

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL  
PRINCIPAL BENCH, NEW DELHI**

**M.A NO. 93/2024**

**IN**

**ORIGINAL APPLICATION NO. 202 of 2023**

**IN THE MATTER OF**

**GAURAV SHARMA**

**...APPLICANT**

**VERSUS**

**GOVT. OF NCT OF DELHI & ORS.**

**...RESPONDENTS**

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**Place: New Delhi**

**Through**

**Date: 11.02.2026**

  
**Gigi C George Advocate**

**Standing counsel (UOI)  
NGT**

**Ch. No. 457, Lawyers Block, DHC**

[Gigicgeorge.adv42@yahoo.in](mailto:Gigicgeorge.adv42@yahoo.in)

**M.9810625315**

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL,  
PRINCIPAL BENCH, NEW DELHI

M.A.NO. 93/2024

IN

O.A.NO. 202/2023

GAURAV SHARMA

--- APPLICANT

VERSUS

GOVT. OF NCT OF DELHI & ORS.

--- RESPONDENTS

**ADDITIONAL REPLY AFFIDAVIT ON BEHALF OF RESPONDENT  
NO.7/MINISTRY OF HEALTH AND FAMILY WELFARE**

I, Ms. Neelam, D/o Late Shri Lekh Raj presently working as Under Secretary in Ministry of Health and Family Welfare, Government of India, having my office at B-Wing Work Hall, 1st Floor, Kartavya Bhawan-1, New Delhi, do hereby solemnly affirm and declare as under:-

That I am authorized and competent to file the present additional reply affidavit on behalf of Respondent No.7/Ministry of Health and Family Welfare.

That the present additional reply affidavit is filed on behalf of Respondent No.7 as per the directions of this Hon'ble Tribunal vide Order dated 17.11.2025. The copy of the same is annexed as **Annexure-A.**

3. That this Hon'ble Tribunal vide order dated 03.07.2023 had constituted a Joint Committee headed by Secretary, Ministry of Health and Family

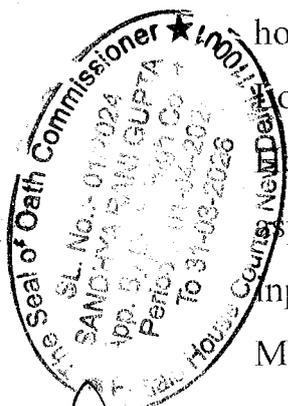
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अवर सचिव/Under Secretary  
स्वास्थ्य एवं परिवार कल्याण मंत्रालय  
Ministry of Health & Family Welfare  
भारत सरकार/Govt. of India  
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Welfare with representatives of Ministry of Environment and Climate Change, Ministry of Home Affairs, Ministry of Housing and Urban Affairs and Central Pollution Control Board, to finalize the SOP for Environmental Management in and around all Government District Hospital or larger than district hospitals including medical colleges as specified by the Committee. The Copy of the Order dated 03.07.2023 is annexed as **Annexure-B.**

4. That this Hon'ble Tribunal further directed to finalize the SOP based on the data collected through questionnaire from various hospitals/sources and to place the SOP on the website of Ministry of Health and Family Welfare and to send an Action Taken Report to Registrar General.
5. That the Committee formed on the direction of this Hon'ble Tribunal deliberated on the issue and after detailed discussions, the focus area to be covered under the Environment Management Plan were identified and a detailed questionnaire was finalized based on the areas so identified like vehicular pollution, traffic management related issues, waste management, development of clean & green hospital premises and surrounding areas, dust mitigation management due to construction and other activities; heating, ventilation and air conditioning systems {HVAC (with Hepa filter)} in critical areas like OT and ICU, management of DG sets, etc. It was decided by the Committee to share the questionnaire with major public hospitals in Delhi like AIIMS, Safdarjung Hospital, Dr. Ram Manohar Lohia Hospital, Lady Hardinge Medical College, Govind Ballabh Pant Hospital and Lok Nayak Jai Prakash Narayan Hospital which cater to all aspects of healthcare delivery system in the city. Taking into account the inputs from all these hospitals and other stakeholders, draft Environment Management Plan (EMP) was drawn inter-alia covering (i) the factors causing environment pollution (air pollutants, vehicles, encroachment, overcrowding, lack of green cover) and measures to mitigate the same, (ii)



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Ministry of Health & Family Welfare  
भारत सरकार / Govt. of India  
नई दिल्ली / New Delhi

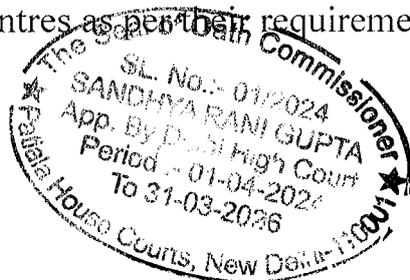
management of prohibited and regulated activities in the hospitals; and (iii) waste management and pollution control (water waste, solid waste, pest control, condemnation of hospital items, biomedical waste, radio-active waste and e-waste) and was circulated to all Committee members for their comments/additional inputs. Subsequently, the final EMP was duly formulated, keeping in view the statutory requirements under the Environment (Protection) Act, 1986 and other relevant laws governing pollution control, waste management, and environmental sustainability in hospital premises (**Annexure C**).

6. The SoP/EMP finalized by the Committee was filed through Email as directed by this Hon'ble Tribunal vide Order dated 01.07.2023 through Standing Counsel(UoI), Ms. Monika Arora and was simultaneously uploaded on Ministry of Health & Family Welfare website.
7. That this Hon'ble Tribunal vide Orders dated 09.09.2024 and 24.12.2024 in MA No.93/2024 has directed the Respondent No.7 to file the EMP through an Affidavit. EMP/SoP was subsequently filed after the approval from the Competent Authority in the Ministry of Health & Family Welfare.
8. That it is humbly submitted with reference to Hon'ble Tribunal's observation on Clause 6 of the EMP that Clause-6 is in nature of policy recommendations forming part of the Environment Management Plan (EMP) formulated by the Committee constituted with the directions of this Hon'ble Tribunal and is intended to provide broad guidance for effective environmental management by the Hospitals.
9. It may further be added that the SoP for environment management is a model/guiding principle and may be adopted by Hospitals/Institutes/medical colleges/agencies including district level hospitals/health centres as per their requirements.

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Ministry of Health & Family Welfare  
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10. That Respondent No.7 has complied with the directions issued by this Hon'ble Tribunal.

*Identified & signed by the Deponent who has signed & thumb impression in presence of Verification*

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Deponent  
अवर सचिव/Under Secretary  
स्वास्थ्य एवं परिवार कल्याण मंत्रालय  
Ministry of Health & Family Welfare  
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Verified at New Delhi on 10 Feb. 2026 that the contents of the above additional reply affidavit is true and correct and nothing material has been concealed therefrom.

The Seal of Oath Commissioner  
SL. No.: 01/2024  
SANDHYA RANI GUPTA  
App. By Delhi High Court  
Period - 01-04-2024  
To 31-03-2026  
Patla House Courts, New Delhi-110011

Deponent  
(नीलम)  
(NEELAM)  
अवर सचिव/Under Secretary  
स्वास्थ्य एवं परिवार कल्याण मंत्रालय  
Ministry of Health & Family Welfare  
भारत सरकार/Govt. of India  
नई दिल्ली/New Delhi

TESTIFIED (H.O.) THE DEPONENT  
Shri./Smt./Km. *Neelam*  
S/o W/o D/o. *Dr. Jeeva Prasad*  
R/o. *Crj George*  
Identifier *SO/26*  
has signed in presence of  
Delhi on *11 FEB 2026*  
that the contents of the above affidavit are true and correct.  
Oath Commissioner, Delhi

Item No. 11

Court No. 1

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

M.A. No. 93/2024

In

Original Application No. 202/2023

Gaurav Sharma

Applicant

Versus

Govt. of N.C.T. of Delhi &amp; Ors.

Respondent(s)

Date of hearing: 17.11.2025

**CORAM: HON'BLE MR. JUSTICE PRAKASH SHRIVASTAVA, CHAIRPERSON  
HON'BLE DR. A. SENTHIL VEL, EXPERT MEMBER**

Applicant: Ms. Jasmine Damkewala, Adv. for Applicant (Through VC)

Respondent: Mr. Gigi. C. George, Advocate for M/o Health &amp; Family Welfare

**ORDER**

1. The Tribunal in the proceedings dated 21.08.2025 had noted that the Environmental Management Plan for the hospitals placed on record on page 404 did not contain the signature of any authority and also did not reveal if it was prepared in compliance of the order of the Tribunal.

2. Subsequently, the affidavit dated 26.08.2025 has been filed by the Respondent No. 7 simply stating that "the Environmental Management Plan has been duly formulated and approved". It does not disclose as to which authority had formulated and approved it.

3. Learned Counsel for the Respondent No. 7 submits that instructions in respect of uploading this Environmental Management Plan on the website is awaited. He has also submitted the Clause-6 of the Plan contains the policy recommendation requiring a multi-disciplinary inter-agency committee to address the issues impacting the environment and also the



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requirement of having regular environment engineer on rolls in all the hospitals to coordinate and implement the Environmental Management Plan. He submits that the instructions in respect of compliance of Clause-6 of the Policy are awaited. He seeks four weeks' time to place on record further affidavit of the Respondent No. 7 on the above issues.

4. List on 11.02.2026.

Prakash Shrivastava, CP

Dr. A. Senthil Vel, EM

November 17, 2025  
M.A. No. 93/2024  
In Original Application No. 202/2023  
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(NEELAM)

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Ministry of Health & Family Welfare  
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Item No. 03

Court No. 1

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

**(By Hybrid Mode)**

Original Application No. 202/2023  
(I.A. No. 475/2023)

(With report dated 01.07.2023)

Gaurav Sharma

Applicant

Versus

Govt. of NCT of Delhi &amp; Ors.

Respondent(s)

Date of hearing: 03.07.2023

**CORAM: HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON  
HON'BLE MR. JUSTICE SUDHIR AGARWAL, JUDICIAL MEMBER  
HON'BLE DR. A. SENTHIL VEL, EXPERT MEMBER**

Applicant: Ms. Jasmine Damkewala, Advocate

Respondents: Dr. Nishant Sharma, Assistant Professor, AIIMS  
Mr. Narender Pal Singh, Advocate for DPCC  
Ms. Puja Kalra, Advocate for Municipal Corporation of Delhi  
Mr. Divya Prakash Pande, Advocate for NDMC

**ORDER**

**The Issue**

1. Grievance in this application is against failure of the statutory and administrative authorities to control air pollution in and around premier healthcare institutions to the detriment of health of indoor and OPD patients, their attendants, doctors and staff.

2. In the context of All India Institute of Medical Sciences (AIIMS), Delhi, the applicant has pointed out that there are sources of pollution inside as well as outside the AIIMS Campus which need to be adequately addressed. Such sources include vehicles, hawkers and encroachers, apart from inadequacy of plantations to absorb dust and carbon dioxide. Footfall in AIIMS is said to be 65000 persons per day and number of vehicles entering the complex is said to be 7500 per day. It is stated that even healthy persons visiting such environment can suffer in health unless



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suitable measures are taken expeditiously. It is pointed out that in Delhi generally air quality is beyond norms. It remains mostly above 'poor' category. This requires special care of control of pollution in and around healthcare facilities.

### **Procedural History**

3. Vide order dated 17.03.2023, considering the grievance, the Tribunal constituted an independent expert Committee to undertake visit to the site, interact with stakeholders and identify remedial measures. The Committee was to be headed by Member Secretary, CPCB with other members being DCP (Traffic), area DFO, MCD, DPCC and Director, AIIMS or his nominee and a nominee of Vardhman Mahavir Medical College & Safdarjung Hospital.

### **Report of the Joint Committee filed on 1.7.2023**

4. In pursuance of above, the joint Committee has visited the site, interacted with the stake holders, compiled data, deliberated upon the issue and filed its report on 01.07.2023. The report gives details of deliberations in different meetings and of study got conducted by School of Planning and Architecture (SPA), New Delhi in association with AIIMS. The study covered the AIIMS premises and buffer of 500 meters from its boundary. The study considered traffic congestion around AIIMS, road conditions, speed of vehicles, traffic composition and volume at relevant locations and also the environment conditions at entry and exit gates of AIIMS. The report finds that there are encroachments on right of way and green belt. Hotspot analysis has also been carried out. The Committee has also made recommendations for short-term and long-term measures required to be taken with reference to the identified points. Some extracts and the recommendations in the report are quoted below:



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### **“3. Survey Findings: Present Scenario**

A detailed field survey/ study in and around AIIMS was undertaken by School of Planning and Architecture (SPA) in association with representatives from AIIMS and other concerned departments. Videography was also conducted during different time slots for capturing the area activities and encroachment scenario.

The AIIMS premises and a buffer of 500m from the AIIMS boundary wall were considered as the study area to identify the areas of concern. Survey for traffic congestion, encroachment check, road conditions etc. were conducted within the 500 m buffer zone.

### **3.1 Traffic Congestion**

Traffic Volume Count survey was conducted on Mahatma Gandhi (MG) Road/Ring road (near Gate 2, AIIMS) and on the opposite side, on Sri Aurobindo Marg (near Foot overbridge, both sides), Gautam Nagar road-- Sudarshan Cinema Road- Gulmohar Park Road, Gate 1, gate 3, gate 6 and gate 8 of AIIMS from 6 am to 6 pm (except 12 noon to 2.30 pm) on 19th May 2023. Speed and delay survey was conducted on MG road/Ring Road, Sri Aurobindo Marg, and Gautam Nagar road-Sudarshan Cinema Road- Gulmohar Park Road between 3.30 pm and 4 pm on 19th May 2023. It was also conducted between 6.15 pm and 6.30 pm, 5th June 2023 on MG road/Ring Road and Sri Aurobindo Marg.

#### **1. MG road/ Ring Road**

Around 1.8 km of the MG road/ ring road falls within the 500 m buffer out of which about 820 m of the road abuts the northern boundary wall of AIIMS. The 1.8 km stretch has four bus stops, an underpass for taking a U-turn and a flyover. These four play a crucial role in deciding the traffic movement.

#### **Road condition**

Although, potholes or unevenness was not observed in the main MG road/ ring road stretch under study, the service roads were found to be broken and in need of repair in certain areas. The service roads also had a lot of dust accumulated on the sides that was resulting in suspension of dust particles in the air during movement of vehicles. On-street parking was observed in the service roads leaving less space for smooth vehicular movement.

#### **Traffic Volume Survey**

Nearly 51,000 vehicles were observed to cross the survey point in front of gate 2, AIIMS on the carriageway from South Extension flyover to Safdarjung hospital with nearly 32% being four wheelers and 34% being two wheelers. The highest hourly volume of traffic was observed between 8 am and 11 am and 3 pm to 6 pm again.

On the other carriageway of the ring road (from Safdarjung hospital to South Extension flyover, nearly 27,000 vehicles crossed the survey point with highest hourly traffic volume being between 11 am and 12 noon with nearly 46% of the vehicles being four wheelers and 17% being 2 wheelers.

#### **Speed and Delay survey**

A combination of road characteristics and high volume of traffic resulted in certain stretches of the MG road/ ring road (within 500 m buffer) experiencing traffic congestion. A speed and delay survey, as mentioned earlier, was conducted to determine the traffic congestion



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points at two points of time, 3.30 pm (19th May 2023) and 6.30 pm (5th June 2023).

The speed limit on MG road/ring road for a car is 60 km/hr but the actual speed varied from 3.5 km/hr to 50 km/hr. The stretch from Gate 6 to Gate 2 was observed to have slow traffic movement at both points of time. The probable reason could be presence of bus stop in front of gate 2, AIIMS, at which the buses stop and then take a slight right to get back on the flyover on MG road/ring road and at the same time, some vehicles take left to go to Sri Aurobindo Marg, increasing conflict between the converging and diverging traffic.

While at 3.30 pm, smooth traffic movement was observed on the flyover in both the directions; traffic congestion was seen at 6.30 pm on the carriageway leading from South Extension flyover to Safdarjung hospital (towards Dhaula Kuan). The probable reason is again the combination of a bus stop, the traffic movement through the Safdarjung hospital gate and change in direction of traffic coming down from the AIIMS flyover; some vehicles going straight to Raj Nagar flyover while others taking a left turn towards Safdarjung Enclave.

#### **Overall scenario:**

- **Location of gate 2, bus stop, flyover take off and the left turn towards Aurobindo Marg is leading to considerable **slowing down of traffic** in that area leading to traffic congestion, particularly during the peak hours.**
- **On-street parking** is being done on the service roads resulting in lessening of effective carriage way and leading to slowing of traffic using the service road. The service road between gate 2 and gate 6 is particularly important, as vehicles wanting to enter AIIMS campus after exiting from gate 2 can use the service road since only exit is allowed from gate 2.
- The **service roads** are in poor condition with road dust that gets suspended in air during movement of vehicles.

#### **2. Sri Aurobindo Marg**

The Western boundary wall of AIIMS abuts Sri Aurobindo Marg. The 1.8 km stretch of Sri Aurobindo Marg within the 500 m buffer has a metro station (AIIMS), two at grade U-turns besides bus stops. The road sections of the stretches also vary along the length of Sri Aurobindo Marg.

#### **Traffic Volume Survey**

Nearly 29,000 vehicles were observed to cross the survey point (below the foot overbridge near gate 3, AIIMS) on the side towards IIT flyover. Out of these, about 48% were four wheelers and 22% were two wheelers. Highest traffic volume was observed from 9 am to 10 am with nearly half of the total vehicles being personal four wheelers and one – fourth being two wheelers.

A similar traffic volume was observed on the other carriageway of Sri Aurobindo Marg as well. Around 24,000 vehicles crossed the survey point from 6 am to 6 pm (except 12 noon to 2.30 pm) on 19th May 2023. Out of these, nearly 46% were four wheelers and about 25% were two wheelers with a fair share of 3 wheelers (22%) as well.



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Highest traffic volume was observed from 5 pm to 6 pm followed by 9 am to 10 am. In the time period, 5 pm to 6 pm, 40% of the vehicles were personal four wheelers followed by nearly 26% of two wheelers and 21% of autorickshaws. In the time period, 9 am to 10 am, there is a change in traffic composition with 60% of the vehicles comprising personal four wheelers followed by nearly 23% of two wheelers and 24% of autorickshaws.

### **Speed and delay survey**

Speed and delay survey was conducted on the stretch from the AIIMS flyover to Indian Oil building at 6.20 pm on 5th June 2023. It was observed that the varying width of the carriageway led to slowing of traffic resulting in congestion in the peak hours. At that time, traffic congestion was mainly observed in front of Yusuf Sarai Market. The average speed in the stretch dropped to 10 km/hour.

### **Overall scenario:**

- The **auto-rickshaws parked near AIIMS metro station and Gate 1, AIIMS** pose a hazard for the vehicles and the pedestrians alike. The auto-rickshaws line up in two-three lanes to get passengers. This also poses a safety hazard for vehicles coming from MG road/ring road as this stretch comes up suddenly after taking a left turn from MG road/ring road. Similarly, on the other side, **the location of the green park metro station** leads to congregation of auto-rickshaws resulting in considerable **slowing of traffic**.
- **Haphazard parking of vehicles in front of Yusuf Sarai market**

### **3. Gautam Nagar Road- Sudarshan Cinema Road- Gulmohar Park Road**

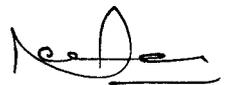
Gautam Nagar road-- Sudarshan Cinema Road- Gulmohar Park Road has a varying Right of Way ranging from 6 m to 12 m. It has median in some stretches while it is two-way traffic without median in others. The road also has extensive on-street parking. It was not clear whether the cars belonged to the residents, or they had been parked by outsiders. This further reduced the effective carriageway.

Certain structures like the location of BSES transformer also reduce the available width of the effective carriageway. There are several informal shops and street vendors operating within the Right of Way (RoW) as well. It was also observed that goods had been kept outside the shops encroaching part of the RoW.

### **Traffic Volume survey**

Around 2100 vehicles were observed to cross the survey point (towards Sri Aurobindo Marg) from 6 am to 6 pm (barring 12 noon to 2.30 pm) on 19th May 2023. The traffic composition is very different from the MG road/ring road and Sri Aurobindo Marg with nearly 64% of the vehicles being two wheelers and around 17% being autorickshaws. Highest traffic volume was observed between 5 pm and 6 pm (295 vehicles) followed by between 10 am and 11 am (275 vehicles).

Around 2100 vehicles were observed to cross the survey point (towards Gate 8, AIIMS) from 6 am to 6 pm (barring 12 noon to 2.30 pm) on 19th May 2023. Highest traffic volume was observed between 10 am and 11 am (269 vehicles) followed closely by 9 am to 10 am



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(263 vehicles). In both the time periods, nearly 60% of the total vehicles comprised two wheelers

### Speed and delay survey

The road experiences slow traffic movement throughout the day. A speed and delay survey were done on 19th May 2023 at 3.30 pm. Major reasons for the slow traffic were low capacity of the roads, use of multimodal transport with varying speed such as a car and a handcart using the same narrow roads, encroachment by informal sector and on street parking.

### Overall scenario:

- The varying effective carriageway of Gautam Nagar road - Sudarshan Cinema Road- Gulmohar Park Road due to **encroachment by haphazard on-street parking, mobile vendors and informal shops** on RoW leads to the formation of bottlenecks, slowing down traffic and leading to **traffic congestion**.
- **Location of utilities such as the BSES transformer, large waste bins** also encroach into the RoW.

### 4. Within AIIMS Premises

There is an extensive road network within AIIMS premises providing connectivity between the various departments and the external gates. The RoW of the roads varies from 6 m to 18 m.

Traffic Volume count survey was conducted on 19th May 2023 from 6 am to 6 pm (except from 12 noon to 2.30 pm) at gate 1 (entry and exit), 3, 6 and 8 of AIIMS. While **18,011 vehicles** were observed to enter from these four gates, **14,580 vehicles** were also seen to exit from these four gates. It is a possibility that the remaining were leaving AIIMS premises from gate 2. So, it may be estimated that there are around **3431 vehicles** exiting from **gate 2** within the survey period.

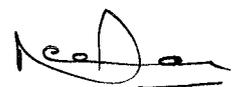
It is interesting to note that 36% of the vehicles entering AIIMS premises were two wheelers followed by personal four wheelers (29%) and auto-rickshaws (25%). To calculate the probable number of vehicles entering on a Monday, that is the busiest day of the week, OPD and admission data was taken from AIIMS. A ratio was found between the OPD and admission number on a

Friday (day of the survey) and Monday. This ratio was applied to the number of vehicles counted on the survey day. As per data provided by AIIMS, on 12th May 2023, Friday, there were 10632 OPD patients and 747 patients were admitted, a total of 11,379 patients while on 15th May 2023, there were 10176 OPD patients and 918 patients, a total of 11,094 patients had visited. It was seen that Monday and Friday had similar number of patients, so one may assume that the number of vehicles will be similar on Monday as well.

#### i. Gate 1 (Entry)

Around 5600 vehicles entered AIIMS from gate 1 on 19th May 2023 between 6 am and 6 pm (except 12 noon to 2.30 pm). Around 36% were four wheelers, 30% were two wheelers and 21% were autorickshaws. High traffic volume, nearly 57% of the total vehicles, was concentrated between 7 am and 11 am.

#### ii. Gate 1 (Exit)



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Around 2600 vehicles left AIIMS from gate 1 on 19th May 2023 between 6 am and 6 pm (except 12 noon to 2.30 pm). Around 34% were autorickshaws, 29% were personal four wheelers and 24% were two wheelers. Nearly 51% of the total vehicles were concentrated between 7 am and 12 noon.

A sample of every 20th vehicle was asked about the gate number through which they had entered. It was observed that nearly 50% of the vehicles leaving from gate 1(exit) had entered from gate 1 and the rest had entered from gate 3.

iii. Gate 3 (Entry)

Around 5671 vehicles entered AIIMS from gate 3 on 19th May 2023 between 6 am and 6 pm (except 12 noon to 2.30 pm). Around 16% were autorickshaws, 11% were personal four wheelers and 10% were personal two wheelers. The period from 6 am to 11 am was the busiest time of the day with nearly 68% of the total vehicles entering from gate 3 concentrated in the above time period.

iv. Gate 3 (Exit)

Around 2560 vehicles left AIIMS from gate 3 on 19th May 2023 between 6 am and 6 pm (except 12 noon to 2.30 pm). Around 51% were two wheelers, 24% were personal four wheelers and 20% were autorickshaws. The period from 3 pm to 6 pm was the busiest time of the day with nearly 46% of the total vehicles leaving from gate 3 concentrated in the above time period.

A sample of every 20th vehicle was asked about the gate number through which they had entered. It was observed that nearly 44% of the vehicles leaving from gate 3 (exit) had entered from the Safdarjung underpass and 26% had entered from gate 1 and 17% had entered from gate 3 itself. The rest 13% had entered from gate 6, and 8.

v. Gate 6 (Entry)

Around 4050 vehicles entered AIIMS from gate 6 on 19th May 2023 between 6 am and 6 pm (except 12 noon to 2.30 pm). Around 40% were two wheelers, 28% were personal four wheelers and 24% were autorickshaws. The period from 8 am to 11 am was the busiest time of the day with nearly 53% of the total vehicles entering from gate 6 concentrated in the above time period.

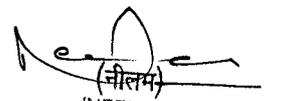
vi. Gate 6 (Exit)

Around 6872 vehicles left AIIMS from gate 6 on 19th May 2023 between 6 am and 6 pm (except 12 noon to 2.30 pm). Around 34% were autorickshaws, 29% were personal four wheelers and 29% were two wheelers. The period from 8 am to 12 noon was the busiest time of the day with nearly 44% of the total vehicles leaving from gate 6 concentrated in the above time period. Another peak between 3 pm and 6 pm was also observed, nearly 36% of the total vehicles leaving from gate 6 concentrated in the above time period.

A sample of every 20th vehicle was asked about the gate number through which they had entered. It was observed that nearly 29% of the vehicles leaving gate 6 (exit) had entered from the gate 1 and 31% had entered from gate 3, 27% had entered from gate 6 itself and 11% had entered from gate 8

vii. Gate 8 (Entry)

Around 2680 vehicles entered AIIMS from gate 8 on 19th May 2023 between 6 am and 6 pm (except 12 noon to 2.30 pm). Around 63% were two wheelers, 17% were personal four wheelers and 15% were autorickshaws. The period from 7 am to 11 am was the busiest time of the day with nearly 56% of

  
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the total vehicles entering from gate 8 concentrated in the above time period.

viii. Gate 8 (Exit)

Around 2500 vehicles left AIIMS premises from gate 8 on 19th May 2023 between 6 am and 6 pm (except 12 noon to 2.30 pm). Around 64% were two wheelers, 17% were personal four wheelers and 14% were autorickshaws. The period from 3 pm to 6 pm was the busiest time of the day with nearly 48% of the total vehicles leaving from gate 8 concentrated in the above time period.

A sample of every 20th vehicle was asked about the gate number through which they had entered. It was observed that nearly all the vehicles entering from gate 8 were also leaving from gate 8.

### Speed and Delay survey

Although traffic within AIIMS premises is well managed, there are some hotspots that need to be considered. The stretch in front of the administrative block has heavy pedestrian movement along with substantial traffic movement emerging as an important vehicle-pedestrian conflict point.

### Overall scenario:

- AIIMS premises experiences heavy traffic during the day with many of the vehicles **entering from gate 1 and gate 3 and traversing the premises to exit from gate 2 or gate 6. Heavy unregulated vehicular movement** within the area is posing a hazard for the pedestrians as well and there is scope of improvement in terms of signages for better traffic management.
- There are some areas within AIIMS premises where **potential vehicular-pedestrian conflict** was observed, particularly near the **administration block and between gates 1 and 3.**

### **3.2 Encroachment of Right of Way**

The area within the 500 m buffer of AIIMS was divided into 10 zones for studying the encroachment and various activities.

Zone A mainly comprises Yusuf Sarai, zone B has Gautam Nagar, zone C has Niti Bagh, zone D has Masjid Moth and Gulmohar park, zone E has South Extension (II). On the other side of the MG road/ Ring Road, zone F has south extension (I) and zone G has Kidwai Nagar among others. Zone H has Kidwai Nagar (W) and zone I comprises Safdarjung hospital and Ansari Nagar (west) while zone J has Green Park.

The encroachments and activities were captured through videography on 30th May 1<sup>st</sup> and 2nd June 2023 on select roads.

Encroachment on RoW were found to be of various types, primarily undesignated on-street parking, informal shops, mobile vendors etc. Encroachment on RoW reduces the effective carriageway and hampers the smooth movement of traffic leading to traffic congestion and thus more air pollution. Further, some of the informal shops and mobile vendors also cook food on site leading to the release of pollutants.



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**Overall scenario:**

- **Food truck and food distribution event** organized for community service on the **footpath of Sri Aurobindo Marg** along the western boundary wall of AIIMS leads to vehicles stopping for partaking the food. It also leads to obstruction of pedestrian movement.
- **Extensive illegal on-street parking** is present on **most of the collector and local roads** in the area within 500 m buffer. These are unregulated and often haphazard. While four wheelers were found in most of these parking sites, **LCVs** were specifically observed in the residential areas of **Gautam Nagar, Masjid Moth and South Extension**.
- **Presence of Informal shops and mobile vendors** in the RoW of collector and local roads of most of the residential areas, particularly in **Gautam Nagar, Yusuf Sarai, and Masjid Moth**.
- **Encroachment by formal shops** by keeping their goods outside their shops.

**3.3 Green Belt**

The vegetative cover at the AIIMS Campus is mainly in the form of trees along the boundary of the institution, along Aurobindo Marg, M.G. Road, Gautam Nagar Road and on the eastern periphery. Within the campus there are roadside plantations with trees and shrubs. Greenery is also present on the form of open spaces, such as lawns in front of Administration Building and open spaces near the residential areas. The trees are mainly mature and a mix of evergreen, semi deciduous and deciduous.

**3.4 Other Activities**

Other activities that could be of concern in the surrounding area have also been studied and mapped. These activities mainly include restaurants, construction activities and solid waste dumping.

The encroachment due to restaurants, construction activities and solid waste dumping may be seen in the images filed in the report.

**4. Hotspot Analysis**

A GIS based hotspot analysis was carried out overlaying all the activity and encroachment layers

It is observed that the areas south and south east of AIIMS Campus have major concentration of activities, parking and encroachment and need to be addressed as a priority for managing parking and informal activities.

**5. Recommendations**

Based on the status of the present issues and the actions being undertaken by various concerned departments, the issue-specific recommendations of the Joint Committee are tabulated below:

  
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S. No.	Aspect	Issue	Short-term measures	Long-term measures	Concerned departments/ organizations
<b>A. Traffic Management outside AIIMS</b>					
1.	Traffic Congestion on high traffic volume roads-MG Road and Aurobindo Marg	<p>1. Encroachments by hawkers, vendors, shops, etc.</p> <p>2. Preferred use of Pedestrian crossing available in front of AIIMS by public over Foot over bridge and subway due to encroachment and lack of cleanliness</p>	<p>1. Removal of encroachments from MG Road and Aurobindo Marg in the stretch up to 500 meters from the periphery of the AIIMS campus.</p> <p>2. Provision of permanent vending areas in few locations to prevent their spreading into entire area may be made by DDA and NDMC.</p> <p>3. Subway and foot over bridge outside AIIMS to be free from all encroachment (including squatters). Delhi Traffic Police and AIIMS traffic committee to conduct random drives to promote use of foot over bridge or subway for crossing the busy road</p>	<p>1. Traffic circulation plan indicating vehicular movement, pedestrian crossings, and parking for an area up to 500 meters from the periphery of the AIIMS campus</p> <p>2. NDMC shall select the AIIMS stretch to be part of the smart street-scaping project, so that the issue of encroachments and hawkers is permanently solved</p>	Delhi Traffic Police, PWD, NDMC, AIIMS Traffic Committee and Delhi Police
2.		Increase in the number of Vehicles including taxis and auto rickshaws parked outside of AIIMS on Aurobindo marg stretch	Vehicles to be challaned regularly for unauthorised parking in and around AIIMS. Monitoring system to be introduced by concerned agency along with fixing accountability		Delhi Traffic Police
3.		Parking of unauthorised vehicles	Regular challaning and towing of unauthorised vehicles parked around the campus. The roads outside AIIMS Gate Nos. 1,2,3 & 6 and area in between, till a	Traffic Police to Explore the feasibility of a dedicated ambulance corridor from South extension to Yusuf Sarai through a study with an expert institute/agency	Delhi Traffic Police

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			distance of at least 500m, to be declared as "Zero Tolerance Zone" Monitoring system to be introduced by concerned agency along with fixing accountability	within 08 weeks to ensure faster access of emergency vehicles.	
4.	Obstruction & Congestion at Gates	Ambulances are parked outside AIIMS gates on Aurobindo marg stretch which causes traffic congestion.	Possibility of designating parking space for private ambulances outside Gate No. 2 in the service lane along the Ring Road or any other suitable place may be explored by Traffic Police, in consultation with SPA/expert institute/agency within 04 weeks		Delhi Traffic Police
5.		No system of entry and exit of vehicles from designated gates	<ol style="list-style-type: none"> <li>1. Gate No.1 of AIIMS on Aurobindo Marg may be exclusively used for entry and the exit could be from Gate Nos. 2 &amp; 3</li> <li>2. Traffic Police and NDMC to explore the possibility of shifting the prepaid Booth of TSR situated outside Gate No. 1 of AIIMS in the service lane near Gate No. 2 of AIIMS or other suitable location within 04 weeks.</li> </ol>		AIIMS Traffic Police, NDMC
6.	Slowing of Speed of Traffic	Slowing down of vehicles on ring road near Gate 2 due to encroachments and bus stop location	<ol style="list-style-type: none"> <li>1. Removal of vendors, hawkers and other encroachments in a distance of 500m around Gate 2</li> <li>2. Provision of permanent vending areas in few locations to prevent their spreading into entire area may be made by DDA and NDMC.</li> </ol>	Transport Department in consultation with NDMC and traffic Police may explore the feasibility of Shifting of Bus stop within 04 weeks	Transport Department, Delhi Traffic Police, PWD, NDMC, AIIMS Traffic Committee and Delhi Police



7.		Slowing down of Vehicles along Yusuf Sarai and Gautam Nagar due to encroachments	Reorganization of Hawkers, vendors, small shops, etc. to designated spaces, removal of abutments into road right of way, especially the <u>BSES transformer</u>	Provision of permanent vending areas in few locations to prevent their spreading into entire area may be made by DDA and NDMC.	DDA and NDMC
8.	Road Condition	The service road from Gate No.2 to Aurobindo Marg is not in good condition and a lot of dust is accumulated. Road condition in certain stretches in Yusuf Sarai, Gautam Nagar and other surrounding areas also require maintenance	The service roads around AIIMS periphery and major roads in Yusuf Sarai, Gautam Nagar and surrounding residential areas (within 500m of AIIMS) need to be repaired and recarpeted to prevent built up of dust	Routine maintenance of road, footpaths, and other paved areas by PWD and NDMC.	PWD, NDMC
<b><u>B. Traffic Management inside ARMS</u></b>					
1.	<b>Vehicular Congestion</b>	1. Vehicular congestion at entry gates of AIIMS. 2. Parking of vehicles, taxis and auto rickshaws at undesignated places inside AIIMS.	1. AIIMS to continue implementation of measures to curb unauthorized entry of vehicles into the campus and ensure smooth vehicular movement within the campus 2. The Security Department to regularly clear all internal roads to avoid congestion by ensuring	1. AIIMS also plans to ban all petrol and diesel vehicles within the campus in near future, except for emergency and patient transportation. 2. It is planning to procure 200 electric	AIIMS

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2.		3. Increase in the number of vehicular traffic entering AIIMS	all vehicles are parked in designated parking areas only.  3. Monitoring system to be introduced along with fixing accountability	vehicles for transportation of staff and patients.  3. AIIMS will provide shuttle service through electric vehicles to major alighting points of public transport such as bus stops and metro stations.	AIIMS
3.	Slowing of Speed of Traffic	Slowing of Speed of Traffic at Stretches within the campus	1. Removal of abutments in road Right of Way 2. Signages need to be put up with appropriate graphics to indicate  1. Entry 2. Exit 3. One way or two way 4. Parking location 5. Arrows to various Departments 6. Shuttle service pickup and drop off points with time chart 7. Public conveniences etc.  These signages can be located immediately at the entrance gate and at strategic locations such as- administration building, between residential area and hospital complex etc.	Reorganization of peripheral parking to designated multilevel parking	AIIMS  Traffic Committee
<b>C. Encroachments on Right of Way</b>					
1.	On street parking	Almost all the roads in the surrounding areas had on-street parking which included	The RW As in the adjoining colonies to issue stickers to only allow residents to park. Designated	Reorganization of peripheral parking to	Delhi Traffic Police, PWD, NDMC and ARMS

  
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		two wheelers, four wheelers, and small and large trucks and buses in certain stretches	parking areas to be identified for outsiders	Permanent multilevel parking near Green park	Traffic Committee and DDA
2.	Encroachments (permanent)	Encroachment by permanent structure such as shops, transformers, large trees which reduce the right of way		<p>1. Smart streetscaping can be implemented for the entire stretch from junction of MG road and Aurobindo Marg up to Yusuf Sarai market this would require accommodation pharma shops (approximately 60 in number) and other activities such as fruit shops, general merchants etc.</p> <p>2. Alternate site should be identified for relocation for the encroachment in other areas.</p>	Delhi Traffic Police, PWD, NDMC, DDA and Delhi Police
3.	Encroachments (temporary)	Encroachment by hawkers selling food, miscellaneous goods etc., and organizations distributing food mainly encroaching onto the footpaths		<p>1. Removal and relocation for hawkers, small shops, etc.</p> <p>2. NDMC to work on relocation plan for food distribution organisations at nearby government sites (DUSIB shelter) done at present outside AIIMS.</p>	Delhi Traffic Police, PWD, NDMC, DDA and Delhi Police

  
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4.		Walk-in hawkers and sellers inside AIIMS	1. Walk-In hawkers and sellers are prohibited inside the campus. The Security Department to strictly ensure that no hawkers and sellers enter the campus. 2. Monitoring system to be introduced by concerned agency along with fixing accountability	<b>AIIMS</b>	
<b>D. Green belt/Plantation</b>					
1.	Green Belt inside AIIMS	Vegetative cover in AIIMS is mainly composed of trees along the boundary, along roads with shrubs interspersed. Lawns in front of administration block, within residential areas and other open spaces have very few trees and some shrubs	Even though the requisite area under landscaping (30% of site) may have been fulfilled the area can still accommodate some trees in the open spaces and spaces released around boundary wall after shifting of parking areas. Many areas are connected with pergolas covered by fibre glass. These can also have climbers raised on top to prevent heating of surfaces. The boundary wall can have climbers planted along sections where the space is not available for raising trees.	1. A comprehensive Landscape Development Plan needs to be prepared for the campus to address greening of campus along with water harvesting green roofs etc. 2. Further, ARMS plans to plant 10000 trees on its campuses	AIIMS Horticulture Department, Consultant for AIIMS Master Plan
2.	Green Belt outside ABMS	No Green Belt presents around the AIIMS premises.	NDMC & Forest Department will work in coordination with AIIMS for development of green belt around the campus.		NDMC, Forest Department, AIIMS
<b>E. Other</b>					
1.	Solid Waste management	Improper management of mobile dhalaos of 1-to- 1.5-ton capacity.	NDMC to ensure daily lifting of garbage so that there is no spillover on the roads.		NDMC
2.	Dust management at Construction sites	Many areas surrounding AIIMS have buildings being renovated and repaired and require dust control/management	Measures as per dust mitigation norms have to be followed		NDMC, DPCC



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3.	Increase in the Footfall of relatives and attendants of patients	Increase in the Footfall of relatives and attendants of patients	1. Installation of Queue Management Systems 2. Promoting e-Sanjeevani platform and tele-consultation for follow-up patients 3. Slot-wise appointment and token systems	AIIMS
4.	Open Squatting	Entire families travel for treatment of one patient and live in hospital premises, bathe, defecate and wash in open. No real accommodation available.	1. AIIMS to ensure Strict adherence to one-patient-one-attendant policy. 2. AIIMS to encourage the patients and attendants to avail waiting area facilities public facilities is in process.	The augmentation of the existing capacity of waiting areas, Vishram Sadan and public facilities is in process. AIIMS



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**Consideration and further directions**

5. We have heard learned Counsel for the applicant and for DPCC, NDMC and also representative of AIIMS, Dr. Nishant Sharma, Assistant Professor.

6. Learned Counsel for the applicant submitted that precautionary principle of environmental law requires anticipation of adverse impact on environment and mitigations measures to offset the same. Reference has been made to Vellore Citizens Forum vs. UOI, (1996) 5 SCC 647. This requires preparation of an appropriate environment management plan covering all sources of pollution in and around the campus of AIIMS and also a suitable SOP by higher authorities applicable to all major healthcare facilities with heavy footfall of patients in all District level or hospitals bigger than that which may be specified by concerned authorities. In absence of such plan or SOP, this Tribunal under section 15 of the NGT Act needs to intervene and issue appropriate directions in the interest of protection of environment and public health. It is submitted that the factual report of the joint Committee confirms need for such plan for improvement of environment in and around country's premier healthcare and research institute. Patients Welfare Committees constituted as per guidelines of the Central Government or voluntary organizations may also be involved in execution of environment management plans, if viable.

7. Representative of the AIIMS has drawn our attention to All-India Institutes of Medical Science Act, 1956 under which AIIMS has been established and declared an institution of national importance. Publication "AIIMS, New Delhi Master Plan, 2022" shows that AIIMS is providing both patient care and healthcare education. Its mandate is maintenance of high standards of medical education in the country. Apart from being well

  
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recognized medical institute, it is reputable public hospital. It is located on 105.77 acre area in East Ansari Nagar with 32.09 acre in Masjid Moth and 14.95 acre in trauma center extension campus. It is now being redeveloped for enhancing patient care and advancing research and teaching for which a master plan has been prepared to accommodate future needs and ease of maintenance. The budget allocation for AIIMS in 2023-24 is Rs. 4134.67 crores. AIIMS representative fairly stated that AIIMS is committed to maintain cleanest environment inside the campus for protection of patients, staff and visitors and also to coordinate with the authorities for remedial measures in coordination with the concerned authorities.

8. Learned Counsel for DPCC and NDMC also fairly submitted that measures recommended by the Committee need to be urgently taken and higher authorities in Central Government need to take cognizance of the situation revealed in the report for remedial action throughout the country.

### **Finding and directions**

9. Since there is no objection to the report of the joint Committee and we see no reason not to accept the same, we accept the report and issue directions in terms thereof. We also agree that a hospital complex being an environmentally sensitive area, an environment management plan is required not only covering the campus but also surrounding periphery. Prohibited and regulated activities need to be identified and mentioned in such plan with nodal agency for monitoring compliance and dedicated funds. This is part of right of citizens to clean environment and sustainable development principle. This is also part of fundamental duty under Article 51 A of the Constitution and obligation of the State under Article 48A.

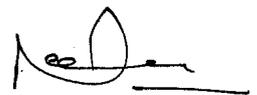
10. Accordingly, we direct that measures suggested in the report be taken in a time bound manner.



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11. With regard to measures required to be adopted outside the AIIMS campus, such as control of traffic congestion, removing encroachments, congestion at gates, speeding of vehicles, improving road conditions, control of dust and other sources of pollution, we constitute an eight member joint Committee of Traffic Police, NDMC, PWD, DDA, Delhi Police, AIIMS, CPCB and DPCC to prepare an action plan in the light of recommendations of the joint Committee and to monitor its execution in a time bound manner. Ambient air quality in and around the campus be monitored and as and when it exceeds the laid down parameters within 500 meters of the boundaries of AIIMS, regulatory measures be taken in the light of Graded Response Action Plan<sup>1</sup> (GRAP). Such action plan be prepared preferably by July 31, 2023. First meeting for this purpose be held by July 15, 2023. Commissioner of Police and Director AIIMS will act jointly as nodal agency for coordination and compliance. They will be free to take assistance of their choice from their respective departments. Meetings of the Committee may be held preferably in the Campus of AIIMS. Execution of the plan may be reviewed periodically, preferably once in a month for next six months. First such review meeting be held by August 31, 2023. Minutes of the meeting may be placed on the website of AIIMS.

12. With regard to measures inside AIIMS campus, such as plantations, waste management, regulation of footfall of visitors and other attendants of patients, squatting, nature of vehicles, management of patient services, parking issues, providing shuttle service, landscaping, involvement of voluntary organizations or individuals, preparation of environment management/action plan, responsibility will be of the Director AIIMS in coordination with concerned departments. Director AIIMS will be free to explore deployment of suitable security force, including CISF, if available.



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<sup>1</sup> [https://cpcb.nic.in/uploads/final\\_graded\\_table.pdf](https://cpcb.nic.in/uploads/final_graded_table.pdf)

The Director AIIMS may hold first meeting for the purpose at the earliest, preferably before July 15, 2023 and finalize action plan and place the same on the website of AIIMS by August 31, 2023. Its execution may be reviewed on monthly basis for first six months and thereafter at such intervals as may be found viable. The minutes of meetings may be placed on the website of AIIMS.

13. Individual issue with regard to AIIMS will stand disposed of in terms of paras 10 to 12 above but since there are identical issues in several other government hospitals, including Safdarjung hospital opposite AIIMS itself, it appears to be necessary to issue direction with regard to the same. In the light of situation revealed by the report of the joint Committee, environmental management inside and around such healthcare appears to be necessary in the interest of protection of right of patients, staff and other visitors to clean environment. This requires issuance of an appropriate SOP by MoEF&CC and Ministry of Health, GoI after study and due consideration of the subject.

14. Accordingly, we constitute a five-member joint Committee to be headed by Secretary, Ministry of Health, GoI with representatives of MoEF&CC, Ministry of Urban Development, GoI and Ministry of Home Affairs, not below the rank of Joint Secretary and nominee of CPCB not below the rank of Director. The Committee will be free to interact with stakeholders and obtain data of status of availability of environment management plans covering all sources of pollution in and around all Government district hospitals or larger than district hospitals including medical colleges as may be specified by the Committee. The joint Committee may meet within one month from today and finalize a questionnaire for getting specific information within one month thereafter. Considering the data collected, appropriate SOP may be finalized within

  
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three months and placed on the website of Ministry of Health. The Committee may specify issues to be covered within the complex and outside the boundary of the healthcare facility complex upto specified periphery for regulation and control of polluting activities which may be found necessary to offset adverse impact on environment.

15. An action taken report in the matter may be filed with the Registrar General of this Tribunal by Secretary, Health, GoI and Commissioner of Police, Delhi within four months from today by e-mail at [judicial-ngt@gov.in](mailto:judicial-ngt@gov.in) preferably in the form of searchable PDF/OCR Support PDF and not in the form of Image PDF. If found necessary, the Registrar General, NGT may place the matter before the bench for further directions.

Subject to above, the application is disposed of.

I.A. No. 475/2023 will also stand disposed of.

A copy of this order be forwarded to the Secretary, Ministry of Health, MoEF&CC, Ministry of Urban Development, Ministry of Home Affairs, CPCB, Director, AIIMS, Commissioner of Police, Delhi, DCP (Traffic), DCP (South), NDMC, PWD, DDA and DPCC by e-mail for compliance.

Adarsh Kumar Goel, CP

Sudhir Agarwal, JM

Dr. A. Senthil Vel, EM

July 03, 2023  
Original Application No. 202/2023  
I.A. No. 475/2023  
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## ENVIRONMENT MANAGEMENT PLAN FOR HOSPITALS

### INTRODUCTION

The “environment” in The Environment (Protection) Act (EPA), 1986 includes water, air, land and the inter-relationship which exists among and between water, air, land, human beings, other living creatures, plants, micro-organisms and property. The environmental pollutants can be solids, liquids or gases present in such concentrations that may be injurious to the environment. The EPA addresses the prevention, control, and abatement of environmental pollution. The state has the responsibility to ensure standards for quality of environmental aspects and standards for emission or discharge of pollutants in the environment, prohibition, or restrictions on handling of hazardous waste etc. including research. Hospitals, given the complexity of the buildings and operations can be contributors to increase in environmental pollution and at the same time are heavily impacted by its adverse effects. Although, hazardous and polluting activities are prohibited or regulated by law, however, a specialized environment management plan is needed to mitigate detrimental effects of various pollutants in the campus and immediate vicinity which affect patients, attendants and the staff of the hospital.

### 2. SCOPE

The scope of the Environment Management Plan (EMP) mostly pertains to the statutes like the Environment (Protection) Act. However, in light of emerging technologies and resulting pollutants, there is a need to look at the environment in a holistic manner to cover issues in the immediate vicinity of hospitals in addition to the factors contextualized within the hospitals. The EMP is an effort to integrate factors impacting the environment like vehicular air/noise pollution, congestions/encroachments, vehicles as contributors to pollution, conflicts with pedestrians, overcrowding due to visitors/attendants, green cover/belt inadequacy, electricity generators associated with air/noise pollution with adequate mitigation measures. Also, the EMP has delved into prohibited and regulated activities and various types of waste management like Water waste, Solid waste, Pest Control, Condemnation of Hospital Items, Bio Medical waste, Radio-active waste, E-waste along with policy recommendations for same.

### 3. FACTORS CAUSING ENVIRONMENTAL POLLUTION & MEASURES TO MITIGATE THE SAME

i. **Air Pollutants**

Emissions from diesel generator (DG) sets & vehicles and dust due to construction & demolition (C&D) activities, poor condition of roads, sweeping activities contribute to pollution both within and around the hospitals. Open cooking activities by hawkers, mobile vendors and unauthorised shops around the hospital are other issues. Both are considered to contribute to the pollution to a very little extent.

**Table 1: Air pollution and mitigation measures**

S. No.	Contributor	Mitigation measures	Responsibility
1.	Use of DG sets	Mandatory compliance to Central Pollution Control Board guidelines related to type of fuel, emissions limits, stack height, etc. as specified from time to time.	Engineering Services Division (inside)
2.	Construction & demolition activities	GRAP compliance in Delhi- Retrofitted Emission Control Device (RECD) or Dual fuel mode, etc., as per latest directions	Central Public Works Department. Municipal Corporation (inside and outside)
3.	Service roads condition and road dust	Regular maintenance	
4.	Dust due to sweeping activities	Mechanised cleaning Using sprinkler-based cleaning machines	Engineering Services Division or CPWD for outer areas and Sanitation inside the hospital.
5.	Open cooking activities by hawkers, mobile vendors, and informal shops around the hospital.	Prohibition and removal through government agencies. Mitigation measures suggested for encroachments in other section.	Municipal Corporation Police

The health institutes should ensure timely and regular upgradation of DG sets, use of approved fuel types, timely replacement and repair, purchase of anti-smog guns, advanced water sprinkler-based cleaning machines etc. Air quality index monitoring device needs to be installed for monitoring the levels and interventions accordingly. Exhausts of isolation wards/ICUs should have High Efficiency

  
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particulate air (HEPA) filters. Use of solar energy should be promoted for lighting and water heating etc.

## ii. Vehicles as contributors to pollution

Government hospitals are high occupancy buildings visited by patient with restricted mobility that are dependent on their attendants for moving across various areas such as outpatient department, laboratories, procedure rooms to inpatient wards or ICUs. This requires public (including auto-rickshaws, taxis) and private vehicles plying both outside / nearby and entering / exiting in huge numbers (more than 10,000 in some hospitals). Recent efforts of the Government to expand medical infrastructure of the country have also contributed in heavy unregulated vehicular movement, traffic congestion within and around the hospital, speed and delay of vehicles and potential vehicular-pedestrian conflict. The service lanes are congested and non-hospital bound. Vehicles try to use hospital roads for by-passing the outside traffic. In addition, vehicles also enter as part of supply chain. Many are diesel vehicles.

**Table 2: Mitigation measures for vehicles contributing to pollution**

S. No.	Contributor	Mitigation measures	Responsibility
1.	Electric or green fuel-based vehicles	<ul style="list-style-type: none"> <li>• Robust electric vehicles based intramural transport system as shuttle services for staff, patient and their attendants.</li> <li>• Promoting use of cycles, e-vehicle and discouraging diesel-based vehicles among hospital staff and visitors. Charging points as per requirements should be installed.</li> <li>• Hospital should provide incentives to promote electric vehicles such as providing free charging stations.</li> <li>• As a long-term measure, prohibiting petrol and diesel vehicles within the campus in near future, except for emergency and patient transportation.</li> </ul>	Transport Department



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2.	Regulation of vehicular movement and decongestion including entry and exit gates	<ul style="list-style-type: none"> <li>• Adequate deployment, patrolling or Quick Response Team (QRT) ensures removal/towing/clamping and fining of unauthorized vehicles parked within the premises through security services and information to the police.</li> <li>• Traffic teams should be deployed at the entry/exit gates and at places known for traffic congestion.</li> <li>• Parking of vehicles, taxis and auto rickshaws is allowed at designated places. Multi-level parking offers space efficiency.</li> <li>• Entry should be allowed only to those authorised vehicles with verified stickers in restricted areas.</li> <li>• Use of RFID enabled tags and boom barriers for in-house vehicles will automate the process.</li> </ul>	Health Institute Security Department
3.	Traffic congestion within hospital	<ul style="list-style-type: none"> <li>• Regulating traffic, one-way roads within hospital and planning through roadmaps to critical zones like casualty building.</li> <li>• Creating separate walkways and roads for cycles.</li> <li>• Regulation of movement of vehicles according to a well-defined traffic circulation plan.</li> <li>• Walk-In hawkers and sellers should be prohibited inside the hospital and adequate canteen facilities may be</li> </ul>	Health Institute Security Department



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		provided at all needful locations.	
4.	Traffic congestion around hospital	<ul style="list-style-type: none"> <li>• Area around the hospitals should be declared "Zero Tolerance Zone".</li> <li>• Improved traffic management plan by the traffic police around the hospital that allows hospital specific traffic on roads surrounding the hospitals.</li> <li>• The traffic police should develop dedicated ambulance corridor at an appropriate distance.</li> <li>• Vehicles to be fined regularly for unauthorised parking in and around the hospital.</li> <li>• Monitoring system to be introduced by Traffic Police.</li> <li>• Adequate deployment of traffic personnel and control of vehicle movement directly by police.</li> <li>• Removal of vendors, hawkers and other encroachments in 500m around gates by the Traffic Police, PWD, Municipal Corporation and Delhi Police.</li> <li>• Specific locations to be provided to vendors to prevent their haphazard spread by local development authority and Municipal Corporation.</li> <li>• Dedicated footpaths, traffic control barriers/chains to segregate the pedestrians, zebra-crossings</li> </ul>	<p>Traffic Police, PWD, Municipal Corporation, Delhi Police</p> <p style="text-align: right;">             (नीलम)            (NEELAM)            अवर सचिव/Under Secretary            स्वास्थ्य एवं परिवार कल्याण विभाग            Ministry of Health &amp; Family Welfare            भारत सरकार, Govt. of India            नई दिल्ली, New Delhi         </p>

		<p>wherever necessary and well defined intra-mural traffic circulation plan.</p> <ul style="list-style-type: none"> <li>• Hospital supply vehicles should have separate access roads.</li> </ul>	
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**Improvement of signage for smooth traffic movement:**

Appropriate and adequate signage should be installed at strategic places like entry / exit gates, administrative building, between residential area and hospital complex. The signage should be meaningful with appropriate graphics, bilingual, and should indicate the entry, exit, one way or two-way, parking location, shuttle service pick and drop off points and arrows to various departments, parking/no parking, speed limits, pedestrian — vehicle conflict zones, zebra-crossing etc.

**Integrated solution to traffic congestion:**

Traffic police and town planners should be engaged in development of an integrated traffic solution.

**iii. Encroachment as contributor to pollution**

Encroachments related factors are considered to contribute to environment pollution from somewhat to a great extent. Such factors are undesignated on-street parking, informal shops, hawkers, mobile vendors, auto-rickshaws parked near hospital, haphazard parking of vehicles, food distribution events around hospital, location of utilities such as the electric transformers, large waste bins etc. around the campus, unauthorised parking around the campus and unauthorised shelters.

**Mitigation measures:**

The resident welfare associations (RWAs) in the adjoining colonies should issue stickers to allow only the residents to park. Designated parking areas should be identified for visitors after verification from the residents. Reorganization of peripheral parking to permanent multilevel parking near the hospital should be developed. Smart streetcaping can be implemented for the approaching roads and nearby markets. This would require accommodation of nearby pharmacy shops and other activities such as fruit shops, general merchants etc. Alternate site should be identified for relocation of the encroachment in other areas. Prevention of encroachment by hawkers, removal and relocation for hawkers, small shops etc. should be ensured if already exist. The Municipal Corporation should not allow food distribution in the immediate vicinity of hospitals and develop relocation plan, if existing, at other appropriate sites. State authorities like Municipal Corporation, local development authorities, police, traffic police should take appropriate steps in this regard.

Provision of adequate canteens/food outlets covering all visited areas should be ensured by the

  
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hospital authorities. The food should be hygienic, affordable and of locally acceptable cuisine. Unauthorised entry by walk-in hawkers and sellers must be prohibited in the campus and restricted by the security services and unauthorised vehicles should be towed away.

**iv. Overcrowding as contributor to pollution**

**Mitigation measures:**

Overcrowding is considered as contributor to environment pollution from somewhat to a great extent. The various factors are lack of online or staggered appointments, tele-consultation, adequate waiting areas, appropriate/effective referral policy/system from other states or hospitals in Delhi leading to walk inpatients, huge patient-load that exceed the handling capacity of higher centres and long waiting times for admissions. Many attendants accompany a patient due to the acuity of patient and assistance needed.

The various measures recommended for reducing peak of patient flow, queues and waiting are:

- Online and staggered appointments and use of ORS portal.
- Queue management and token system by Security Services.
- Increased number of OPD registration counters.
- Dedicated department-based registration counters in respective department OPDs for decongestion of the main registration complex.
- Dedicated counter for Senior Citizens, Handicapped, Pregnant Ladies, Cancer patients etc.
- Token system for OPD Consultation.
- Evening OPD should also be run.
- Screening OPD.-Efficient feedback mechanism- Efficient feedback mechanism including “Mera Aaspataal” portal, public suggestion and feedback boxes.
- One patient one attendant policy.
- Patient facilitation services through patient care coordinators and Aao Sath Chale Services and provision of trolleys and wheelchairs readily available.
- Admissions coordinated through assigned resident doctors and called only on booked operation theater slots and beds.
- Designated fixed visiting hours and visitor passes.
- Creation of additional waiting areas with public facilities.
- Resting places or dharmshalas - The existing capacity may be augmented.
- e-Sanjeevani platform and tele-consultation.



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v. **Lack of green cover/belt**

Vegetative cover in hospitals usually comprises trees along the boundary, along roads with shrubs interspersed. At time, there is enough empty open spaces to accommodate trees and also other vegetative cover along the boundary walls.

**Mitigation measures:**

There should be adequate green cover and proper inventory of trees in Hospitals. Hospitals should carry out regular and special plantation drives on Independence Day, Republic Day, Swachhta Pakhwada, World Environment Day for renewal and replacement of trees identifying all such places in the campus, where plantations can be done. Appropriate places need to be identified within the campus for the installation of potted plants. Climbers need to be raised to prevent heating of surfaces. The boundary walls may have climbers planted along sections where the space is not available for raising trees. Vertical gardens and roof gardens may be developed. A Comprehensive Landscape Development plan should be worked upon along with the existing master plan of hospitals to address the greening of campus along with additional water harvesting, green roofs etc. Herbal garden should be developed with the help of CPWD and Horticulture department. Regular upkeep should be done by a dedicated team of malis under the supervision of civil engineers. Gardens should be re-developed and more resilient & perennial plants should be planted.

vi. **Noise Pollution**

Factors contributing to noise pollution are use of DG sets, patient crowd, vehicle outside campus in surrounding roads, honking by vehicles, heavy equipment / high vibration equipment and equipment in ICUs etc.

**Table 3 : Mitigation measures for noise pollution**

S. No.	Common contributor	Mitigation measures	Responsibility
1.	Use of DG sets	Acoustic enclosures Following DPCC norms	Engineering Services Division
2.	Honking by vehicles	No Honking Zone Penalties/fines Signage	Police (outside) Security Services (inside)
3.	Heavy equipment/ high vibration equipment	Sound proofing. Regular maintenance by the concerned agencies. Proper platform is made for absorbing the vibration as per guidelines.	Engineering Services Division



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4.	Equipment in ICUs	Centralised monitoring system Equipment maintenance programs.	Stores & user department
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#### 4. PROHIBITED AND REGULATED ACTIVITIES IN HOSPITALS

##### a. Prohibited Activities

- i. Smoking or chewing of tobacco. "The Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Act, 2003" or COTPA, 2003.
- ii. Alcohol Consumption or Narcotics.
- iii. Spitting in public places.
- iv. Open urination or defecation.
- v. Use of mercury-based sphygmomanometer and thermometers.

##### b. Regulated Activities: The regulated activities in hospitals and measures recommended to address such activities are as follows:

- i. Waste generation and management: All types of wastes such as Bio-Medical Waste (BMW) management including consent to establish, operate and authorisation, solid waste management, liquid waste management, e-waste management, hazardous waste etc. are regulated and compliance must be ensured as per the statutory requirements.
- ii. Maintenance activities for upkeep of various buildings of the hospital are also considered as a regulated activity.
- iii. Control of Emissions from DG Sets: The D.G sets must comply with regulatory norms.

##### c. MANAGEMENT OF PROHIBITED AND REGULATED ACTIVITIES

##### i. Prohibited Activities

Table 4: Mitigation measures for prohibited activities

Sr. No.	Prohibited Activities	Mitigation measures	Responsibility
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1.	Smoking or chewing of tobacco. "The Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Act, 2003" or COTPA, 2003.	Posters at strategic locations for both education/awareness and information regarding it punishable offence and quantum of penalty. Fine as per rule facilitated through Security Services.	Hospital Security Services
2.	Alcohol Consumption or Narcotics	Posters at strategic locations. Complaint to police through Security Services.	Hospital Security Services
3.	Spitting in public places	Posters at strategic locations. Fine as per rule through Security Services.	Hospital Security Services
4.	Open urination or defecation	Availability of adequate urinals/ toilets at all patient care and waiting areas.	Engineering Services Department/CPWD
5.	Use of mercury-based sphygmomanometer and thermometers	Purchase and disposal policy of mercury free items	Hospital Stores/ Purchase Department

## ii. Regulated Activities

Measures recommended to address such activities are as follows:

- A. Waste Generation and Management:** Compliance must be ensured as per the statutory requirements.
- B. Maintenance activities** for upkeep of various buildings. The dust particles can be suppressed by water sprinkling as detailed in relevant section.
- C. Control of Emissions from DG Sets:** The D.G sets must comply with regulatory norms. The Retrofitted Emission Control Device (RECD) or Dual fuel mode and compliance of emission standards as per latest directions under Section 12 of the Commission for Air Quality Management in National Capital Region and Adjoining Areas Act 2021 - Regulations for use of DG sets in NCR must be ensured.

  
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The Graded Response Action Plan (GRAP) for NCR (Revision: October 2023) by Commission for Air Quality Management in National Capital Region and adjoining areas has been classified under 4 different stages of adverse air quality in Delhi viz.:

- a. Stage — I 'Poor' (AQI 201 - 300): Ensure that Construction & Demolition (C&D) materials and waste are properly stored/ contained, duly covered in the premises. Ensure transportation of C&D waste in covered vehicles and its recycling at an appropriate processing facility. Strictly enforce directions and yardsticks for use of anti-smog guns at C&D sites. Intensify use of anti-smog guns, water sprinkling and dust suppression measures in road construction / maintenance / repair projects.
- b. Stage — II, 'Very Poor (AQI 301-400): Avoid dust generating construction activities during months of October to January.
- c. Stage — III 'Severe' (AQI 401-450): Hospitals are exempt from strict ban on construction, subject to strict compliance of the C&D Waste Management Rules, dust prevention/control norms including compliance with the directions of the Commission issued from time to time in this regard.
- d. Stage — IV 'Severe +' (AQI >450): No specific mention of hospitals.



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## 5. WASTE MANAGEMENT AND POLLUTION CONTROL

There should be designated officials authorised for ensuring compliances to statutory requirements. The hospitals consider that there are no gaps in the statutory or administrative provisions that have led to inadequate control of air or other pollutions in and around hospital that are detrimental to the health of occupants / visitors of the hospital. However, need of environment engineer is felt.

### a. WATER WASTE

Effluent and Sewage management: The effluent and sewage generation is being treated through sewage treatment plants (STPs) and effluent treatment plants (ETPs). There should be designated officials authorised for ensuring regulatory compliances. Hospitals have provisions of Sewage Treatment Plant (STP) and Effluent Treatment Plant (ETP). Monitoring of compliance to waste discharges under regulatory compliance is through monitoring system integrated with DPCC as per guidelines. Qualified and experienced manpower to operate and supervise functioning of these facilities are available. However, posting of environment engineer is suggested for improving the supervision. Treated ETP/STP water is used in construction, flushing in toilets and horticulture purpose.

**b. SOLID WASTE**

Solid waste management must be as per Solid Waste Management Rules, 2016. Regular reporting should be done and uploaded on website in compliance with the said rules. There should be designated officials authorised for ensuring regulatory compliances related to solid waste such as Additional Medical Superintendent, Officer In charge / Link / Medical Officer (sanitation). Dumping of waste around hospitals is not encouraged and is prohibited. In hospitals, it should be segregated, collected and transported as two categories i.e., blue, and green wastes. Compost machines and bulk waste generator under SWM Rules, 2016 should be installed and operationalised or the municipal corporation manages the solid waste. There should be proper segregation of Bio-Medical Waste and common municipal solid waste (MSW). It is ensured through the BMW Management Committee and the allied staff deployed. The hospitals have different policies for segregation, colour coded bins, trolleys, handlers, collection system and separate collection sites for Bio Medical Waste Management under BMW unit and Municipal Solid Waste Management according to rules for proper segregation.

Compliance of SWM Rules, 2016 should be ensured in the hospitals by daily routine rounds/ inspections carrying out for ensuring proper segregation. Appropriate coloured garbage bins are placed at every 100-200 meters. Garbage prone or vulnerable points should be eliminated. Timely collection of waste from the central storage area by Municipal Corporation or authorized vendor should be ensured.

The wet waste should be processed within premises using organic waste re- processor/composting machines or should be taken by the municipal corporation.

Dry waste is generally collected and managed by the municipal corporation. Hospitals are now being mandated to recycle the dry waste through material recovery facility established in campus.

The area outside the buildings should be cleaned two to three times daily or as and when required.

Water sprinkling to suppress dust clouding should be carried out in hospitals. Mechanised brooming machine with automatic sprinklers or manual should be carried out. Mechanised cleaning should be carried out.

Burning of waste must not be allowed / should be prohibited and enforced through the security services. Effective waste management policy/system and its compliance prevent the burning of the waste. Training and raising awareness among waste handlers on regular basis and monitoring by sanitary supervisors also contribute to prevent it.

The Hospital Administration should monitor cleanliness and removal of waste. Regular rounds

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inspection of the sites, monitoring of services & records and meetings should be held. The department of sanitation services should be under the direct control of Medical Superintendent(s). There should be Officer In charge(s) who oversee the functioning and policy making. There should be dedicated team of Sanitation Officers, inspectors to supervise and outsourced staff that carry out cleanliness and collection of waste. Necessary building infrastructure, equipment and material should be available for effectiveness. There can be a sanitation and cleanliness committee. Periodic rounds are being taken by the designated members of the committee.

Hospital Administration should visit and inspect the waste processing facilities on regular basis or once in six months.

The hospitals should plan to phase out mercury based apparatus (if not done already) by 2025 in line with the obligations of Minamata Convention on mercury.

### **c. PEST CONTROL**

The department of community medicine, engineering services or the administration directly monitor the services. The services of pest and vector control can be either managed in-house if the expertise is available or can be outsourced to experienced expert firms under the supervision of sanitation officers/inspectors and guidance of officer in charges. The material used should be as per the World Health Organization Pesticide Evaluation Scheme (WHOPES) and other guidelines in vogue that ensures that vector control products and public health pesticides active ingredients are effective, safe and meet stringent quality and manufacturing standards. Adequate numbers of appropriate chemical spray machines should be ensured.

### **d. CONDEMNATION OF HOSPITAL ITEMS**

There are various categories of waste material that are generated in the hospital such as general, furniture, machinery and equipment, linen etc. Respective stores should carry out regular periodic condemnation through e-auction as per hospital policy and collected by government approved vendors so that no condemned items accumulate. Committees also monitor or there are nodal officers or condemnation department.

### **e. BIO-MEDICAL WASTE (BMW) MANAGEMENT**

BMW should be managed as per BMW Rule, 2016 that includes segregation, collection, storage, transfer and disposal. Hospitals should have designated officials authorised for ensuring regulatory compliances related to BMW management. Hospitals should have consent to operate and BMW authorisation in compliance with the existing BMW Management Rules. In compliance with the BMW management rules, the disposal will be at a Common biomedical waste treatment facility or in-house as per the guidelines in the said rules. No healthcare facility shall setup onsite BMW treatment

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facilities if a Common Bio-Medical Waste Treatment Facility (CBMWTF) exists within 75 km of distance.

Proper segregation of different categories of BMW should be ensured by the segregation at the point of waste generation into various categories using appropriately colour coded bins, bags, cardboard boxes and puncture proof containers with needle destroyers.

Pre-treatment of lab/microbiological waste/blood samples/blood bags should be done through autoclaving and microwaving.

Designated well-ventilated and secure area for temporary storage of BMW should be available in all hospitals. Proper bar code mechanism should be in place. Designated website/webpage for online uploading of the monthly BMW reports should be functional.

#### **f. RADIO-ACTIVE WASTE MANAGEMENT**

All hospitals should have Radiation Safety Officers (if applicable), and all radiation equipment should be registered with The Atomic Energy Regulatory Board (AERB). Radioactive wastes generated in the medical facilities using radioactive source for diagnostic and/or therapeutic applications also must meet safety requirements stipulated by AERB. Compliance of safe disposal of radioactive waste in hospitals should be ensured by allowing the technetium 99m and iodine 131 waste to decay for more than 4 half-lives in radioactive waste storage room and then disposing them into general waste as per AERB guidelines. After its life cycle usage, all radioactive waste should be sent to the original manufacturer/supplier of the country, after obtaining due approval from AERB. In case if it is from India, the Board of Radioisotope technology (BRIT), Mumbai is available for safe disposal. Once it is disposed, the hospital/RSO should ensure to intimate AERB for the compliance of safe disposal. For patients injected with the radioactivity, there should be a separate toilet for flushing of excreta.

#### **Radioactive leaks:**

In case of emergencies such as radioactive leakage, pre-planned and established structural & non-structural measures should be taken by the various stakeholders including Radiation Safety Officer to minimize risks to health, life and hospital environment. These situations need to be intimated to the national safety regulatory authority. Similarly, radiation disaster management should be dealt by competent authority established with guidance and stipulated procedures.

There should be set protocol to be followed in case of a radioactive spill:

#### **Minor Spill:**

- i. Notify the person in the area that a spill has occurred.

  
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- ii. Prevent the spread by covering the spill with absorbent paper.
- iii. Survey with low range, thin window GM based survey meter or an appropriate contamination monitor, check the area around the spill, hands and clothing for contamination.
- iv. Clean up using disposable gloves and handling tongs. Carefully fold the absorbent paper. Insert it into a plastic bag and dispose of in the radioactive waste container. Also insert all other contaminated materials such as disposable gloves into plastic bag.
- v. Report the incident to the Radiation Safety Officer.

### **Major Spill:**

- i. Call for help: Notify the Radiation Safety Officer.
- ii. Clear the Area: Notify all the persons not involved in the spill to vacate the room.
- iii. Prevent the spread: Cover the spill with absorbent material, but do not attempt to clean it up. Confine the movement of all the personnel potentially contaminated to prevent spread of contamination.
- iv. Monitor: Monitor all people involved in spill for contamination before leaving the room.
- v. Shield the source: If possible, the spill should be shielded, but only if it can be done without further contamination and without significantly increasing radiation exposure.
- vi. Close the room: Leave the room and lock the door to prevent entry.
- vii. Personal decontamination: Contaminated clothing should be removed and stored for further evaluation by Radiation Safety Personnel. If the spill is on the skin, flush thoroughly and then wash with mild soap and lukewarm water.

### **g. E-WASTE MANAGEMENT**

Compliance to E-waste rules should be ensured by annual/periodic bids by the respective Store Sections for e-waste collection and disposal to agency (dismantlers/recyclers) authorized by Delhi Pollution Control Committee (DPCC) and a Green Certificate is provided by agency. Annual E-waste returns should also be sent to DPCC.

## **6. POLICY RECOMMENDATIONS**

There should be a multi-disciplinary inter-agency committee that should address issues impacting the environment and develop/revise the EMP as per the requirements of the area/region/specific institutes. There should be representation from statutory / implementing bodies viz., CPCB/DPCC,

  
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 स्वास्थ्य एवं परिवार कल्याण मंत्रालय  
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NDMC, MoEFCC, Delhi Police, Traffic Police, Civil society, NGOs etc. All hospitals should have regular environment engineers on rolls of the hospital who should coordinate/liase and implement the environment management plans.

## 7. TRAINING

Civic consciousness is essential to ensure implementation of statutory requirements, therefore hospitals should carry out regular trainings and awareness programs highlighting the negative impact of environmental hazards. There should be an annual training schedule and all staff must be covered. Trainings should also be conducted on occasions such as Environment Day and Swachhta Pakhwada. Environment related topics should be included in the induction training of newly joined Nursing Officers and Resident doctors and as a component of in-service education system. The IEC (Information Education and Communication) posters should be placed at all the sites where the wastes are generated. IEC videos can also be played on LED screens. Various competitions such as poster making, essay writing competitions etc. may also be held to promote awareness of environment management. Regular audits should be conducted with feedback to the concerned departments and the competent authority. Trainings of outsourced employees must be ensured using a mandatory responsibility clause in tenders with submission of proofs and penal provisions in case of non-compliance. Use of vernacular language in trainings and bilingual posters in IEC material will prove to be more effective in view of education of the staff involved in waste management activities. Street plays or nukkad natak with participation by key stakeholders may also be conducted.

## 8. NEWER TECHNOLOGIES

Newer technologies to mitigate ambient air pollution and fugitive emission such as pulse radio wave frequency machines need to be explored. More research in the domain should be carried out.

## 9. CONCLUSION

The Environment management plan provides for the safety of the occupants of hospitals of both patients and the staff by filling the gap of integration of the various statutes applicable to the hospitals and those generally applicable in the immediate vicinity. The plan identifies such pollutants and factors that can adversely impact the environment. It suggests the mitigation measures and delineates the responsibilities of the various stakeholders within the hospitals and role of the government agencies bringing together a multidisciplinary and multi-pronged strategy to holistically address the issue.