 004 (Rajasthan)
17. The Member Secretary Telangana State Pollution Control Board, Paryavarana Bhavan, A-III, Industrial Estate, Sanathnagar, Hyderabad–500018 (Telangana)	18. The Member Secretary Tamil Nadu Pollution Control Boar, 76, Anna Salai, Guindy Industrial Estate, Race View Colony, Guindy, Chennai–600032 (Tamil Nadu)

19. The Member Secretary Uttar Pradesh Pollution Control Board IIIrd Floor PICUP Bhavan Vibhuthi Khand, Gomti Nagar, Lucknow – 226 020. (Uttar Pradesh)	**20.** The Member Secretary Puducherry Pollution Control Committee 'B' Block, Ground Floor, Chief Secretariat, Puducherry-605 001
21. The Member Secretary West Bengal Pollution Control Board Paribesh Bhavan, 10-A, Block LA, Sector III, Salt Lake City, Kolkata-700 091 (West Bengal)	**22.** The Member Secretary Andaman & Nicobar Islands Pollution Control Committee, Department of Science & Technology, Dollyganj Van Sadan, Haddo P.O. Port Blair-744102 (Andaman & Nicobar)
23. The Member Secretary Chandigarh Pollution Control Committee Paryavaran Bhawan, Ground Floor, Sector-19 B, Madhya Marg, Chandigarh – 160 019	**24.** The Member Secretary Pollution Control Committee, UTs of Daman, Diu and Dadra & Nagar Haveli Fort Area, Court Compound, Moti Daman - 396 220
25. The Member Secretary Delhi Pollution Control Committee, Government of N.C.T. Delhi 4th Floor, ISBT Building, Kashmere Gate, Delhi-110 006	**26.** The Member Secretary Ladakh Pollution Control Committee Wildlife Office Building, Near Council Secreatriat, Opposite Police Station Housing Colony, Leh-194101 (Ladakh)

Annexure-4

Status of Implementation of revised Guidelines for Environmental Management of Dairy Farms and Gaushalas issued by CPCB in July, 2021

State/ UT	Inventory in the State/UT		Details of public notice in newspapers and on websites by local authorities/ corporations	Total No. of Registered Dairy farms and Gaushalas as per local authorities/ corporations		Details of public notice in newspapers and on websites by SPCB/PCC	Details of uploading of Guidelines and circulation to Dairy farms and Gaushalas by SPCB/PCC/local bodies/Municipal corporations	Total No. of Dairy farms and Gaushalas having CTE/CTO from SPCB/PCC		Details of Environmental audit						Details of training programmes organised by SPCB/PCC and other stakeholders for implementation of the Guidelines
										Dairy farms			Gaushalas			
	Total No. of Dairy farms	Total No. of Gaushalas		Dairy farms	Gaushalas			Dairy farms	Gaushalas	No. of environmental audit	No. of defaulter units	Action taken against defaulter units	No. of environmental audit	No. of defaulter units	Action taken against defaulter units	
Andhra Pradesh	1	46	Nil	0	13	Notice displayed in APPCB website	Guidelines was uploaded on APPCB website	0	0	Nil	Nil	Nil	Nil	Nil	Nil	APPCB circulated the Guidelines to the stakeholder departments viz Animal husbandry and ULBs for implementation.
Bihar	21	13	No information provided by BSPCB	Nil	08	Public notices were published in newspapers on 12.02.2020, 30.09.2020, 01.10.2020, 04.10.2020, 06.10.2020	Guidelines was uploaded on BSPCB website	Nil	Nil	As informed environmental audit yet to be carried-out	N.A.	N.A.	As informed environmental audit yet to be carried-out	N.A.	N.A.	As informed training programme yet to be organised

State/ UT	Inventory in the State/UT		Details of public notice in newspapers and on websites by local authorities/ corporations	Total No. of Registered Dairy farms and Gaushalas as per local authorities/ corporations		Details of public notice in newspapers and on websites by SPCB/PCC	Details of uploading of Guidelines and circulation to Dairy farms and Gaushalas by SPCB/PCC/local bodies/Municipal corporations	Total No. of Dairy farms and Gaushalas having CTE/CTO from SPCB/PCC		Details of Environmental audit						Details of training programmes organised by SPCB/PCC and other stakeholders for implementation of the Guidelines
										Dairy farms			Gaushalas			
	Total No. of Dairy farms	Total No. of Gaushalas		Dairy farms	Gaushalas			Dairy farms	Gaushalas	No. of environmental audit	No. of defaulter units	Action taken against defaulter units	No. of environmental audit	No. of defaulter units	Action taken against defaulter units	
						and 01.09.2023 and uploaded on BSPCB website										
Gujarat	409075	1254	As informed, no details provided by local bodies	322		Public notices published in newspaper	Guidelines was uploaded on GPCB website	01		12	Not provided	Nil	53	Not provided	Nil	As informed training programme is a continues process
Himachal Pradesh	734	192	Nil	0	91	public notices published on newspapers	Guidelines was uploaded on HPSPCB website	0	2	7	0	0	28	6	67	3 training programmes organized
Jammu & Kashmir	831	09	Published notices in various newspapers on 01.06.2022, 04.01.2023, 04.03.2023 and 22.08.2023	143	Nil	Public notices published in various newspapers on 30.12.2022, 21.08.2020, 14.10.2020, 25.08.2020,	As informed website is under construction	51	Nil	197	148	53 SCN issued against the defaulter Dairy farms and Gaushalas	09	09	53 SCN issued against the defaulter Dairy farms and Gaushalas	Various awareness programmes, interactive talks, webinars and audio-visual ad have been conducted by JKPCC along

State/ UT	Inventory in the State/UT		Details of public notice in newspapers and on websites by local authorities/ corporations	Total No. of Registered Dairy farms and Gaushalas as per local authorities/ corporations		Details of public notice in newspapers and on websites by SPCB/PCC	Details of uploading of Guidelines and circulation to Dairy farms and Gaushalas by SPCB/PCC/local bodies/Municipal corporations	Total No. of Dairy farms and Gaushalas having CTE/CTO from SPCB/PCC		Details of Environmental audit						Details of training programmes organised by SPCB/PCC and other stakeholders for implementation of the Guidelines
										Dairy farms			Gaushalas			
	Total No. of Dairy farms	Total No. of Gaushalas		Dairy farms	Gaushalas			Dairy farms	Gaushalas	No. of environmental audit	No. of defaulter units	Action taken against defaulter units	No. of environmental audit	No. of defaulter units	Action taken against defaulter units	
						13.03.2021 and 29.09.2021										with other implementing agencies
Maharashtra	10598	494	As informed by MPCB that letters were communicated to local bodies to publish public notices	6531	320	Public notices published in newspapers by MPCB on 20.09.2020	Guidelines uploaded on website	08	01	Nil	837	28 SCN issued against the defaulter Dairy farms and Gaushalas	Nil	117	28 SCN issued against the defaulter Dairy farms and Gaushalas	Training programme is proposed as informed
Nagaland	11	Nil	No information provided	No information provided		Notice has been circulated to all urban local bodies and Dairy farms on 15.09.2020	Uploaded on NPCB website	Nil	N.A.	02	Nil	No information provided	N.A.	N.A.	N.A.	No information provided
Punjab	1979	487	Information yet to be received from local bodies as informed	0	476	Public notices published in leading newspaperon 15.08.2020	Uploaded on SPCB website	0	1	115	115	87 SCN issued, 106 closure issued, 36 prosecution initiated	8	7	87 SCN issued, 106 closure issued, 36 prosecution initiated	Board has conducted training programmes with

State/ UT	Inventory in the State/UT		Details of public notice in newspapers and on websites by local authorities/ corporations	Total No. of Registered Dairy farms and Gaushalas as per local authorities/ corporations		Details of public notice in newspapers and on websites by SPCB/PCC	Details of uploading of Guidelines and circulation to Dairy farms and Gaushalas by SPCB/PCC/local bodies/Municipal corporations	Total No. of Dairy farms and Gaushalas having CTE/CTO from SPCB/PCC		Details of Environmental audit						Details of training programmes organised by SPCB/PCC and other stakeholders for implementation of the Guidelines
										Dairy farms			Gaushalas			
	Total No. of Dairy farms	Total No. of Gaushalas		Dairy farms	Gaushalas			Dairy farms	Gaushalas	No. of environmental audit	No. of defaulter units	Action taken against defaulter units	No. of environmental audit	No. of defaulter units	Action taken against defaulter units	
						and 17.08.2020						against the defaulter Dairy farms and Gaushalas			against the defaulter Dairy farms and Gaushalas	the dairy owners to apprise the guidelines
Sikkim	32321	Nil	Information yet to be received from local bodies as informed	Information yet to be received from local bodies as informed		Notice published in local newspaper as informed	Uploaded on SPCB website	Nil	Nil	No information provided			N.A.	N.A.	N.A.	No information provided
Tamil Nadu	50		Nil	Nil		Published in magazines in English and Dinamani on 13.09.2020	Uploaded on TNPCB website	2	2	N.A.	1	01 SCN issued and 01 closure issued to Dairy farms and Gaushalas	Nil	Nil	01 SCN issued and 01 closure issued to Dairy farms and Gaushalas	Nil
Tripura	1135	3	Relevant information was not provided	Relevant information was not provided		Notice were published in local newspapers in English and vernacular languages	Uploaded on TSPCB website	3		No relevant information provided		Direction issued to defaulting units	No relevant information provided		Direction issued to defaulting units	Training programme is being conducted by the TSPCB as informed

State/ UT	Inventory in the State/UT		Details of public notice in newspapers and on websites by local authorities/ corporations	Total No. of Registered Dairy farms and Gaushalas as per local authorities/ corporations		Details of public notice in newspapers and on websites by SPCB/PCC	Details of uploading of Guidelines and circulation to Dairy farms and Gaushalas by SPCB/PCC/local bodies/Municipal corporations	Total No. of Dairy farms and Gaushalas having CTE/CTO from SPCB/PCC		Details of Environmental audit						Details of training programmes organised by SPCB/PCC and other stakeholders for implementation of the Guidelines
	Total No. of Dairy farms	Total No. of Gaushalas		Dairy farms	Gaushalas			Dairy farms	Gaushalas	Dairy farms			Gaushalas			
										No. of environmental audit	No. of defaulter units	Action taken against defaulter units	No. of environmental audit	No. of defaulter units	Action taken against defaulter units	
Uttarakhand	197		Public notice in Dehradun Jagran on 12.10.2022	Information yet to be received from local bodies as informed		Public notice issued in various newspapers on 03.11.2021 and 17.09.2020	Uploaded on UKPCB website	01	Nil	04	04	Under consideration for SCN as informed	04	04	Under consideration for SCN as informed	Training programme yet to be organised as instructions were communicated to regional offices of UKPCB by its head office
Lakshadweep	Nil		Guidelines available in the Lakshadweep website	Nil		There are no larger establishment to produce for supplying to milk processing plants. Local authority will interact with small farm owners occasionally.	Guidelines available in the Lakshadweep website	Nil		Nil	Nil	Nil	Nil	Nil	Nil	Action being initiated to arrange training programme.

Annexure-5

Speed Post/E-mail

CM-13011/99/2022-LAW-HO-CPCB-HO

October 16, 2023

To

The Member Secretary
SPCBs/ PCCs
(As per list enclosed)

Sub: Action Taken Report for Environmental Auditing of Dairy Farms and Gaushalas carried out by CPCB as per regulatory mechanism of revised "Guidelines for Environmental Management of Dairy Farms and Gaushalas" issued by CPCB in July, 2021 for compliance to Hon'ble NGT order dated 20.07.2023 in OA No. 394/2022 – reg.

Sir,

In compliance to Hon'ble NGT (PB) order dated 20.07.2023 in OA No. 394/2022, CPCB has carried out Environmental Auditing of Dairy Farms and Gaushalas as per regulatory mechanism of revised "Guidelines for Environmental Management of Dairy Farms and Gaushalas" issued by CPCB in July, 2021. In this regard, please find enclosed a copy of environmental audit reports for taking necessary action against the defaulter Dairy Farms and Gaushalas.

In view of the above, it is requested to provide the Action Taken Report to this office at the earliest.

Yours faithfully

(Anamika Sagar)
Additional Director &
Divisional Head IPC-IV

Encl.: As above

Copy to:

The Regional Director
Regional Directorates
Central Pollution Control Board
(As per the list enclosed)

: For information & request to follow-up with concerned SPCBs/PCCs, please.

(Anamika Sagar)