

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

EXECUTION APPLICATION NO.: 16 OF 2019

IN

ORIGINAL APPLICATION NO.: 153 OF 2014

**IN THE MATTER OF:**

Indian National Trust for Art  
and Cultural Heritage

...Applicant

Versus

Government of NCT of Delhi & Ors.

...Respondents

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DATE: 28.08.2024

PLACE: NEW DELHI

FILED BY:



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DATED: 29.07.2024, FILED ON BEHALF OF THE MEMBER SECRETARY,  
STATE WETLAND AUTHORITY, HARYANA WITH REGARD TO THE  
NOTIFICATION OF THE NAJAFGARH JHEEL**

**MOST RESPECTFULLY SHOWETH:**

1. That the Applicant had filed the above titled Original Application raising the threats to the Najafgarh Jheel, an important water body in the National Capital Region, arising from continuous encroachments, unauthorized constructions and the fast draining of the lake waters by widening the Najafgarh drain, connecting the lake with Yamuna, by the Respondents on the pretexts of flood-protection. The Applicant by way of the Original Application had also raised inaction on the part of the Respondents in curbing the unauthorized constructions in and around the lake. The Original Application sought revival, protection and preservation of the interstate Najafgarh Jheel, which is extremely vital to meet the drinking and domestic needs of the water starved areas of Gurgaon and Delhi through groundwater recharge, moderate urban flooding, maintain and restore biodiversity habitats, developing climate resilience.

2. That vide Order, dated: 30.07.2024, this Hon'ble Tribunal was pleased to permit the Counsel for the Applicant to file objections to the report, dated 29.07.2024, filed by the State Wetland Authority and place all the relevant material on record on which the Applicant wanted to rely upon within a period of four weeks.

The relevant parts of the Order dated: 30.07.2024, passed by this Hon'ble Tribunal are extracted as under:

“ ...

*4. Submission of the Learned Counsel for the applicant is that entire submerged area of Najafgarh Jheel falling within the territory of State of Haryana should be declared as wetland and that it cannot be reduced to mere 75 acres. Counsel for the applicant is permitted to file objections to the report and place all the relevant material on record on which he wants to rely upon within four weeks.*

...”

3. That at the outset it is submitted that the State of Haryana and the State Wetlands Authority, Haryana have played a fraud upon this Hon'ble Tribunal by suppressing crucial facts and concealing vital information with regard to the extent of submergence of the Najafgarh Jheel, and its Notification as a Transboundary wetland, with a malafide intent to dry and destroy the whole Jheel which is crucial for securing the water needs of the parched Gurugram district (which is experiencing a groundwater exploitation rate of over 300%) in Haryana and also limiting the waters on the Delhi side also.
4. That the covert and malafide intent of the State of Haryana and the State Wetland Authority, Haryana, in stating in the Status Report, dated: 29.07.2024, that a paltry 75 acres will be notified are revealed in the deliberations of the Inter-ministerial Committee, which was set up by the Ministry of Environment, Forest & Climate Change (MoEF&CC, hereinafter referred to as MOEF&CC), at the behest of the State of Haryana in 2022. The deliberations, as obtained by the Applicant through RTI, clearly state that Haryana has earmarked the same land of 75 acres for making a bundh in the Jheel parallel to Delhi side bundh so as to kill the Jheel and ultimately destroy it. This proposed bundh is itself a prohibited activity in the Jheel in terms of

the Wetlands (Conservation and Management) Rules, 2017 as also noted in the EMP.

The relevant extracts from the deliberations of the said Inter-ministerial Committee, as obtained vide RTI reply, are reproduced as under:

*“...Km 5800 to Km 6737) falls under the jurisdiction of the Delhi Govt. The length from Km 6,737 to Km 11,734 (Right side) of Najafgarh Drain falls in the boundary of Haryana. The proposed bund is shown as Y-Z on the map. Accordingly, 75 Acres Land is required for constructing the Embankment (Total length 4,997 km) from Km 6,737 to 11,734 along Najafgarh Drain.”*

(Emphasis added)

(A True Copy of the relevant extracts from the deliberations of the Inter-ministerial Committee, as obtained vide RTI reply is annexed herewith and marked as **ANNEXURE O-1**)

5. That the State Wetlands Authority, as per Rule 5(4)(i) of the Wetlands (Conservation and Management) Rules, 2017, is obligated to perform the following function:

*“in cases wherein lands within boundary of notified wetlands or wetlands complex have private tenancy rights, recommend mechanisms for maintenance of ecological character through promotional activities;”*

It is submitted that, as such, regardless of the revenue record the area of submergence is required to be notified as a wetland under the Wetlands (Conservation and Management) Rules, 2017 and which in no way adversely affects the interests of farmers.

6. That it is essential to protect the recorded area of submergence as per the mean HFL of the last 10 years for the following reasons :
  - i. Wetland spread follow contour lines and not straight lines – hence the very concept of notifying a straight line rectangle 5000m x 60m [75 acres] is violative of natural hydrological principles and aimed at confining a vast natural lake into an artificial narrow tank.

- ii. Mean HFL recorded from 2007 to 2017 is 209.86m. As per Wetlands (Conservation and Management) Rules, 2017, up to a distance of 50m from this HFL no permanent construction is to be permitted.
  - iii. Najafgarh Jheel is the main flood buffering wetland for Gurugram city in absence of which the city will be submerged in intense rainfall events which are increasingly frequent.
  - iv. Najafgarh Jheel is the main groundwater recharge zone in District Gurugram, where, as per NITI Aayog's Composite Water Management Index, the aquifer will be exhausted in the next two years.
  - v. Najafgarh Jheel is the main wetland habitat in the region for bird biodiversity.
  - vi. The throttling of the vast spread of Najafgarh Jheel to a narrow artificial rectangular strip may well repeat a Bangalore like situation in Gurugram
7. That the State Wetlands Authority, as per Rule 5(4)(g) of the Wetlands (Conservation and Management) Rules, 2017, is required to perform the following function:

*“define strategies for conservation and wise use of wetlands within their jurisdiction; wise use being a principle for managing these ecosystems which incorporates sustainable uses (such as capture fisheries at subsistence level or harvest of aquatic plants) as being compatible with conservation, if ecosystem functions (such as water storage, groundwater recharge, flood buffering) and values (such as recreation and cultural) are maintained or enhanced;”*

8. That further, Rule 4 of the Wetlands (Conservation and Management) Rules, 2017, imposes certain restrictions, as under:

**“4. Restrictions of activities in wetlands.-**(1) *The wetlands shall be conserved and managed in accordance with the principle of 'wise use' as determined by the Wetlands Authority.*

(2) *The following activities shall be prohibited within the wetlands, namely,-*

...

*(vi) any construction of a permanent nature except for boat jetties within fifty metres from the mean high flood level observed in the past ten years calculated from the date of commencement of these rules;*

...”

(Emphasis added)

9. That, in accordance with Rule 4(2)(vi), as stated above, the High Flood Levels of the decade preceding and prior to 2017 are as follows :

<b>Year</b>	<b>High Flood Level Contour</b>
2009	210m
2010	210.35m
2011	209.75 m
2012	209.72 m
2013	209.92 m
2014	209.70m
2015	209.70m
2016	210 m
2017	209.62m
<b>Average Level</b>	<b>209.86M</b>

Source : I&FC, Delhi

#### **AREA OF SUBMERGENCE**

10. That according to the ‘Land Revenue Settlement of the Gurgaon District, 1882’, “*the area of excessive inundation in the Gurgaon District is 1772 acres belonging to villages Dharampur, Daulatabad, Budgera, Mankraula and Naubaramad*” which are the present day Haryana villages.

(A True Copy of the relevant extracts of the 'Land Revenue Settlement of the Gurgaon District, 1882' is annexd herewith and marked as **ANNEXURE O-2**)

11. That the area of submergence as recorded in Haryana EMP and subsequently in the Joint EMP [on behalf of State of Haryana and Government of NCT of Delhi], submitted by the CPCB on behalf of MoEF&CC, before this Hon'ble Tribunal, are as follows :

- Submergence Area under contour 211m : 5349 acres
- Submergence Area under contour 210m : 3436 acres
- Submergence Area under contour 209m : 917 acres

The above-mentioned area is now being sought by Haryana to be reduced to a mere 75 acres even in the face of water crisis which also appears to be trickery in view of their declaration in the Interministerial Committee mentioned in above para 4.

(A True Copy of the relevant extracts of the Haryana EMP as well as Joint EMP are annexed herewith and marked as **ANNEXURE O-3**).

12. That as per the 'Report of the Haryana State Wetland Authority', dated 29.07.2024, filed before this Hon'ble Tribunal, the area of submergence, supported by satellite imagery is clearly shown. The satellite imageries submitted in the said report admit submergence of 2048 acres on 24.09.2021 and 1667 acres on 11.11. 2021.

(A True Copy of relevant parts of the 'Report of the Haryana State Wetland Authority' dated 29.07.2024, showing the extent of submergence in Najafgarh Jheel, is annexed herewith and marked as **ANNEXURE O-4**).

13. That the Google satellite imagery, dated: 13.06.2024 and of Sentinel satellite image, dated 30.06. 2024 clearly show a water spread of over 4 sq.km. which is along the contour and not a straight line as proposed by Haryana, illogically and without application of mind.

(A True Copy of the Google satellite imagery, dated: 13.06.2024 and of Sentinel satellite image, dated 30.06.2024 clearly showing a water spread of over 4 sq.km. is annexed herewith and marked as **ANNEXURE O-5**).

14. That several relevant satellite imageries show the vast spread of Najafgarh Jheel following the contour line rather than straight line, further showing that in each case, the submergence area is in excess of 1000 acres.

(A True Copy of the relevant satellite imageries showing the vast spread of Najafgarh Jheel following the contour line rather than straight line, further showing that in each case, the submergence area is in excess of 1000 acres, is annexed herewith and marked as **ANNEXURE O-6**)

15. That the State of Haryana is bound to implement its part of the Joint EMP, dated: 13.12.2021, filed by the MoEF&CC before this Hon'ble Tribunal, wherein the concurrence of the State of Haryana is expressly noted and to which the State of Haryana has not objected in the last 32 Months.

(A True Copy of the relevant part of the Joint EMP, dated: 13.12.2021, filed by the MoEF&CC before this Hon'ble Tribunal is annexed herewith and marked as **ANNEXURE O-7**)

16. That it is expedient in the interest of justice that the entire area of Najafgarh Jheel falling in Haryana, with core submergence area of 209m contour, buffer zone upto contour 211m and HFL upto 212.5m contour as noted in Joint EMP, is notified as Wetland.

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**PRAYER**

In light of the facts and circumstances stated herein-above, it is most respectfully prayed that this Hon'ble Tribunal may, graciously, be pleased to:

- A. Direct the State of Haryana to prepare the Brief Document and send the same to MOEFF&CC for Notification of Najafgarh Jheel as a Transboundary Wetland, with core submergence area of 209m contour [917 acres], buffer zone upto contour 211m and HFL upto 212.5m contour as noted in Joint EMP, along with the zone of influence extending up to 212.5 m., on that part of the Jheel, falling on the side of Haryana;
- B. Direct the State of Haryana to implement its part of the Joint EMP, dated: 13.12.2021, filed by the MoEF&CC before this Hon'ble Tribunal, wherein the concurrence of the State of Haryana is expressly noted and to which the State of Haryana has not objected in the last 32 Months;
- C. Direct the above said compliances to be carried out within 30 days in a time-bound manner;
- D. Pass any other Order(s) or direction(s) as this Hon'ble Tribunal may deem fit and proper on the facts and circumstances of the instant case.

  
 DEPONENT  
 I N T A C H  
 Natural Heritage Division  
 71, Lodhi Estate, New Delhi-110 003

**APPLICANT**

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**AFFIDAVIT**

I, Manu Bhatnagar, S/o Lt. Sh. R.P. Bhatnagar, aged around 66 years, R/o 24, Chitra Vihar, Delhi-110092 do hereby solemnly affirm and declare as under:

1. That I am currently employed as the Principal Director in the Applicant Organization and am conversant with the facts and circumstances of the case and competent to swear this affidavit.
2. That the contents of the accompanying Objection are true and correct to my knowledge as derived from the records of the case. No part of it is false and nothing material has been concealed therefrom.



*Manu Bhatnagar*  
**DEPONENT**  
I N T A C H  
Natural Heritage Division  
71, Lodhi Estate, New Delhi-110 003  
**DEPONENT**

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**VERIFICATION**

Verified on this \_\_\_\_ day of August, 2024 that the contents of the present Affidavit are true and correct to my knowledge and belief and nothing material is concealed therefrom.

*Akash*

I, IDENTIFIED THE DEPONENT WHO HAS SIGNED IN MY PRESENCE

ATTESTED

NOTARY PUBLIC

*Mansi Bhargava*  
DEPONENT  
I N T A C H  
Natural Heritage Division  
71, Lodhi Estate, New Delhi-110 003

**DEPONENT**

NOTARY PUBLIC APPOINTED BY  
GOVT. OF INDIA  
G. S. KHARRANDA  
Notary Reg. No. 785  
28 AUG, 2024  
ADVOCATE ENL. No. D 287181  
ATTESTED 9899422266

## ANNEXURE O-1

Extract from the deliberations of the Inter-ministerial Committee as obtained through RTI:

File No. J-22012/23/2014-CS(W)PLJ (Computer No. 101406) 1-5  
 10/06/2021/WETLAND


5.800 to Km. 5.737) falls under the jurisdiction of Delhi Govt. The length from Km 5.737 to Km 11.734 (Right side) of Najafgarh Drain falls in the boundary of Haryana. The proposed bund is shown as Y-Z on the map. Accordingly 75 Acres Land is required for constructing the Embankment (Total length 4.997 Km) from Km 5.737 to 11.734 along Najafgarh Drain.

**Issue no.5.**  
**Role of Stakeholders and Beneficiaries**

Primarily the stakeholders and beneficiaries of the Najafgarh depression/proposed wetland will be landowners, farmers, Drain panchayats and environmentalists. The District Development has obtained the views of the landowners/ panchayats. Briefly, the villagers have demanded either compensation for the land in question or land measuring equal size in the adjoining areas. The inputs received from the Divisional Forest Officer are also attached.

**Recommendations/Views of the Committee**

1. After detailed deliberations with various stakeholders, the committee proposes that GMDA may complete the leg-2 and leg-3 (Badshahpur drain) up to the Najafgarh drain so that there is no unwanted spillage into the proposed wetland. Provision of sluice gates may be provided by GMDA for maintaining a fixed level of water in the proposed wetland under emergent conditions/drain season, provided the quality of water (BOD, COD levels) match the standards set by wetland authority. This aspect should also be taken up with the technical committee to ward off any adverse repercussions in future.
2. The committee is also of the view that bunding of Najafgarh drain on Haryana side is necessary for the section Y-Z to prevent back-flow of water from Najafgarh drain onto the Haryana side. Any solution without bunding would be



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## ANNEXURE O-2

Land Revenue Settlement of the Gurgaon District – FC Channing,  
Settlement Officer, 1882  
extracts

these circumstances I have to propose an assessment of Rs. 10,552, being a decrease of 5·3 per cent. on the existing jama, Rs. 11,137.

My rates are—

		Rs.	A.	P.
Cháhi	...	...	2	12 0
Dáhari	...	...	2	4 0
Baráni Chiknot and Narmot	...	...	1	8 0
Magda	...	...	1	4 0
Bhur	...	...	0	12 0
Fallow	...	...	0	12 0

In fixing the Cháhi rate, regard has been paid on the one hand to the nearness of water to the surface, and on the other hand to the percentages of salt and brackish wells, and the other rates correspond to the qualities of the various descriptions of soils as above described.

35. *Section 247.*—Chak Najafgarh jhíl contains 12 villages with a total area of 14,242 acres lying around the southern end of the Najafgarh jhíl. Of its soils the Bhur (20 per cent.) is mainly found where this circle adjoins Chak Farrukhnagar, and is, as in that circle, high, uneven and bad; some 25 per cent. of the Bhur is however of good quality: while the Magda (36·6 per cent.), the Narmot (23·1 per cent.) and the Chiknot (20·3 per cent.) are all good soils, the last two being mainly lands flooded from the jhíl. Owing to the abundance of natural irrigation and the saltness of the springs, the well irrigated area, notwithstanding the nearness of water to the surface, is under 3 per cent. Of the irrigation láos, 65 per cent. are on sweet, 20 per cent. on brackish and 15 per cent. on salt wells. All the wells are of masonry. 53·3 per cent. of the well lands are Magda, 33·7 per cent. Bhur, 10·5 per cent. Narmot, and 2·5 per cent. Chiknot. 60 per cent. were actually irrigated in the year of measurement.

Barley is as usual the staple well crop, being 69·6 per cent. against wheat 13·9 per cent. The rate which with reference to the foregoing considerations I propose is Rs. 3 per acre.

Of the Baráni lands 0·8 per cent. are Chiknot and 13·2 per cent. Narmot, both good, low lying, generally by moist from the vicinity of the jhíl, and occasionally benefited by floods. 53·2 per cent. is Magda, also good these soils resemble those of Chak adjoining Dáhar and may be assessed at the same rates, the remaining 32·8 per cent. are Bhur, of which, as above noted, three-quarters is bad, similar to that of Farrukhnagar, which I have proposed to assess at Re. 0-9-0, but one-quarter being of fair quality worth about Re. 0-14-0, my rate for the Bhur in this circle is Re. 0-10-0. Bájra forms 42·3 per cent. of the Baráni produce, barley 21·1 per cent., wheat 12 per cent., jowár 7·7 per cent., autumn pulses 6 per cent., wheat and gram 3·8 per cent., cotton 3·4 per cent. and gram 1·4 per cent.

But the especial feature of this circle is the irrigation from the

jhíl. 6,042 acres are shown in the statements as Dáhri. Of these 36.4 per cent. are Chiknot, 31.5 per cent. Narmot, 23 per cent. Magda, 9.1 per cent. Bhur. The great bulk of these lands are flooded by the jhíl waters, and the small remaining portion is irrigated by drainage from the higher tracts around. Of the crops grown on the Dáhri lands in the year of measurement, wheat formed 40.6 per cent., barley 16.9 per cent., melons 11.2 per cent., jowár 8.6 per cent., sugarcane 5.8 per cent., cotton 3 per cent., barley and gram 2.6 per cent., wheat and gram 2 per cent. and gram 0.7 per cent.

As I lately submitted a separate report on the subject of these villages with reference to proposed drainage works, I extract from it the following remarks:—

“ In this district there are twelve villages which are wholly or partly liable to inundation from the jhíl; in five of these villages the lands lie beyond all risk of excessive inundation, except, perhaps, in seasons of most unusually heavy rains, and the owners of these villages have no desire whatever to see any further drainage works executed; so also in two other villages, although lying somewhat near the jhíl, the villagers stated that their lands were not in need of further drainage; although a waste estate jointly owned by them and immediately adjoining their village would be benefited. There remain five villages which suffer from excessive inundation. 1 Dharnpur, 2 Daulatábád, 3 Budherá, 4 Mankraula, 5 Naubarámad. The area in these five villages which the people themselves point out as suffering from excessive inundation is 1,772 acres, and after enquiry I accept this area as correct.

I have had a statement prepared showing the remissions granted in these twelve villages during the last fifteen years. The total sum is Rs. 18,985, of this Rs. 16,761 were granted in the five villages which complain of inundation, and Rs. 2,224 in the other seven villages: in the five villages the average remissions were Rs. 1,117 per annum, being nearly 10 per cent. on the revenue assessed, and in the other villages Rs. 148 per annum, being less than one-and-a-half per cent. on the revenue: the total average annual remissions were Rs. 1,265 per annum, almost the whole of which is due to the action of the jhíl.

In the seven villages the remissions on account of inundations were given in kharif only.

The system of cultivation adopted in these villages is as follows:—

The ordinary kharif crops such as jowár, bájra, &c., are sown in those high lands which are beyond the ordinary inundation level.

From the lands which after being flooded by the jhíl submerge before the end of November, good crops of wheat are obtained.

Lands which have remained submerged beyond the season of rabi sowings, but which have become fit for cultivation by the end of March, may be planted with sugarcane or melons.

If any lands have remained under water so long that they continue moist up to the commencement of the rains, rice is sown and transplanted into the shallow water near the edge of the jhíl. Rice also can

## ANNEXURE O-3

Haryana EMP [submitted before Hon'ble NGT on 27.09.2021] –  
Extracts:

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#### Executive Summary

1. Haryana State is situated in the northern part of India and is bounded by Punjab and Himachal Pradesh to the north and by Rajasthan to the west and south. It is located between 27° 37' to 30° 35' N latitude and between 74° 20' and 77° 36' E longitude. There are 22 districts in the state. The total geographical area of the state is 44,212 km<sup>2</sup>, which is 1.4 % of the geographical area of the country. Haryana has four main geographical features, namely the Shivalik Hills to the northeast, the Aravalli Range in the south, the Yamuna-Ghaggar plain forming the largest part of the state. There are two agro climatic zones in the state. The north western part is suitable for rice, wheat, vegetable and temperate fruits and the south western part is suitable for high quality agricultural produce, tropical fruits, exotic vegetables and herbal and medicinal plants. There are various land use/land cover classes such as kharif, rabi, zaid, fallow, plantation, evergreen/ semi evergreen, deciduous, shrub/degraded/scrub, littoral swamp, grassland, grazing land, wasteland, built up area, water bodies and scrub land in the state. The total area covered under Forest is 3.9% of the total geographical area of the State. The climate of Haryana is very hot in summer and cold in winters. The hottest months are May and June and the coldest being December and January. Rainfall is varied, with the Shivalik Hills region being the wettest and the Aravalli Hills region being the driest. About 80% of the rainfall occurs in the monsoon season during the months of July and September.
2. Najafgarh Jheel, a trans-boundary water body shared between Haryana and NCT of Delhi, is a critical natural infrastructure for the region, buffering floods, treating wastewater, recharging groundwater and providing habitat to numerous plant and animal species. The high ornithological value of the Jheel is indicated by the presence of nearly three hundred bird species, including several threatened ones while nearly one hundred are winter visitors which visit this lake during winter and come from as far as Eurasian region- the rest are resident Indian or local migratory bird species. The jheel supports a good population of fishes, mollusks and gastropods and that is why the jheel supports a good population of avifauna.
3. Despite being the source of several benefits and sustaining habitats of diverse species, Najafgarh Jheel has been highly fragmented and transformed, used as a waste receptacle, and infested with invasive species. The Sahibi River, to which Najafgarh Jheel was the natural floodplain, has been converted virtually into a drain. The decimation of Jheel has exposed the neighboring settlements in Haryana and NCT of Delhi to high risks of pluvial flooding and reduced groundwater levels. Recent constructions within the Jheel area, while impeding natural wetland functions, are precarious owing to high seismicity and liquefaction within the region.
4. Conservation and wise use of Najafgarh Jheel is an imperative for sustainable urbanization of the NCT of Delhi and Haryana region, while also securing the role of wetlands as a part of

critical ecological networks, key being, a part of the migration corridor in the Central Asian Flyway. The Government of India, through its numerous policies and programmes, is desirous of mainstreaming full range of ecosystem services and biodiversity values of wetlands within developmental planning at various levels.

#### Implementing Wetlands (Conservation and Management) Rules, 2017

5. Notifying Jheel under the Wetlands (Conservation and Management) Rules, 2017 is an imperative under the several judicial directions, especially Supreme Court order of February 8, 2017. The notification will also act as a safeguard against the high development threats from urbanization in the region. The flood cushioning, groundwater recharge and waste treatment functions of the Najafgarh Jheel acquire high significance in the face of increasing water stress, and intensity and frequency of extreme events due to climate change and other stressors.
6. The present water body regime is a pale shadow of an extensive expanse, spanning nearly 24,000 ha until the 1960s. Regulation and fragmentation of flows of Sahibi River and construction of embankment on the Delhi side have led to a significant curtailment in area and inundation. The creation of Bund along the Najafgarh Jheel has resulted in massive reduction in its by bringing 8143 acres under 211m contour line, 2805 acres under 210m contour line and 1638 acres under 209m contour line under agriculture. The drainage from the areas are channelized into Najafgarh drain; although urbanization also reduced the submergible area in Haryana but still 5349 acres under 211m contour line, 3436 acres under 210m contour line and 917 acres under 209 contour line are available for holding flood waters (Sinha et al., 2019).
7. Development activities within the contours level 210 m and 211 m are most likely to adversely influence wetland functioning and to be considered as 'no construction buffer zone or zone of influence' as per provisions of the Wetlands (Conservation and Management) Rules, 2017. The area is also a hazard zone for construction due to high seismicity and soil liquefaction risks. (Refer map I for extent of wetland and zone of influence).
8. Regulation under the Wetlands (Conservation and Management) Rules, 2017 within the wetland and its zone of influence is proposed to be as follows:

Sr. No.	Activities	Within Wetland	Within Zone of Influence
1.	Prohibited	<ul style="list-style-type: none"> <li>• Conversion for non-wetland uses including encroachment of any kind.</li> <li>• Setting up of any industry and expansion of existing industries.</li> <li>• Manufacture or handling or storage or disposal</li> </ul>	<ul style="list-style-type: none"> <li>• Diversion of inflowing water channels</li> <li>• Change in land use</li> <li>• poaching</li> </ul>

## 1. The Management Context

- 1.1. Najafgarh Jheel, a trans-boundary water body shared between Haryana and NCT of Delhi, is a critical natural infrastructure for the region, buffering floods, treating wastewater, recharging groundwater and providing habitat to numerous plant and animal species, including diverse migratory and resident water birds. Despite being source of critical benefits and sustaining high biological diversity, the wetland has been highly fragmented and transformed, used as a waste receptacle, and infested with invasive species. This Environment Management Plan has been drafted by Shri. R.S. Verma, Director, Environment & Climate Change Department, cum-Member Secretary, State Wetland Authority, Haryana, Dr. R.K. Chauhan, Joint Director, Environment & Climate Change Department, Haryana and Shri Prince, Technical Expert, State Wetland Authority, Haryana under the able guidance of Shri Vijai Vardhan, Chief Secretary to Govt. Haryana and Shri S. N. Roy, Additional Chief Secretary, Environment & Climate Change, Department with the help of 2 Sub-Committee namely Engineering Sub-committee and Financial Sub-committee constituted for the matter of Najafgarh Jheel. This draft of Environment Management plan has been prepared in compliance with the directions of Hon'ble National Green Tribunal.
- 1.2. This Environment Management Plan has been prepared by the State Wetland Authority, Haryana. In framing this plan, the Authority has referred to existing reports (notable, the booklet - Najafgarh Jheel prepared by INTACH in 2018, a detailed note on status of Najafgarh Jheel and Action Plan for its preservation and Wetland and Restoration by Prof C R Babu), and maps, satellite images and datasets made available by various agencies. A field-visit to the wetland was also made on September 08, 2021 by the Engineering Sub-Committee. The plan uses the management planning guidance of the National Plan for Aquatic Ecosystems of the Ministry of Environment, Forest and Climate Change as the reference framework.
- 1.3. This document is a framework plan to be used as a guide for developing a comprehensive management plan based on a diagnostic evaluation of wetland features and related biodiversity and their governing factors, involving a multidisciplinary expert team and extensive stakeholder consultations. The plan also provides a basis of wetland demarcation for the purpose of notification under Wetlands (Conservation and Management) Rules, 2017. Given that this is an interstate wetland, this document also considered the draft Environment Management Plan submitted by Wetland Authority of NCT Delhi, and shared vision on management objectives, actions, monitoring mechanisms and institutional arrangement is developed.

### Water body Extent

- 1.4. Straddling the border of Haryana and NCT of Delhi, the Najafgarh Jheel is a large water body located in the Sahibi River Basin which spans 10.611 km<sup>2</sup> across Rajasthan, Haryana and NCT Delhi. The water body forms part of the course of the Sahibi River and

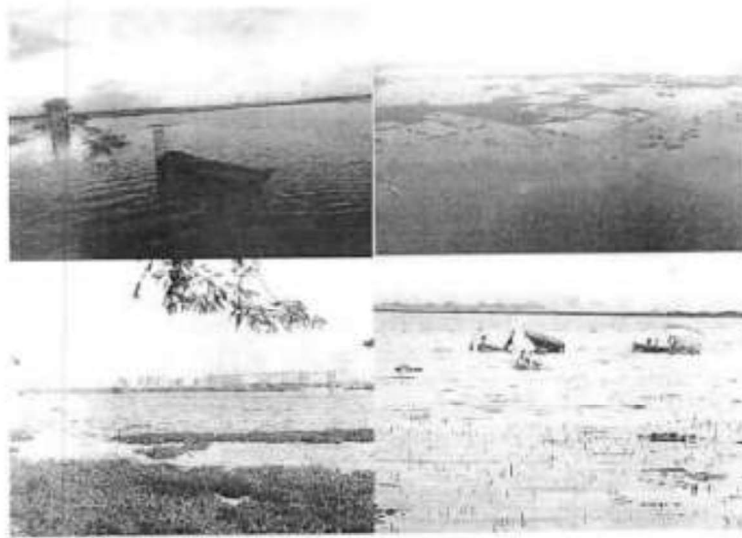
is depicted in the maps of 1803, 1807, 1936, 1964, 1975, 1984, 1996, 2010 [Survey of India] and can be readily seen as an interstate water body in various satellite images. It is also mentioned on p.94 of National Wetland Atlas [Haryana State], 2011, and as per the February 11, 2017 directions of the Supreme Court in matter related to Writ Petition(s) (Civil) No(s). 230/2001 is to be notified under the provisions of Wetlands (Conservation and Management) Rules, 2017.

- 1.5. The current water body regime is a fragment of large expanse, which was noted in the Delhi Gazetteer, 1883, as having a spread of 88 square miles [226km<sup>2</sup> or 56500 acres] based on the Revenue Settlement Records [Maconachie, 1880]. In 1865 the Govt. of the North-West Province [later United Provinces] started draining the Jheel by excavating and widening the channel of Sahibi from the eastern end of the Jheel to the Yamuna. This channel then came to be known as the Najafgarh Nala or Najafgarh Drain having a length of 51.700 km in UT of Delhi and 5 Km in Haryana.
- 1.6. Being a shallow depression in a large catchment and with constricted outfall, the area surrounding the water body is recurrently flooded. Floods are therefore a regular feature, and major floods have been recorded - 1958, 1964, 1977, 1988, 1995 with lesser floods in 1975, 1976, 1983, 1996, 2010, 2016 and even in 2020. Subsequently, after the floods of 1964, the Union Territory of Delhi built an embankment on its side of the Jheel to prevent inundation of its areas parting the Jheel into north and south segments. The construction of embankment has thus curtailed the natural flood pulses, and also triggered land use change, with large swathes brought under agriculture, and fringes for urban development.
- 1.7. Wetlands are defined in the text of Ramsar Convention (to which India is a signatory) as ***‘areas of marsh, fen, peat land or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six meters’***. Wetlands are delineated based on their key indicators - namely presence of permanent or intermittent inundation (at least in excess of 15 days in a normal hydrological year), hydrophytes (of dominance above 50%), and saturated soil (with ground water levels less than 1 foot). A systematic delineation of wetland regime has not been done in case of Najafgarh Jheel, however the inundation patterns provide a robust indicator for the said purpose.
- 1.8. In flood years vast areas of the Najafgarh Jheel depression have been submerged. Thus, in 1958 the Jheel submerged 145km<sup>2</sup> [14,500 ha] and in 1964 the Najafgarh Jheel attained a spread of 240km<sup>2</sup>. [Source: Irrigation and Flood Control Department, NCT of Delhi].
- 1.9. High flood level in the area was at 212.5m contour and this would therefore be the level to which flood waters can cover in the event of very high rainfall. The flood water usually

covers the area under the 209m contour and rarely go beyond the 210m contour. The data regarding the 1977 (which may be taken as the once in a 100 years flood on the Sahibi) floods level is available from I&FC website **(Picture-1)**



Map 2. Catchment of Sahibi River



Picture 3. Inundation on August 20, 2020 on Delhi side (top left and right) and Haryana side (bottom left and right)(Credit: Ramesh Mumukshu)

- 1.10.** On behalf of the NGT's context a visit was made to Najafgarh Jheel by a team consisting of Hon'ble Member of Yamuna Monitoring Committee, Shri. B.S. Sajwan, two Monitoring Committee Members of Haryana, Shri. M.D. Sinha, Additional CEO, Gurugram Metropolitan Development Authority and his team, the Member Secretary of CPCB and his team, Irrigation Department of Haryana and HSPCB Members and Professor C.R. Babu of the University of Delhi. The visit was made on January 25, 2020. An excerpt from the report of Prof. Babu is reproduced below:

*"The left out Najafgarh Jheel is the only landform that ensures the safety to Gurugram and Delhi from the massive floodwaters during heavy rainfall resulting from climate change. In fact, it was pointed out that the frequent water logging of Gurugram city roads and submergence of Plots in the submergible area enclosed by 212m contour line is the rule rather than the exception. Sector 100 of Gurugram and neighboring areas, which were flooded and submerged in 2010, have been brought under construction and are in the core flood zone. Najafgarh Jheel is the only safeguard for both the cities against climate change and adaptation to extreme events - extreme temperature and rainfall."*

- 1.11.** As per the data and analysis of the topography of the area and surface hydrology, the high flood level in the area was at 212.5m contour level. It is also clear from the report of

the Technical Committee of State Wetland Authority Haryana that the flood water usually covers the area under the 209m contour and rarely go beyond the 210m contour it is clear that the 209m contour level is crucial for the maintenance of this aheel. Taking into consideration, the lean season historical data, an appropriate core area for the wetland to be considered by the state wet land Authority. The area also to be declared as buffer where the community can practice seasonal agriculture and no construction activity and mining are permitted. On the eastern and western sides, the major sector road intersecting the 211m contour can be the boundary of the buffer zone as decided by SWA in due course. This delineation takes into account:

- Permanent and intermittent inundation areas, as well as the presence of hydrophytes.
- Detailed contour mapping presented in report of Prof C R Babu.
- Report of the Technical Committee of the State Wetland Authority, Haryana.
- Report of the Divisional Commissioner, Gurugram.

1.12. It is crucial that construction activity in and around the wetland region is completely curtailed given the high risk of liquefaction and earthquake Hazards.



Map 3. Seismic hazard maps for Delhi (left) and Haryana (right)

**[Joint EMP of Haryana and Government of NCT of Delhi filed by the CPCB before this Hon'ble Tribunal vide Report, dated: 13.12.2021]**

The Joint EMP reads as under:

*“The Wetland Authorities of Haryana and NCT Delhi have examined each other's environmental management plan and come up with this joint document stating shared vision on wetland notification,*

*management objectives, actions, monitoring mechanisms and institutional arrangements.”*

#### Executive Summary

1. The Wetland Authorities of Haryana and NCT Delhi have examined each other's environmental management plan and come up with this joint document stating shared vision on wetland notification, management objectives, actions, monitoring mechanisms and institutional arrangements.
2. Najafgarh Jheel, a transboundary wetland shared between Haryana and NCT of Delhi, is a critical natural infrastructure for the region, buffering floods, treating wastewater, recharging groundwater [with high potential for water supply to significant population] and providing habitat to numerous plant, animal and bird species. The high ornithological value of the wetland is indicated by the presence of 281 bird species, including several threatened ones (such as Egyptian vulture, Sarus Crane, Steppe Eagle, Greater Spotted Eagle, Imperial Eagle) and those migrating along the Central Asian Flyway. Nearly a hundred species are winter migrants visiting the lake from Eurasian region the rest being resident Indian or local migrants. The wetland also supports heronries of Darters, Cormorants, Cattle Egrets and Ibises. The wetland also supports a good population of pisces, molluscs and gastropods which is why the Jheel supports a good population of avifauna.
3. Despite being the source of several benefits and sustaining habitats of diverse species, Najafgarh Jheel has been highly fragmented and transformed, built upon, used as a waste receptacle, and infested with invasive species. The Sahibi River, of which Najafgarh Jheel was the natural floodplain, has been converted virtually into a drain. The decimation of wetlands has exposed the neighbouring settlements in Haryana and NCT of Delhi to high risks of pluvial flooding and reduced groundwater levels. Recent constructions within the wetlands, while impeding natural wetland functions, are precarious owing to high seismicity and liquefaction within the region.
4. Conservation and wise use of Najafgarh Jheel is an imperative for sustainable urbanisation of the NCT of Delhi and Haryana region, while also securing the role of wetlands as a part of critical ecological networks, key being, a part of the migration corridor in the Central Asian Flyway. The Government of India, through its numerous policies and programmes, is desirous of mainstreaming full range of ecosystem services and biodiversity values of wetlands within developmental planning at various levels.

#### Implementing Wetlands (Conservation and Management) Rules, 2017

5. The top priority is to notify Najafgarh Jheel and its area of influence under the Wetlands (Conservation and Management) Rules, 2017, which is an imperative under the several judicial directions, especially Supreme Court order of February 8, 2017. The notification will also act as a safeguard against the high developmental threats from galloping urbanisation in the region. The flood cushioning, groundwater recharge and waste treatment functions of the Najafgarh Jheel acquire high significance in the face of increasing water stress, and intensity and frequency of extreme events due to climate change and other stressors.
6. Both States agree that core zone of Jheel will encompass the area enclosed within contour 209m amsl as the zone of permanent inundation with seasonal variability extending further into the zone of influence which will extend upto contour 211m amsl. The zone of influence may be partially modified on the Haryana side by existing sectoral roads on east and west. [see Map 1]. Both sides note that the inundation area of the 100 Year High Flood Level extends to contour 212.5m amsl which also overlies zone of the highest soil liquefaction in the region and which is classified as Seismic Zone IV where buildings would be vulnerable to natural hazard.
7. The present wetland regime is a pale shadow of an extensive expanse, spanning nearly 24,000 ha until the 1960s. Regulation and fragmentation of flows of Sahibi River and construction of embankment on the Delhi side have led to a significant curtailment in wetland area and inundation. The creation of Bund along the Najafgarh Jheel on the Delhi side has resulted in massive reduction in the Jheel spread. Still, in Delhi 6500 acres under 211m contour level [inclusive of area under lower contours], 2200 acres under 210m contour line and 890 acres under 209m contour line would be potentially available for holding flood waters. Urbanization has also reduced the submergence area in Haryana. Still, in Haryana, 5349 acres under 211m contour line [inclusive of area under lower contours], 3436 acres under 210m contour line and 917 acres under 209m contour line are available for holding flood waters (Sinha et al, 2019). The area is also in conformity with wetland demarcation on Survey of India map submitted by Government of Haryana to the National Green Tribunal in 2015. Even in regulated conditions, the water levels at Dhansa regulator (upstream of Najafgarh Jheel) have been around 209.9 m amsl (average maximum for 2010-2020) and average 210.6m amsl [daily record from 20 July, 2021 – 9 October, 2021 – see Annexure A- source I & FC, Delhi]. Owing to the

extensive hydrological modifications, the wetland is mostly confined within the 210 m amsl contour wherein it is inundated for at least 15 days in a year although in 2021 monsoon there have been 90 continuous days of average 210.6m level [see Annexure A]. Groundwater is close to surface. Settlements in the region have naturally evolved around the inundation regime, mostly present outside 211m amsl elevation. Notably, some parts of newly built-up areas in Sectors 107 & 108 of Gurugram fall within this boundary, and being built on wetlands, are routinely submerged. On Delhi side, this area encompasses the Zone L of Masterplan, already designated as Jheel.

8. Developmental activities within the contour 211m amsl are most likely to adversely influence wetland functioning and should be considered as 'no construction buffer zone or zone of influence' as per provisions of the Wetlands (Conservation and Management) Rules, 2017. This zone spans 4,740 ha (2,600 ha in NCT of Delhi and 2,140 ha in Haryana). The area is also a hazard zone for construction due to high seismicity and soil liquefaction risks. (refer Map 1 at page 7 for extent of wetland and zone of influence)
9. Regulation under the Wetlands (Conservation and Management) Rules, 2017 within the wetland and its zone of influence is proposed to be as follows:

	Within Wetland	Within Zone Of Influence
Prohibited Activities	<ul style="list-style-type: none"> <li>• Conversion for non-wetland uses including encroachment of any kind;</li> <li>• Setting up of any industry and expansion of existing industries;</li> <li>• Manufacture or handling or storage or disposal of:               <ul style="list-style-type: none"> <li>o construction and demolition waste covered under the Construction and Demolition Waste Management Rules, 2016;</li> <li>o hazardous substances covered under the Manufacture, Storage and Import of Hazardous Chemical Rules, 1989 or</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Diversion of inflowing water channels</li> <li>• Change in land use.               <ul style="list-style-type: none"> <li>• Poaching.</li> </ul> </li> </ul>

of the Ministry of Environment, Forest and Climate Change as the reference framework.

- 1.3 The expert committee refers to this document as a framework plan to be used as a guide for developing a comprehensive management plan based on a diagnostic evaluation of wetland features and related biodiversity and their governing factors, involving a multidisciplinary expert team and extensive stakeholder consultations. The plan also provides a basis of wetland demarcation for the purpose of notification under Wetlands (Conservation and Management) Rules, 2017. Given that this is an interstate wetland, the Wetland Authorities of both states have examined each other's environmental management plan and come up with this joint document stating shared vision on management objectives, actions, monitoring mechanisms and institutional arrangements.

#### Wetland Extent

- 1.4 Straddling the border of Haryana and NCT of Delhi, the Najafgarh Jheel is a large wetland located in the Sahibi River Basin which spans 10,611 km<sup>2</sup> across Rajasthan, Haryana and NCT Delhi (Map 1). The wetland forms part of the course of the Sahibi River and is depicted in the maps of 1803, 1807, 1936, 1964, 1975, 1984, 1996, 2010 [Survey of India] and can be readily seen as an interstate waterbody in various satellite images. It is also mentioned on p. 94 of National Wetland Atlas [Haryana State], 2011, and as per the February 8, 2017 directions of the Supreme Court in matter related to Writ Petition(s)(Civil) No(s). 230/2001 is to be notified under the provisions of Wetlands (Conservation and Management) Rules, 2017.
- 1.5 The current wetland regime is a fragment of large expanse, which was noted in the Delhi Gazetteer, 1883, as having a spread of 88 square miles [226 km<sup>2</sup> or 56500 acres] based on the Revenue Settlement Records [Maconachie, 1880]. In 1865 the Govt. of the North-West Province [later United Provinces] started draining the Jheel by excavating and widening the channel of Sahibi from the eastern end of the Jheel to the Yamuna. This channel then came to be known as the Najafgarh Nala or Najafgarh Drain having a length of 51 km in UT of Delhi.
- 1.6 Being a shallow depression in a large catchment and with constricted outfall, the area surrounding the wetland is recurrently flooded. Floods are therefore a regular feature, and major floods have been recorded – 1958, 1964, 1977, 1988, 1995 with lesser floods in 1967, 1975, 1976, 1983, 1996, 2010, 2016, 2020 and even

in 2021. Subsequently, after the floods of 1964, the Union Territory of Delhi built an embankment on its side of the Jheel to prevent inundation of its areas parting the Jheel into north and south segments. [Haryana cannot similarly do so as this is the only route for escape of flood waters from Gurugram to Yamuna River]. Again, after the massive floods of 1977 the Najafgarh Drain was widened to accommodate the flood and Delhi started constructing the Supplementary Drain to carry the excessive flood discharge to the Yamuna. The construction of embankment has thus curtailed the natural flood pulses, and also triggered land use change, with large swathes brought under agriculture, and fringes for urban development.

- 1.7 Wetlands are defined in the text of Ramsar Convention (to which India is a signatory) as "areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres". Wetlands are delineated based on their key indicators- namely presence of permanent or intermittent inundation (at least in excess of 15 days in a normal hydrological year), hydrophytes (of dominance above 50%), and saturated soil (with ground water levels less than 1 foot). A systematic delineation of wetland regime has not been done in case of Najafgarh Jheel, however the inundation patterns provide a robust indicator for the said purpose. The current regimes however are significantly modified by the embankment on the Delhi side, and operation of regulators at Dhansa (upstream of the wetland).
- 1.8 In flood years vast areas of the Najafgarh Jheel depression have been submerged. Thus, in 1958 the Jheel submerged 145 km<sup>2</sup> [14,500 ha] and in 1964 the Najafgarh Jheel attained a spread of 240 km<sup>2</sup>. [Source: Irrigation and Flood Control Department, NCT of Delhi].
- 1.9 Data on the spread attained in 1977 is available, not in terms of area but in terms of contour levels reached by flood waters. The water levels are recorded at the depth gauges on various regulators and bridges by Dept. of Irrigation and Flood Control, Delhi [I & FC]. The following data regarding the 1977 [which may be taken as the once in a 100 year flood on the Sahibi] flood levels is available from I & FC website (also see Image no. 4 on p.17) :

*"The max level recorded D/s of Dhansa regulator was 212.80 m amsl (697.98 ft) on August 9, 1977 and the max. level recorded at Kakraula was 212.125 m amsl (695.77 ft) on August 16, 1977 and the same level was recorded at Basaidarapur on August 17, 1977. The rural area in Delhi remained under water for about 3½ months and were free from submersion only in the second week of November."*

1.10 The water level data for 2010-2020 (Table 1) and for 2021 (Table 1A) indicates that even in the regulated condition, the average maximum water level attained at Jhatikra bridge [immediately downstream of the Jheel] over the last 11 years has been 209.90 m amsl and average minimum level has been 208.75 m. These levels are the result of intense rainfall events in Gurgaon and SW Delhi and do not cater to the basin level events which can occur in any year. While there is an impression that there is hardly any flow in the Sahibi river due to several checkdams in the Rajasthan side upstream of Masani Barrage the northern part of the Sahibi catchment [downstream of Masani Barrage], amounting to some 5000 km<sup>2</sup>, is capable of generating massive inflows, well beyond the water holding capacity of the Jheel.

Table No 1: Water Level (m) And Discharge Of Najafgarh Drain Upstream & Downstream Of Najafgarh Jheel

YEAR	NAJAFGARH DRAIN							
	RAINFALL (mm)		DHANSA DISCHARGE (Cusec)		DHANSA REGULATOR (Level)		JHATIKRA (Level)	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
2010	5.40	98.80	364	1488	209.300	210.375	208.750	210.350
2011	2.10	62.20	13	330	209.275	209.800	208.500	209.750
2012	3.80	54.60	36	563	209.350	209.950	208.350	209.725
2013	2.40	63.00	7	853	209.250	210.000	208.750	209.925
2014	6.40	77.80	20	254	209.300	210.300	208.650	209.700
2015	1.60	62.40	36	330	209.350	209.800	208.800	209.700
2016	1.80	57.80	7	799	209.250	210.075	208.900	210.000
2017	3.20	26.20	36	158	209.250	209.950	208.750	209.625
2018	2.80	62.40	7	1385	209.250	210.325	208.900	210.125
2019	3.60	34.20	7	103	208.900	209.500	208.900	209.375
2020	3.20	102.60	144	2450	209.250	210.700	209.000	210.650

Source : I & FC, Delhi

Table No 2 : Water Level (in m amsl) Attained at Dhansa, Jhatikra, Kakraula (2021)  
[Data for all days from 20/7/21 to 9/10/21 Available in Annexure A]

Date	Dhansa	Jhatikra	Kakraula
20/07/2021	210.350	210.250	210.300
29/07/2021	210.700	210.650	210.450
01/08/2021	210.800	210.750	210.575
08/08/2021	210.875	210.850	210.550
13/08/2021	210.800	210.775	210.500
22/08/2021	210.550	210.450	210.250
06/09/2021	210.650	210.575	210.350
12/09/2021	210.800	210.750	210.550
17/09/2021	210.950	210.400	210.650

21/09/2021	210.950	210.875	210.650
30/09/2021	210.900	210.850	210.575
09/10/2021	210.650	210.600	210.325

Source : I & FC, Delhi



Map No 2 : Catchment of Sahibi River (Source: Irrigation and Flood Control Department, NCT Delhi)



Image No. 1 : Inundation of 1977 floods (Landsat MSS imagery, Sinha et al., 2019)



Image No. 2 : Vast Waterspread On Delhi Side In 1999 (Even As A Result Of Localised High Rainfall Event)



Image No. 3 : Submergence Patterns Along Najafgarh Jheel (September 8, 2016) (Source : Sinha Et Al., 2019)

- 1.13 On behalf of the NGT a visit was made to Najafgarh Jheel by a team consisting of Hon'ble Member of Yamuna Monitoring Committee, Shri. B. S. Sajwan, two Monitoring Committee Members of Haryana, Shri. M. D. Sinha, Additional CEO, Gurgaon Metropolitan Development Authority and his team, the Member Secretary of CPCB and his team, Irrigation Department of Haryana and HSPCB Members and Professor C. R. Babu of the University of Delhi. The visit was made on January 25 2020. An excerpt from the report of Prof Babu is reproduced below :

*"The left out Najafgarh Jheel is the only landform that ensures the safety to Gurugram and Delhi from the massive floodwaters during heavy rainfall resulting from climate change. In fact, it was pointed out that the frequent water logging of Gurugram city roads and submergence of flats in the submergible area enclosed by 212m contour line is the rule rather than the exception. Sector 108 of Gurugram and neighbouring areas, which were flooded and submerged in 2010, have been brought under construction and are in the core flood zone. Najafgarh Jheel is the only safeguard for both the cities against climate change and adaptation to extreme events – extreme temperature and rainfall."*

- 1.14 As per the data and analysis of the topography of the area and surface hydrology, the high flood level in the area was at 212.5m contour level. Based on the chronological record, map series, water level data and visual evidences presented above the core area of the Jheel may be delineated outside contour 209 m amsl (Map 3). The area between contours 209 m amsl and 211 m amsl serve as the zone of influence, whereas the area upto 212.5 m amsl is a zone of high floods. It is also clear from the report of the Technical Committee of State Wetland Authority Haryana that the flood water usually covers the area under the 209m contour and seasonally go beyond the 210m contour. It is clear that the 209m contour level is crucial for the maintenance of this Jheel. The zone of influence is to act as a buffer zone for holding seasonal floods where the community can practice seasonal agriculture but no construction activity and mining are permitted, On the eastern and western sides [Gurugram], the major existing sector road intersecting the 211m contour may be the boundary of the zone of influence. This delineation takes into account
- Permanent and intermittent inundation areas, as well as the presence of hydrophytes.
  - Zone L of the Masterplan of NCT Delhi which already reserves an area of 356 ha [890 acres] designated as Najafgarh Jheel (Figure 1). Masterplan also mandates that one revenue village depth along NCT Delhi boundary is to be maintained as green belt.

## ANNEXURE O-4

Status Report by Haryana State Wetland Authority, dated:  
29.07.2024:

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

**E.A No. 16 of 2019**

**IN**

**O.A No. 153 of 2014**

**Indian National Trust for Art and Culture Heritage**

**...Applicant**

**Vs**


**Govt. of NCT and Delhi & others**

**...Respondent**

**INDEX**

<b>Sr. No.</b>	<b>Particulars</b>	<b>Dated</b>
1	Status Report	29/07/2024
2	Annexure-R/1	15/06/2022
3	Annexure-R/2	29/07/2024

Place: Panchkula  
Dated: 29.07.2024

  
Pardeep Kumar  
Member Secretary,  
State Wetland Authority, Haryana

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

EA No. 16 of 2019

IN

OA No. 153 of 2014

**Indian National Trust for Art and Culture Heritage**

...Applicant

**Vs**

**Govt. of NCT and Delhi & others**

...Respondent

**STATUS REPORT BY WAY OF AFFIDAVIT OF PARDEEP  
KUMAR, MEMBER SECRETARY, STATE WETLAND  
AUTHORITY, HARYANA IN COMPLIANCE OF ORDER  
DATED 16.02.2024 AND 25.04.2024.**

I, the above-named deponent, do hereby solemnly affirm and declare as  
under: -

**PRELIMINARY SUBMISSIONS: -**

**MOST RESPECTFULLY SHOWETH:**

1. That the Indian National Trust for Art and Culture Heritage filed an  
OA No. 153 of 2014 and prayed for issuing directions for

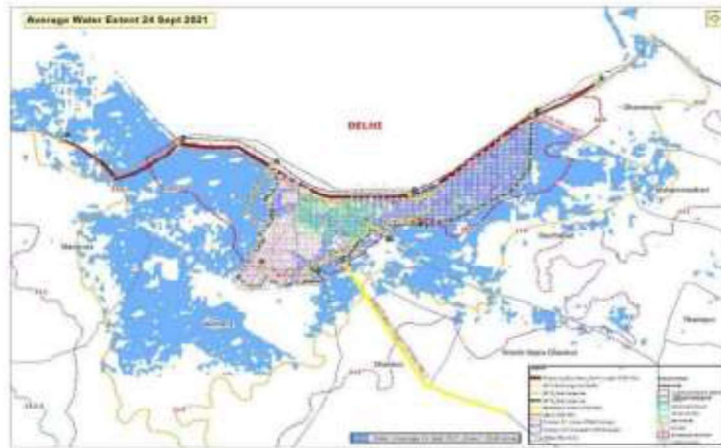


Fig.47. Water spread on Sept 24, 2021 was 2048 acres



Fig. 48. Water spread was 1667 acres on Nov 11, 2021

Table 6. The extent of area under various contour levels in Haryana

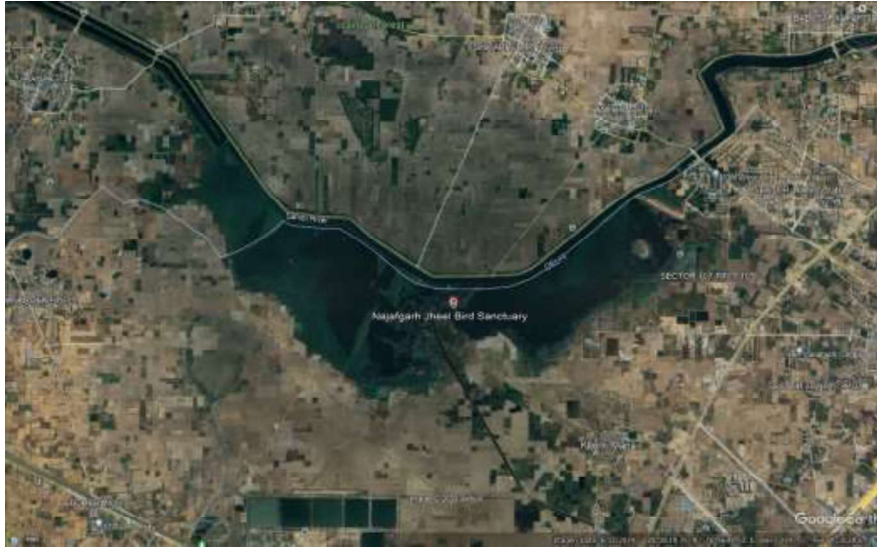
S.No	Contour Level (m)	Extent of Area (in acres)
1	202	2617
2	210	2395.0
3	211	13,08.8
4	212.5	11205.0

Table 7. Extent of area under various contour levels in Delhi

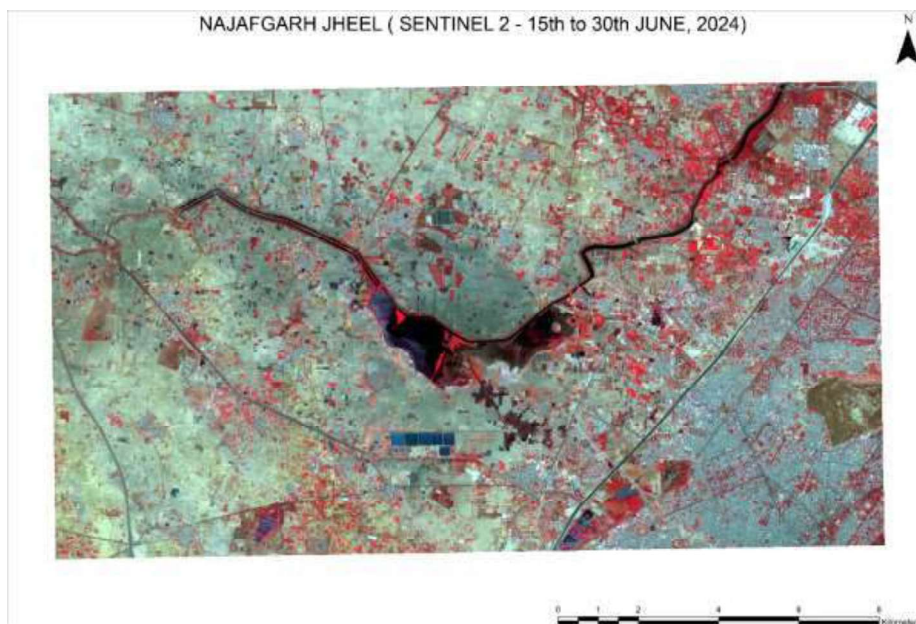
S. No.	Location	Area of the village at contour level of Submerge level (with bank) (200.0m)	Area of the village at contour level of 205.0m (ft=6)	Area of the village at contour level of 215.0m (ft=6)	Area of the village at contour level of 221.00 m (ft=6)
1	Rawla	92.00	203.44	291.07	698.18
2	Dokhla	--	--	--	290.41
3	Churamohata	--	257.03	600.00	773.12
4	Jalpur	--	139.14	170.01	203.23
5	Shikapur	--	941.58	694.07	720.35
6	Jattika	--	410.10	474.87	522.79
	<b>Total</b>	<b>92.00</b>	<b>1691.29</b>	<b>2243.92</b>	<b>3283.98</b>

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## ANNEXURE O-5

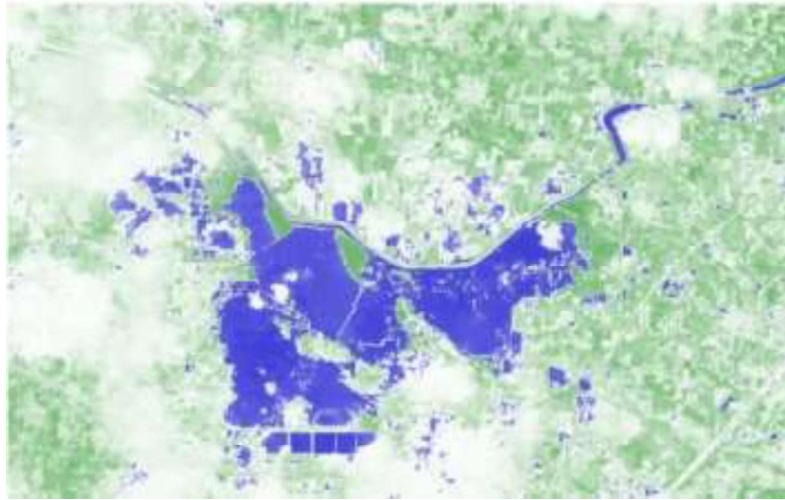


**Google Image of 13.06. 2024 showing 1125 Acres  
Submergence Area Along Contour**

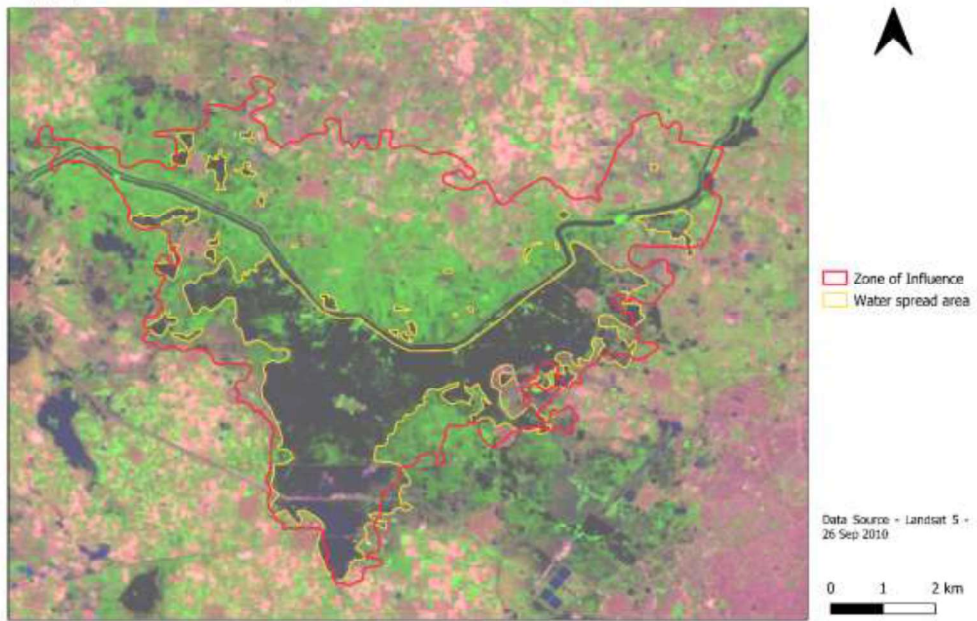


**Najafgarh Jheel Extent 1250 Acres as on 30.06.2024**

ANNEXURE O-6

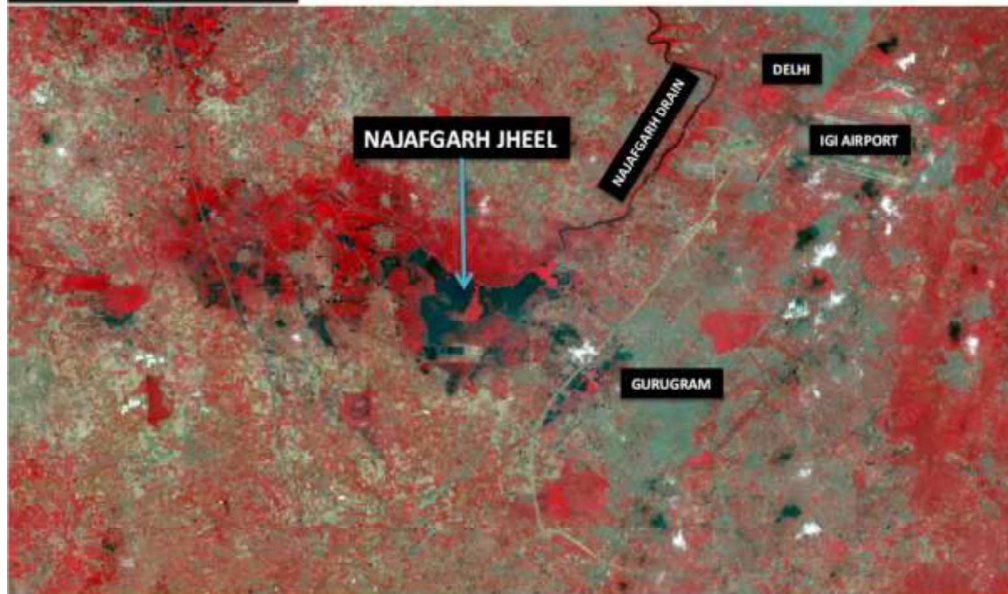


Najafgarh Jheel - Water Spread 2010



919

2020-September



**Najafgarh Jheel Spread of 1250 Acres on 25<sup>th</sup> November, 2018**

### Executive Summary

1. The Wetland Authorities of Haryana and NCT Delhi have examined each other's environmental management plan and come up with this joint document stating shared vision on wetland notification, management objectives, actions, monitoring mechanisms and institutional arrangements.
2. Najafgarh Jheel, a transboundary wetland shared between Haryana and NCT of Delhi, is a critical natural infrastructure for the region, buffering floods, treating wastewater, recharging groundwater [with high potential for water supply to significant population] and providing habitat to numerous plant, animal and bird species. The high ornithological value of the wetland is indicated by the presence of 281 bird species, including several threatened ones (such as Egyptian vulture, Sarus Crane, Steppe Eagle, Greater Spotted Eagle, Imperial Eagle) and those migrating along the Central Asian Flyway. Nearly a hundred species are winter migrants visiting the lake from Eurasian region the rest being resident Indian or local migrants. The wetland also supports heronries of Darters, Cormorants, Cattle Egrets and Ibises. The wetland also supports a good population of pisces, molluscs and gastropods which is why the Jheel supports a good population of avifauna.
3. Despite being the source of several benefits and sustaining habitats of diverse species, Najafgarh Jheel has been highly fragmented and transformed, built upon, used as a waste receptacle, and infested with invasive species. The Sahibi River, of which Najafgarh Jheel was the natural floodplain, has been converted virtually into a drain. The decimation of wetlands has exposed the neighbouring settlements in Haryana and NCT of Delhi to high risks of pluvial flooding and reduced groundwater levels. Recent constructions within the wetlands, while impeding natural wetland functions, are precarious owing to high seismicity and liquefaction within the region.
4. Conservation and wise use of Najafgarh Jheel is an imperative for sustainable urbanisation of the NCT of Delhi and Haryana region, while also securing the role of wetlands as a part of critical ecological networks, key being, a part of the migration corridor in the Central Asian Flyway. The Government of India, through its numerous policies and programmes, is desirous of mainstreaming full range of ecosystem services and biodiversity values of wetlands within developmental planning at various levels.