BEFORE THE NATIONAL GREEN TRIBUNAL SOUTHERN ZONE CHENNAI

MEMORANDUM OF APPLICATION

[Under Section 18(1) read with Sections 14, 15, 16 & 17 of the National Green Tribunal Act, 2010]

OA NO 103 OF 2022

Between:

Dr Lubna Sarwath

……Applicant

And

State of Telangana & Ors …..Respondents

ADDITIONAL AFFIDAVIT ON BEHALF OF THE APPLICANT

1. I, Dr.Lubna Sarwat D/o Late Janab Muhammad Khaleelulla, aged 57 years R/o Flat No. 202, Gayatri Garden Apartment, Street No. 2, Tarnaka, Secunderabad, Telangana-500017, presently in Hyderabad do hereby solemnly affirm and say as under :
2. I am the Applicant in the above Application and as such I am fully conversant with the facts and proceedings of the case competent to swear the Affidavit.
3. It is submitted that during course of the hearing on 21.9.2022 this Hon'ble Tribunal directed the Applicant to furnish information relating to Order of the Special Bench in OA No. 85 of 2015 (SZ) and further directed the Applicant to place the status of the complaint made to the District Collector. Besides that the Hon'ble Tribunal also directed the Applicant to place the particulars of the encroachments in the twin reservoirs.
4. In compliance of the direction of the Hon'ble Tribunal, Applicant would like to furnish status/ information as follows:

Sl No.	**Query from Bench**	**Status**	
1-	**Hon'ble Tribunal on Order dated 21.9.2022:** "The Learned Counsel appearing	Original Application No. 85/2015(SZ) Dr. Lubna Sarwath Applicant Versus The State of Telangana and Ors. Date of	Order disposing OA 85/2015 enclosed.

	for the State of Telengana also states that a similar application was already disposed of by the Hon'ble Principal Bench in O.A. No. 85 of 2015. But in this application there is no mention about the same. The Learned Counsel appearing for the applicant is directed to verify the same and also find out if any other application/appeal regarding these two water bodies is already dealt with by this Tribunal.	hearing:06.07.2022 ORDER The Issue raised – pollution of Hussain Sagar Lake, Hyderabad, Telangana Grievance in the application is against failure to prevent and remedy pollution of Hussain Sagar Lake and consequential pollution of Musi River on account of discharge of industrial effluents and sewage.' 'The application is disposed of.' Whereas, OA No. 103/2022(SZ) pertains to encroachments inside the Osman Sagar and Himayath Sagar drinking water reservoirs and no such application/appeal is already dealt with by the Tribunal.	
2	"We could also see the complaint under Section 133 of CrPC filed before the District Magistrate, Rangareddy for public nuisance of encroachments on the public property, namely, Osman Sagar Reservoir and the Himayath Sagar Reservoir which are to be restored. 5. The Learned Counsel appearing for the applicant is also unable to say	The complaint was before the District Collector of Rangareddy. Till date no action was initiated by District Collector on the complaint. RTI application was filed on 4 July 2022 seeking following information: 'Action Taken Report on our Complaint/Petition U/section 133 CrPC for removal of Public nuisance delivered at RR District Collector office Inward Section on 23 June 2022'.	RTI Application dated 4July2022 enclosed.

	what is the status and stage of the said petition.	There has been no response to the Applicant either on the original representation under Sec.133 CrPC nor any reply furnished under RTI.	
3	The present case relating to removal of alleged encroachments on the two water bodies, namely, Osman Sagar Reservoir and Himayath Sagar Reservoir in State of Telengana. Though the application is accompanied by thephotographs, we are unable to make out anything from that with respect to the encroachments alleged	Applicant has submitted the following primary evidence in Original Application: a) Official maps of HMWSSB with a huge reduction of 300 acres in Osman Sagar reservoir, between the FTL area map dated 18.06.2013 and FTL area map dated 13.2.2019 is Acres6335-38Guntas, whereas FTL area map dated 4.12.2019 is 6039.00Acres/24.44SqKms, i.e., reduced by around 300 acres. (See page Nos.40, 41, 42) b) Official maps of HMWSSB dated 18.06.2013 , 13.2.2019 and map with reduced area dated 4.12.2019 , all 5 maps contain encroachments identified in and around Osman Sagar reservoir and Himayath sagar reservoir; (See Page Nos. 40, 41, 42, 43, and 44) c) Official figure of number of encroachments notified on the website of Government portal by way of map and also numerically; (See Page Nos. 85, 83,84) d) Official list of encroachments submitted on 12 oct 2022; (See Page Nos. 7, 8)	

		e) People's list of violations after examining the official maps submitted on 12 oct 2022; (See Page Nos.9 to 13) f) RTI application dated 24sep2022 submitted to three authorities , viz., HMWSSB, DC RR, Engineer in Chief/State Committee on Dam Safety, for list of encroachments, to submit reply within 48 hours. Whereas Office of E-in-C refused to take the RTI application, the remaining two authorities have not replied so far. (See Page Nos. 14 to 21) g) Pictures of encroachments of ORO sports, and other constructions in a Joint Visit of Applicant with HMWSSB officials have been submitted in Original Application at page Nos. (See Page Nos. h) Pictures of encroachments, fence, compound walls, BT road, uprooted FTL pillars have been submitted in Original Application at page Nos. (See Page Nos.	
4	Particulars of encroachments and encroachers?	Few of the names like M/s. Oro Sports are identified as 'compound wall' on the official map . While few others like Faizan Feels are identified as encroachments in official map.	

		Hence, the encroachers' list and encroachment lists of both Osman Sagar reservoir and Himayath Sagar reservoir is known to the HMWSSB.	
5	Annexure XV 'Save Gandipet' filed in Original Application that was available on https://missionkakatiya.cgg.gov.in/saveGandipet even when this petition was filed downloaded on 26aug2022 has now been removed by Government of Telangana as on 22 Oct 2022: **'Error 404! The page you have requested is not available!'**		Official maps highlighting encroachments and lands inside FTL of Osman Sagar enclosed in Original Application and right below for ready reference.

6. PRIMARY EVIDENCE: OFFICIAL NRSC MAPS , HMWSSB MAPS

As primary evidence, I would like to produce below one of the encroachments M/s. ORO sports on National Remote Sensing Center satellite layer from High Resolution pictures of years 2012-2016 and 2018.

This encroachment was surveyed along with the Officials of HMWSSB on 18.11. 2020 . This encroachment is demarcated as compound wall on the official FTL area map of Osman Sagar, whereas on ground it is commercial venture of ORO sports. (kindly see full report on survey at pages numbers 45 – 50 of the Original Application.

In pictures below the red line is the FTL area boundary as per geo coordinates given by the HMWSSB downloaded from the HMDA website.

ORO sports can be seen clearly 100% inside the FTL area of the Osman Sagar reservoir. This is in full knowledge of all the officials and government of Telangana, MAUD department.

The primary evidence below is to reiterate that as per the official HMWSSB maps from 2013 till date, ORO sports is completely in the FTL area of the Osman Sagar reservoir.

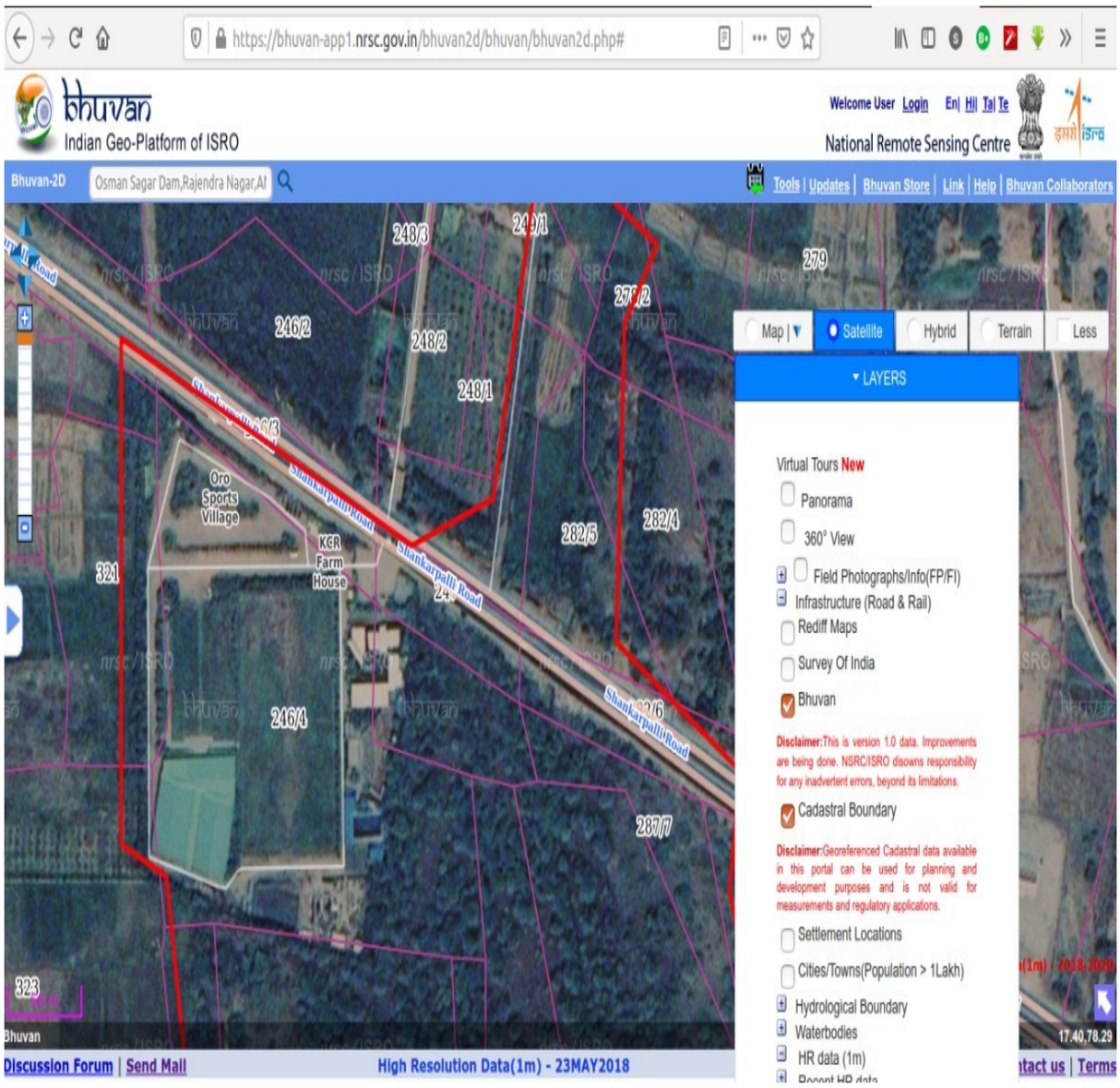
Further the location with survey numbers is juxtaposed with the cadastral map of the Osman Sagar to corroborate the location of the encroachment. Cadastral map is now not available on the website of HMDA.

Picture 1 : Screen grab from National Remote Sensing Center website High Resolution data 1M dated 23May2018 alongwith Survey Numbers

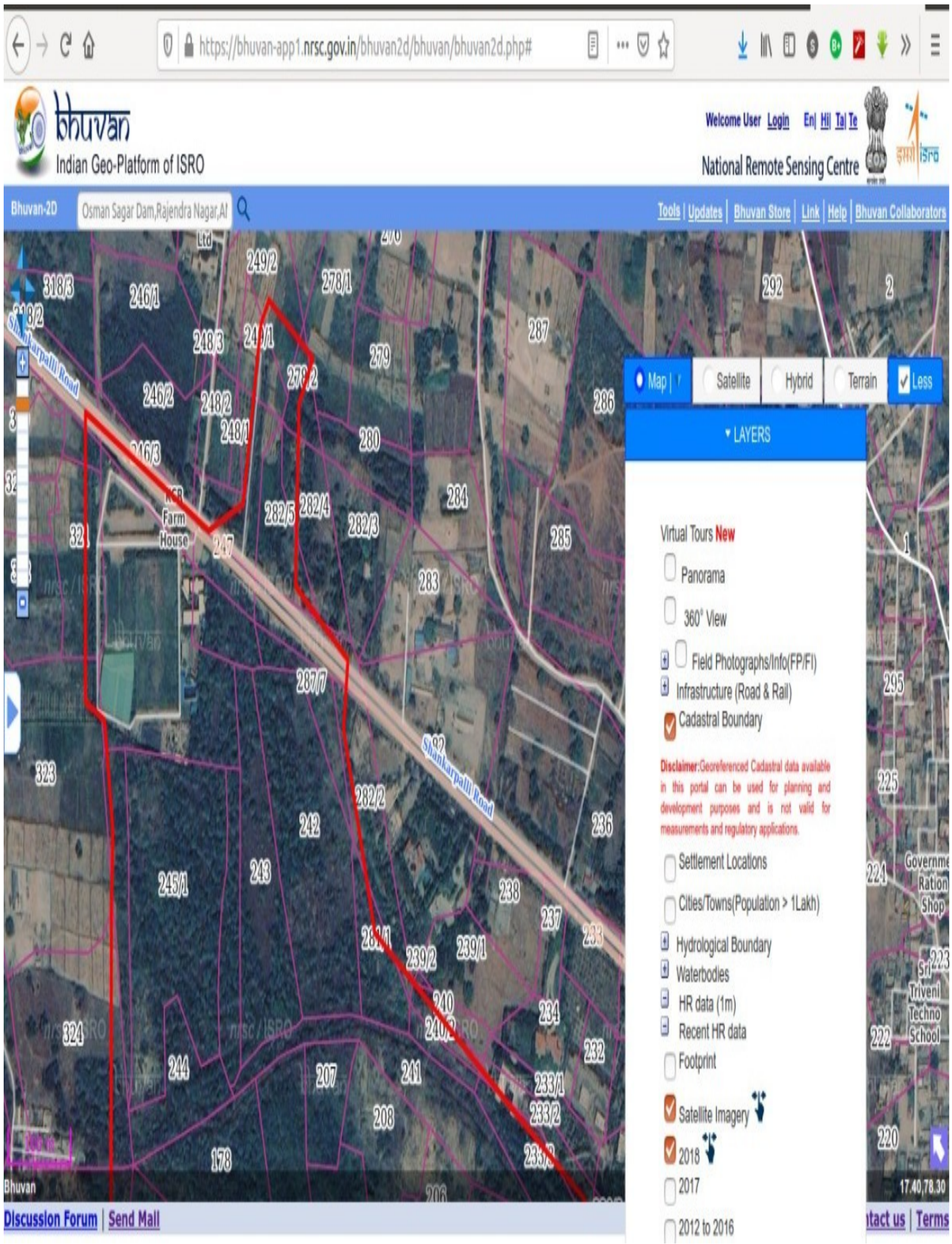
Red Line: FTL area boundary of OsmanSagar reservoir overlaid online.

Pink Line: Cadastral boundary layer activated from the website as evident from the Layers tab.

Picture source: https://bhuvan-app1.nrsc.gov.in/bhuvan2d/bhuvan/bhuvan2d.php#



Below is zoomed out screen grab of the same:

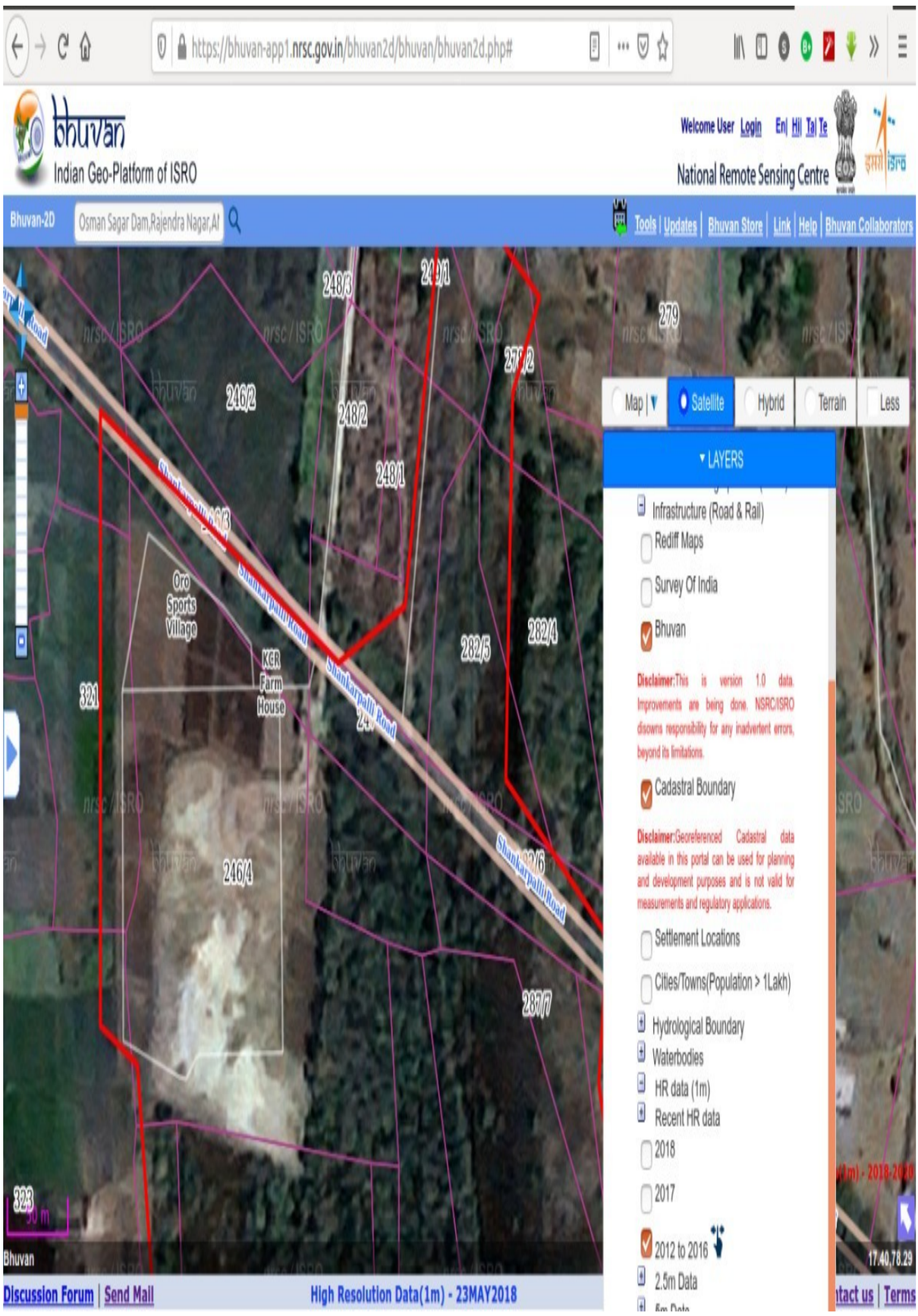


Picture 2 : Screen grab from National Remote Sensing Center website High Resolution data 1M of year 2012-2016 alongwith Survey Numbers

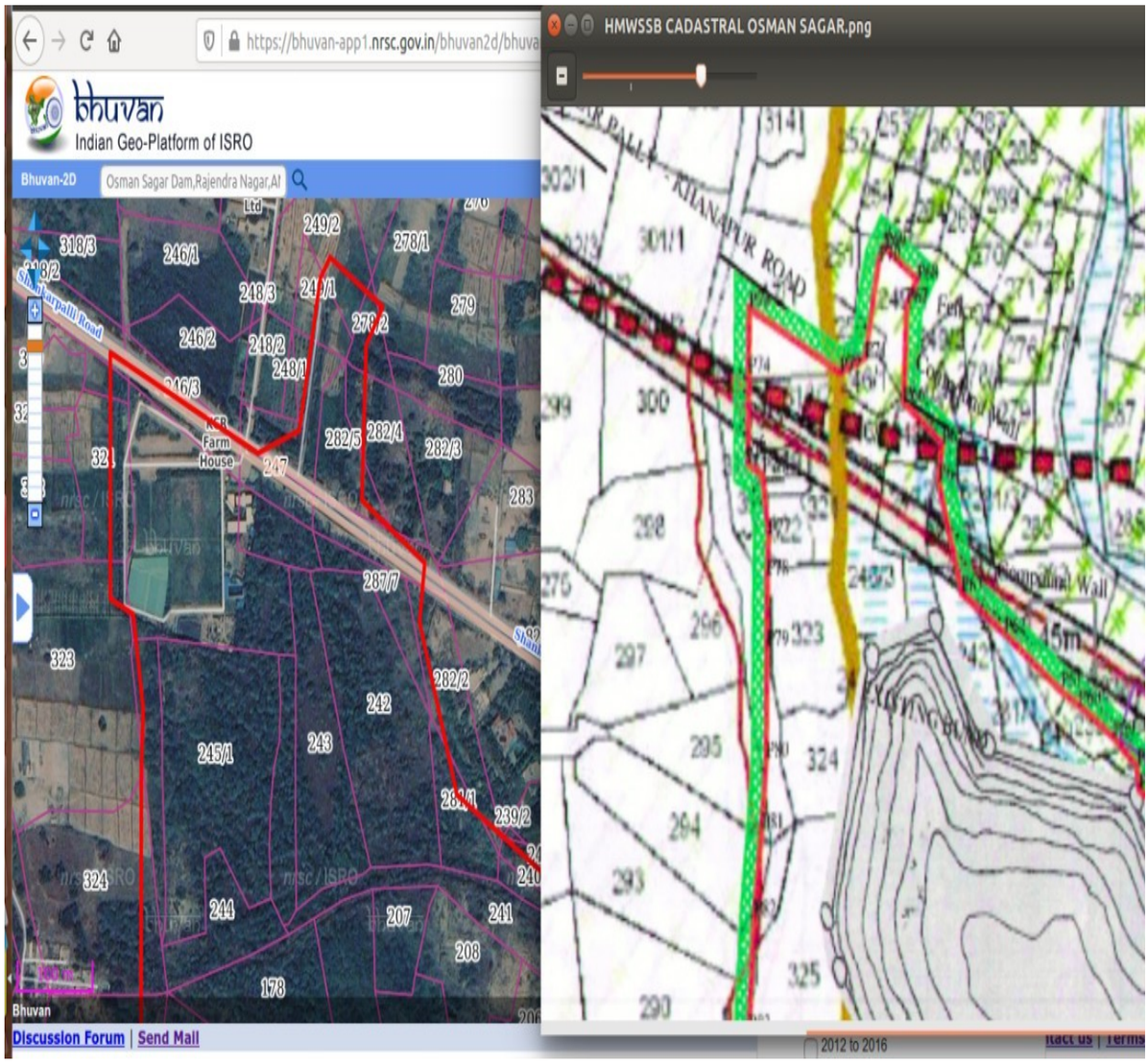
Red Line: FTL area boundary of OsmanSagar reservoir overlaid online.

Pink Line: Cadastral boundary layer activated from the website as evident from the Layers tab.

Picture source: https://bhuvan-app1.nrsc.gov.in/bhuvan2d/bhuvan/bhuvan2d.php#



Picture 3: Frame contains two pictures viz., screen grab from NRSC on the left, (as shown at Picture 2) juxtaposed with the extract from the cadastral map of the Osman Sagar obtained from HMWSSB/HMDA, on the right



Picture 4: Google earth satellite imagery of December 2021 with HMWSSB joint field visit spots demarcated online

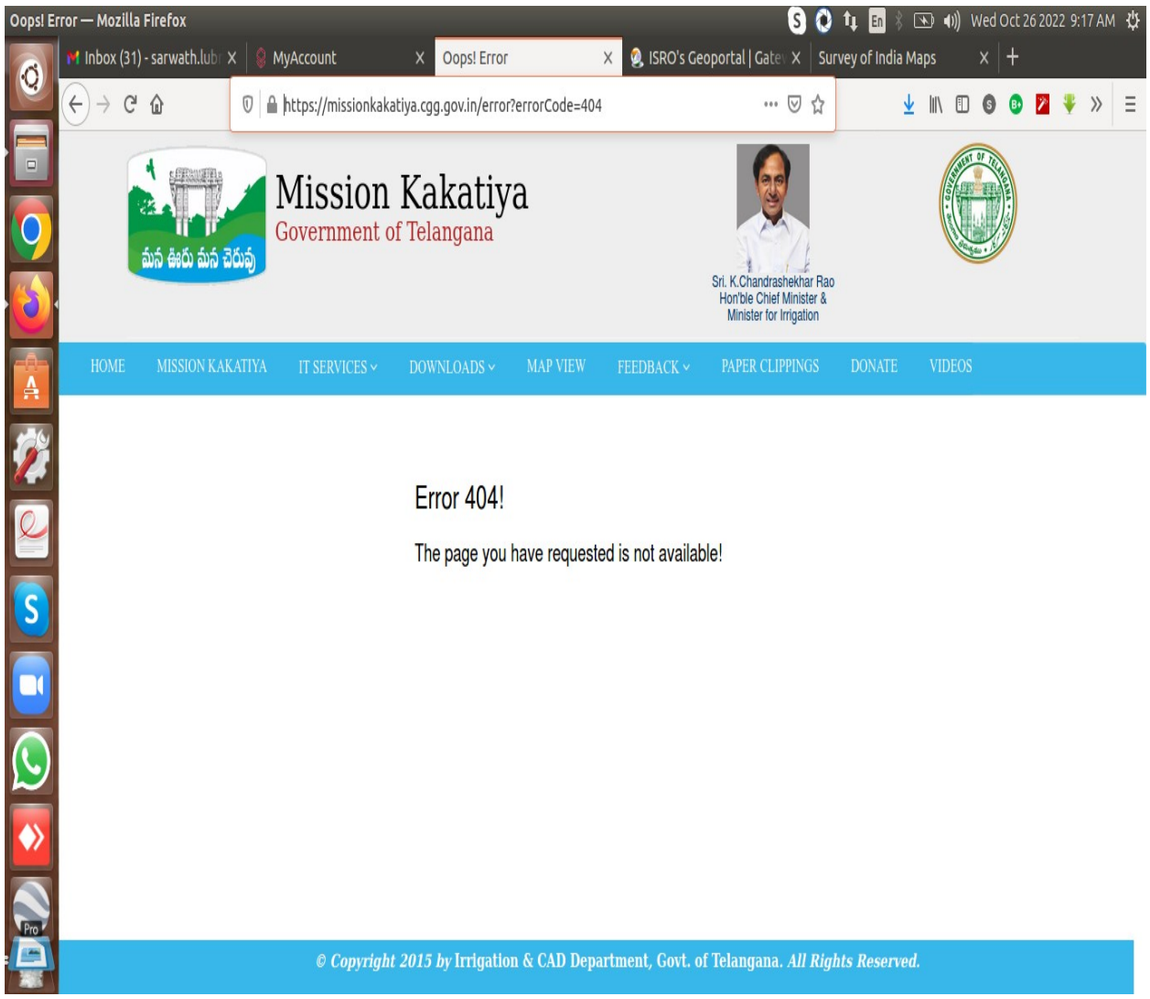
Picture 5: Google earth satellite imagery of November 2020 with HMWSSB joint field visit spots demarcated online

Picture 6: Google earth satellite imagery of March 2022 with HMWSSB joint field visit spots demarcated online

7. PRIMARY EVIDENCE BEING TAMPERED BY RESPONDENTS GOVERNMENT OF TELANGANA:

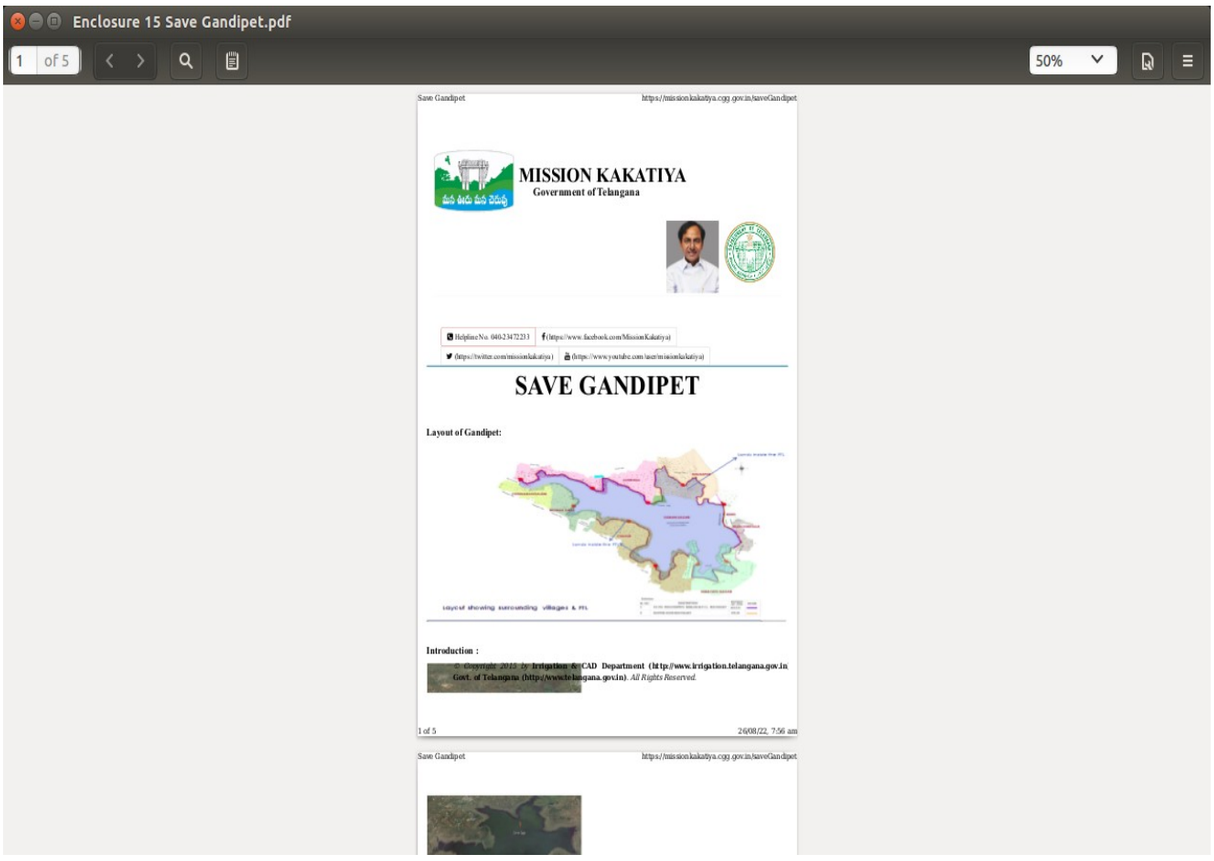
7.A) PRIMARY EVIDENCE AND ONE OF THE MATERIAL PAPERS SUBMITTED TO NGT IN ORIGINAL APPLICATION, REMOVED BY STATE RESPONDENTS AFTER SUBMISSION.

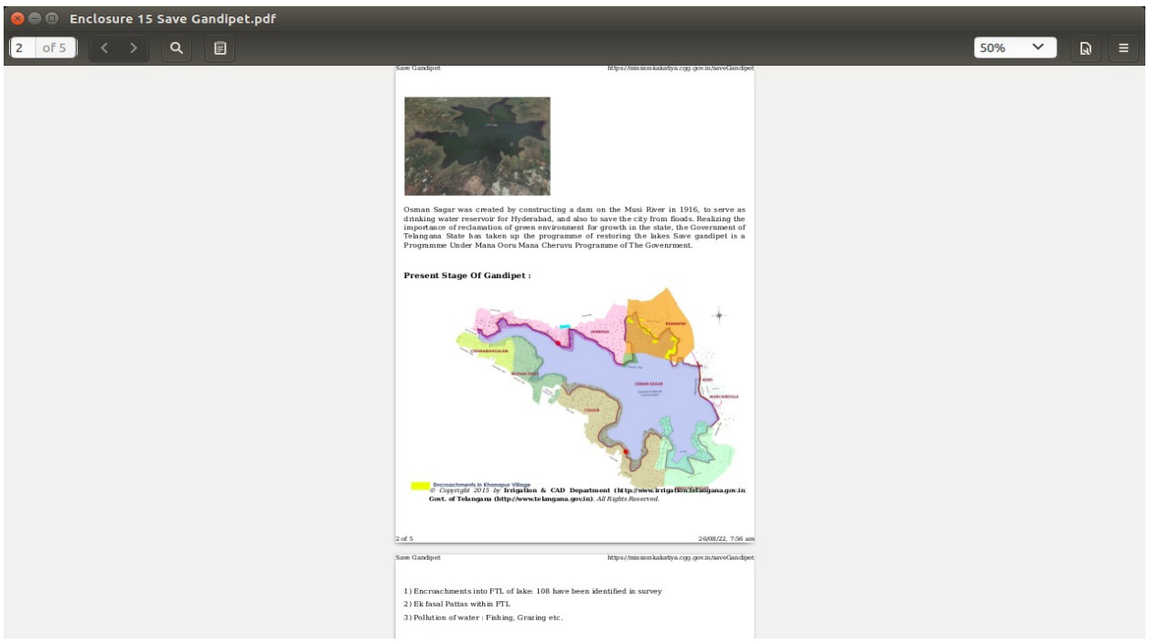
Picture 7: WEB PAGE NOT FOUND WHEN RECHECKED ON 26 OCT 2022:



7.B) BELOW IS E**VIDENCE OF DOWNLOADING EARLIER FROM SAME WEBLINK ON 22 AUG 2022 THAT HAS BEEN SUBMITTED IN ORIGINAL APPLICATION AS 'ANNEXURE 15'.**

Picture 8: EXTRACTS FROM Annexure 15, WHEREIN 'ENCROACHMENTS' AND 'LANDS INSIDE FTL' HIGHLIGHTED BY IRRIGATION DEPARTMENT, GOVERNMENT OF TELANGANA::





8. ANOTHER PRIMARY EVIDENCE OF FTL MAP TAMPERED BY RESPONDENTS GOVERNMENT OF TELANGANA , MAUD, HMWSSB, HMDA: 14 PAGE DOCUMENT WITH GEO COORDINATES REDUCED TO 1 PAGE DOCUMENT. AREA REDUCED TO ACRES 6039 FROM ACRES 6335-38GUNTAS

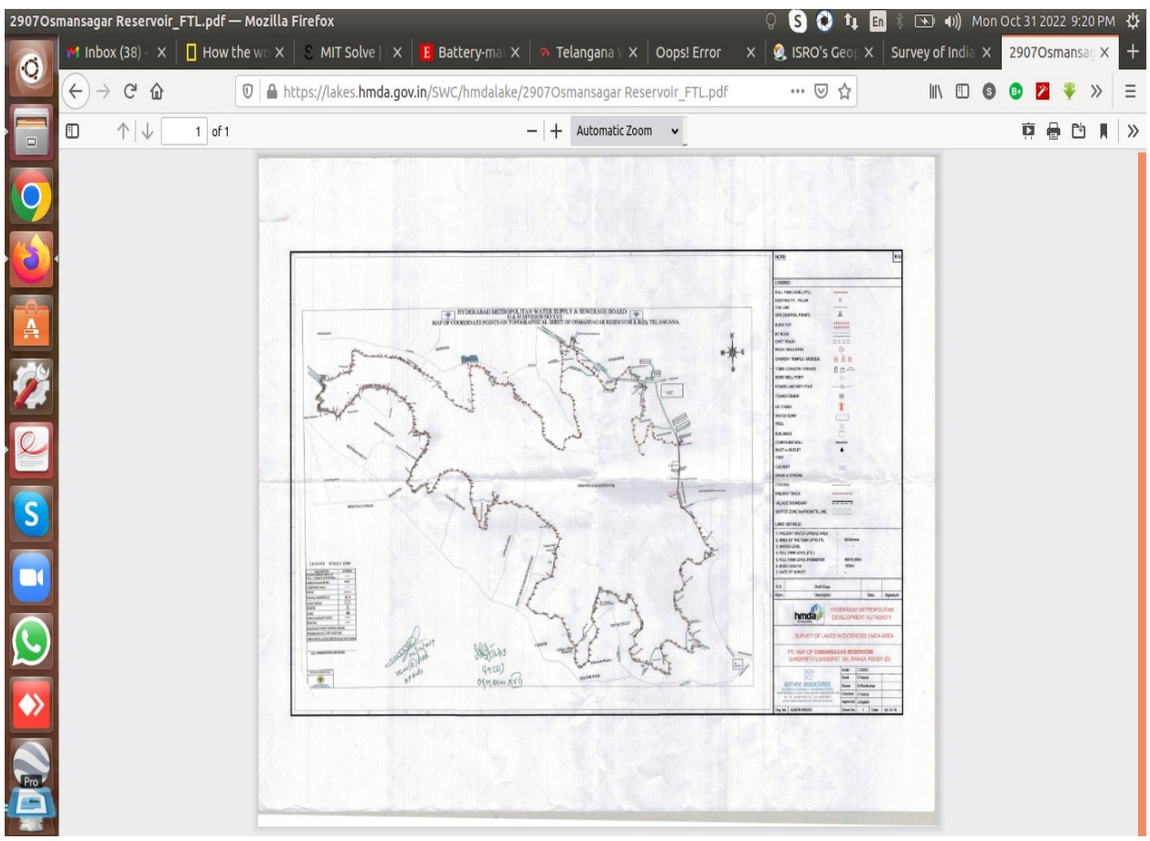
It is submitted that, Applicant had earlier downloaded the FTL area map from HMDA website which was a 14 page document signed by HMWSSB officials.

First page containing FTL area map with reduced area of Acres6039 signed dated 4.12.2019, while, remaining 13 pages titled 'OSMAN SAGAR COORDINATES' containing 489 geo coordinates latitude and longitude, signed dated 29.11.2019.

But as on date at the HMDA link https://lakes.hmda.gov.in/SWC/hmdalake/2907Osmansagar%20Reservoir_FTL.pdf we have a single page pdf file with only first page. The remaining 13 pages containing geo coordinates have been deleted.
However, the file is present with the Applicant and is now being submitted to the NGT bench.

Thus another key primary evidence based upon which the Applicant generated the kml file of the FTL area as given by HMWSB geo coordinates is now deleted from the website. Applicant used this demarcation to buttress the encroachments in the FTL area of the Osman sagar reservoir, as well as, to question the reduction in the FTL area from Acres6335-38guntas to Acres6039.

Picture 9: Below picture is screenshot from HMDA website that shows a single page FTL map document; whereas originally it was 14 page document containing geo coordinates of FTL boundary.



9. I submit that, apart from tabular clarifications in response to the directions of the Hon'ble Tribunal, additional official material has been submitted above at item 6, as primary evidence to corroborate the complaints raised by the Applicant for eviction of all encroachments in Osman Sagar and Himayath Sagar reservoirs and to stop release of drinking water before eviction of encroachments and restoration of status quo ante of the twin reservoirs in terms of area and holding capacity.

10. In the above facts and circumstances, it is humbly prayed that the additional affidavit may be treated as part and partial of the Original Application and appropriate orders may be passed.

DEPONENT

VERIFICATION

I, Dr.Lubna Sarwath D/o Late Janab Muhammad Khaleelullah, aged 57 years R/o Flat No. 202, Gayatri Garden Apartment, Street No. 2, Tarnaka, Secunderabad, Telangana-500017, presently in Hyderabad, do hereby state on oath that, the contents of para nos. 1 to 10 are true and correct to the best of my personal knowledge and belief.

Hence verified at Hyderabad on 31.10.2022

DEPONENT

Item No. 02 (Court No. 1)

BEFORE THE NATIONAL GREEN TRIBUNAL
SPECIAL BENCH

(By Video Conferencing)

Original Application No. 85/2015(SZ)

Dr. Lubna Sarwath Applicant

Versus

The State of Telangana and Ors. Respondent(s)

Date of hearing: 06.07.2022

CORAM: HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON
HON'BLE MR. JUSTICE K. RAMAKRISHNAN, JUDICIAL MEMBER
HON'BLE MR. JUSTICE SUDHIR AGARWAL, JUDICIAL MEMBER
HON'BLE DR. SATYAGOPAL KORLAPATI, EXPERT MEMBER
HON'BLE PROF. A SENTHIL VEL, EXPERT MEMBER

Applicant(s): Mr. Anu Pradha Singh, Mr. Neha Panchpal, Mr. Arun Kumar Kasi and Ms. Mugdha, Advocates

Respondent(s): Mrs. H. Yasmeen Ali for Advocate R1.
Mr. D. Srinivasan Advocate for R2.
Mr. T. Sai Krishnan Advocate for R3 & R4.

ORDER

The Issue raised – pollution of Hussain Sagar Lake, Hyderabad, Telangana

1. Grievance in this application is against failure to prevent and remedy pollution of Hussain Sagar Lake and consequential pollution of Musi River on account of discharge of industrial effluents and sewage.

2. According to the applicant, Hussain Sagar Lake is situated in between the twin-cities of Hyderabad and Secunderabad. It is an ecological and cultural landmark of Hyderabad. The Hussain Sagar Lake is older than Hyderabad city. It was formed in 1516 (A D) by building a Bund, now

known as Tank Bund, in a natural depression at about 511 m above MSL. It was a fresh water lake and used as drinking water source for Hyderabad from 1860s to 1930s. The original Water Spread area of the lake, with catchment area of about 300 sq KM, was around 1600 Hectares. As per a study done in 1986, the lake had catchment area of about 300 sq KM, with a free catchment of 175 Sq KM. The peak flood flow was estimated to be about 15,087 cusecs. The lake had a storage capacity of 1,68,000 cubic mts. at 511 MSL. Feeder Streams are Bholakpur Channel-15 MLD, Banjara Hills Nala -10 MLD, Kukutapalle Nala -70 MLD and Picket Nala - 6MLD, which have shrunk in size and now become sewage drains. All the storm water from Banjara & Jubilee Hills, having contour levels varying from 590 to 610m above MSL and the surrounding areas, drains into Hussein Sagar which is at 511 m. The reduction in the water spread area of the lake over the years reduced its holding capacity, resulting in flooding of low lying areas both upstream and downstream of the lake. Jeedimetla and Balanagar industrial area there are mainly more than 300 units both under public and private sector, manufacturing inter-alia chemical reagents, organics, pharmaceuticals, drugs, biochemical, synthetic chemicals, detergents, aircraft batteries, distillation products etc. In the initial phase of industrialization, a pipeline was laid by the Municipal Corporation of Hyderabad to carry the effluents from the industrial area downstream beyond Hussain Sagar Lake. The industrial effluents started finding their way into Hussain Sagar Lake through Kukatpally drain. Added to it, the increase of urbanization with settlement of industrial labour in the periphery of the industries led to discharge of large volume of domestic sewage the Kukatpally stream. Thus, what initially was a fresh water stream has become a domestic sewage drain. Nature of pollution flowing into the lake is a mixture of untreated sewage and industrial

effluents. The water of the lake is characterized by high biological Oxygen demand (BOD), high chemical oxygen demand (COD), total dissolved solids (TOS), heavy metals (carcinogenic- hexavalent chromium, cadmium, nickel, arsenic; non-carcinogenic but highly toxic-mercury, lead manganese) coliforms and pesticides (DDT, lindane monocrotophos, endusulfan, Chlopyriphos, chlorophos). Poly-aromatic hydrocarbons and trace organic compounds, including aliphatic and aromatic compounds have been found to be present in the lake.

3. There is a proposal to use the hazardous silt to make islands inside the Hussain Sagar Lake. This would reduce the size of the Hussain Sagar Lake, apart from violating the Lake in several other ways, defeating the very purpose of dewatering the lake and filling it with fresh water. Around 50 acres of lake area would be used to dump silt near Kukatpally nala. Polluted Lake water which is being released into the water bodies including Musi River would affect environment, apart from cancer and non-cancer risk varying from extremely high to borderline for various pathways. The DDT and other carcinogens which are present in the polluted water are primary cancer causing agents.

Procedural History

4. The application was filed on 25.04.2015 and came up for hearing on 24.08.2015. The Tribunal required the applicant to inform the counsel for the respondents and thus issued notice. The parties impleaded are the State of Telangana, Greater Hyderabad Municipal Corporation (GHMC), Hyderabad Metropolitan Development Authority (HMDA) and Telangana State PCB. The respondents have filed their respective affidavits. The Tribunal has considered the matter in the last seven years by several

orders which include orders for remedial action in the light of pleadings and factual reports furnished from time to time.

5. All orders and pleadings need not be mentioned and it will suffice to refer to some orders and facts relevant for passing the current final order. On 01.05.2015, the Tribunal granted interim injunction against dewatering of the lake against which W.P. No. 14321 of 2015 was filed before the High Court and order of this Tribunal was stayed. However SLP No. 16926 of 2015 was filed which was disposed of on 26.05.2015 with a direction that the Tribunal may look into the matter by appointing an Expert Committee.

6. Accordingly, an Expert Committee was appointed by this Tribunal on 29.05.2015 with following terms of reference:-

> *"1. Factors responsible for causing pollution of the lake.*
>
> *2. Efforts made by the concerned State Government departments/authorities in taking up measures in cleaning the lake and preventing further pollution.*
>
> *3. Action taken/proposed to prevent the untreated sewage and effluents from entering into the lake through storm water drains (nalas).*
>
> *4. Action taken to divert the untreated sewage and effluents from entering the lake through storm water drains particularly in respect of Kukatpally nala which is reported to be the main source of discharging huge quantity of untreated sewage and effluents causing pollution in the lake.*
>
> *5. Whether any polluted water is released from the lake into the River Musi in the current summer season and if so how much quantity and for what purpose.*
>
> *6. Whether any damage is observed to the ecology and environment in the River Musi if polluted water from the lake is found to be released in the current summer season, distance covered by the flowing polluted water in the River Musi and whether there are any signs of released polluted water entering River Krishna.*
>
> *7. Is it a fact that the authorities have undertaken civil works for repairing the sluice gates of the lake and for this purpose only they*

have to release some amount of water from the lake into the River Musi?

8. To verify that the work undertaken by the State Government is limited to the repairs of the sluices and there is no unnecessary dewatering of the lake.

9. Whether the work of repairs and improvement to sluice gates is under progress and if so, what is the stage of the civil works and the due date of completion of such works.

10. Are there any environmental studies undertaken for siting of the proposed activities in the lake in question?"

7. The Expert Committee filed its report dated 22.09.2015. The report found that pollution was on account of untreated effluents and untreated sewage being discharged into the lake. The recommendation in the report are as follows:-

"Recommendations:

The recommendations from the committee for the preservation of Hussain Sagar lake are follows:

1. In-lake treatment,

The lake water may be treated through several palliative measures to remove eutrophication and improve quality of lake water; the components of which are:

- *Dredging and de-silting - widely adopted and considered essential for the lake.*
- *De-weeding/hyacinth control or removal (biological, chemical, mechanical and manual measures, bio-composting)*
- *Bio-remediation (Clean up with bio-products natural bacteria breakdown, and aerators to churn the lakes)*
- *Introduction of composite fish culture/larvivorous fish species to control mosquitoes*
- *Some portions of the lake may be designated as protected areas and no commercial activity should be allowed and it should be part of the eco-tourism.*

2. Shoreline management

Shoreline management needs to be strengthened by banning construction activity to specific heights above the periphery of the lake. The existing structures in the lake for diversion of excess flows need to be revamped at the earliest. The lake periphery should be declared as protected areas or bird sanctuaries. To prevent pollution from human wastes,

community toilet facilities could be provided around periphery of the lake. Solid waste management measures could be introduced and the lake should be adequately fenced to avoid the dumping of solid waste on any portion of the lake. Peripheral green belts can be created. Eco tourism facilities need to be undertaken which would convert the lake into a great tourist attraction. However, tourism needs to be controlled to prevent adverse effect on the bio diversity of the lake areas. Restrictions and guidelines need to be imposed on Idol immersions.

3. ***Peoples' participation***

This is a very effective management method that is increasingly becoming a necessity in Lake Environment Management. Involvement of non-Governmental organizations, which can act as a great catalyst in this work. The assessment of social, economic and ecological aspects of lakes through community participation can help to formulate a comprehensive management plan, which is ecologically viable and socially acceptable.

4. ***Environmental education and awareness***

Resource material for generating awareness on the importance of biodiversity and dependence of the local community on the Lake Ecosystems needs to be developed and disseminated to all people concerned. Environmental education and awareness Kits may also be developed for school children and uneducated youth living in and around the lake, with the help of NGOs.

5. ***Lake Management Committee***

Government may examine extending the scope and jurisdiction of Hyderabad Lake management Committee to protect the lakes from encroachments on lake lands as well as encouraging public participation in making many decisions in management of lakes, especially the Hussain Sagar Lake.

6. ***Survey of Lakes***

Separate cell may be created in the HMDA Department for Survey of lake areas in thee Hyderabad City, with dedicated staff, to complete lake survey and identify the areas to be protected from any pollution from industries and any other potential sources and to be included in the master plan.

7. ***Green Cess***

Government may consider imposition of Green Cess and its modalities may be worked out. It may be levied on Vehicle users/visitors to the lake parks, commercial buildings in and around the lake, permitted vendors in the vicinity of lake. Funds so generated can be utilized for the maintenance of the restored lakes.

8. ***Restoration of Musi River***

The Musi River is being polluted by the indiscriminate discharges of waste water from domestic sewage as well as from industrial effluents. It is the high time that a comprehensive study should be taken up to assess the environmental conditions of this river that would culminate with recommendations for reviving this important natural water body."

8. The matter was thereafter taken up for consideration on 22.01.2020. The Tribunal constituted a further joint Committee of CPCB, MoEF&CC, IIT, Hyderabad and National Institute of Hydrology to prepare updated action plan for further action to be coordinated by the State PCB. The said Committee filed its report before the Tribunal on 17.08.2020 with the following conclusion and recommendations:-

"8. CONCLUSION & RECOMMENDATIONS:

i. *Department concerned shall install proper low measurement devices to measure the flow quantum of the sewage streams generated from all the Nala/drains and also the outlets of the weirs from the Lake and at the confluence point of River Musii.*
ii. *Lake restoration should include both In-lake techniques (Physical, chemical and biological measures) and watershed management techniques (onsite, offsite and non-structural best management practices) for the lake restoration.*
iii. *Appropriate corrective action needs to be taken to avoid direct discharge of untreated streams into the Lake. Also, Departments concerned shall ensure that there is no industrial contaminant in the receiving streams of Kukutapalle Nala.*
iv. *Existing treatment capacity of STPs needs to be enhanced to cater the needs of actual total generation of the sewage streams. Treatment Efficiency of the STPs shall be periodically examined.*
v. *It is recommended that State Authority needs to take up a detailed study on Water Quality of Lake and characteristics of the sludge deposited and its feasibility for desilting/*

dredging and mechanism for disposal and its impact and also the ecological impact of River Musi by engaging an independent reputed organization Such as NEERI or any other institution as desired by the Hon'ble NGT, having an expertise in the relevant filed in coordination with Telangana SPCB, HMDA, HMWS&SB and Irrigation Department.

vi. *It is recommended to form a Permanent Lake Protection Committee comprising of the various Stakeholders of the Departments of the State with regulatory powers in order to protect the Hussainsagar Lake from the Pollution and other encroachments.*

vii. *The State Government should allocate separate budget to establish State Level Lake Management Authority with a dedicated independent technical team for regular action. "They should submit their short term and long term action plans/progress for the continuous lake conservation.*

*By considering the above facts, the Hon'ble Court may pass appropriate Order(s)/Direction(s) as deemed fit.***"**

9. In response the said report, the State of Telangana filed an action taken report dated 22.02.2021 mentioning the steps taken for preventing pollution of the lake in question as follows:-

"**6.* ***Observation of the Joint Committee:

i. *Though the additional I&D structure have been constructed and commissioned at Kukatpally nallah, still about 30-40% of the untreated sewage comprising with probably seepage / discharge from the Industrialarea directly join by overflow to the Hussain Sagar lake from the Kukatpally Nallah. Further, during the visit, it was observed that the sewage from Balkapur Nallah, Banjara Nallah, Yosufguda Nallah, has been diverted and not directly mixing in the Hussain Sagar lake. In the physical site inspection, it was observed that the sewage during peak flows in a day and also mixture of sewage and storm water in monsoon season overflows to the lake through the barrier which of marginal height.*

ii. *During the Committee inspection, the STP installed at Balkapur Nallah was not in operation due to the mechanical failures in the clarifier and damage to filters in UV filtration. So the entire stream of sewage has been diverted to the Goalnaka drain without treatment near to Amberpet STP. The overflow / discharge through the outlet of the Hussain Sagar Lake again confluence into the surplus channel with the stream of untreated sewage near Viceroy Hotel and reaches Goalnaka drain, where 80 MLD of untreated water is diverted through I&D Structure to Amberpet STP. The remaining untreated water from*

Surplus Nallah flows directly into Musi River. Accordingly, the exiting capacity of treatment facility and the mode of discharge will not resolve the issues regarding the Hussain Sagar lake water quality. During the meeting State authority, informed that they proposed 17 STPs on the upstream of Kukatpally Nallah and reportedly tender has been already floated for the purpose and is in process.

iii. *Though the State Authority claim that the treated water from STP of Picket Nallah (30 MLD) is being discharged into the Hussain Sagar lake, the Committee during the visit has observed that partial mixing of untreated sewage with treated water from STP.*

iv. *During the previous visit, Hussain Sagar Lake Development Authority, HMDA informed that repair works to surplus weir will be completed after monsoon period. However, no progress in this regard has been observed by the Joint Committee during this visit.*

v. *Despite the recommendations of the Joint Committee, the State Authority neither installed any flow measurement devices to measure the flow / quantum of the sewage streams generated from all the Nallah / drains and also the outlets of the weirs from the lake and at the confluence point of river Musi nor adopted any method for quantifying the actual quantum of the sewage generated.*

vi. *The city has a combined type of sewer system where the sewage and storm water flows in one drain, using I&D structure the sewage as well as storm water is diverted to STP for treatment which reduces the fresh water flow into the river. Converting to separate type of sewer system will reduce the load on STP and also flood which in turn reduce the pollution of water bodies.*

vii. *To prevent/reduce the flow of sewage into nallah's, the Underground drainage (UGD) system with sewer network has to be provided to entire GHMC area and can be directly divert the sewage to STP allowing the nallahs to carry only rain water.*

viii. *Constructing more I&D structures for diverting the sewage from nallah may prevent pollution to some extent in Hussain Sagar lake but increasing the pollution load of River Musi. The entire sewage of 1400 MLD of sewage generated by the GHMC area is diverted to Amberpet STP through Goalnaka drain. The Amberpet STP has a capacity to treat only 339 MLD and the rest of the sewage directly flows to river Musi.*

7. ***Recommendations/suggestions of the joint committee:***

i. *The detailed study is required to measure and estimate the sewage/storm water flow in to the lake and river Musi.*

ii. *As a temporary measure, suitable bioremediation of nallah's can be carried out after the barrier structure, to treat the overflow as per the guidelines of CPCB.*

iii. *The Hussain sagar lake has 7 numbers of high jet fountains with a water height of 18m to improve the dissolved oxygen. The number of jet fountains /aerators can also be increased and operated continuously to improve the DO which also reduces the contaminants to some extent.*

iv. *The separate sewer system shall be constructed and operated to treat sewage separately without combining storm water. The treated sewage shall be reused for other purposes and thus avoiding discharge to lake.***"**

10. Thereafter, report dated 08.06.2021 was filed with following conclusions and recommendations:-

"5. Conclusions of Joint Committee

Following conclusions are based on the discussion held and documents provided by concerned departments:

i. *HMWSSB has completed tender process for the construction of 17 STPs in the Hussain Sagar Lake - Kukatpally Nala Catchment area.*
ii. *HMWSSB has proposed laying sewer collection network to convey sewage to proposed 17 STPs in the Kukatpally catchment area and waiting for the approval from the State Government.*
iii. *HMDA had invited Global tender for Request for Proposals (RFP) to improve the water quality of Hussain Sagar Lake through Bio-remediation. The finalization of tender is under progress.*

6. Recommendations of the Joint Committee

After discussion & reviewing of the progress of action taken by the concerned departments viz. HMDA, HMWSSB and irrigation department, the Joint Committee request the Hon'ble NGT to issue suitable directions to concerned departments for submitting the time bound action plan to comply with the following directions to improve the water quality of the Hussain Sagar Lake.

i. *The GHMC which is responsible for the sewage management and solid waste in the Hyderabad has not attended any of the meeting conducted by the Joint Committee in spite of informing the meeting schedules.*
ii. *GHMC to quantify the sewage generated in the entire city and submit a time bound action plan for the treatment of the entire sewage generated in the Hyderabad city limits.*

iii. *To ensure full-fledged operation of Solid waste management system including door to door collection with segregation of wet and dry waste. To ensure that no solid waste/ garbage find its way to water bodies either by dumping/throwing in the vicinity of water bodies.*

iv. *HMDA has once again called a global tender for the Bio-remediation of Hussain Sagar Lake, without tapping the pollution at the source a fruitful result cannot be borne. The reply may be given for the queries raised by applicant regarding the bio-remediation carried out by M/s Matrix Environmental Inc, Hyderabad and the tender issued for Modern food court' and 'Japanese food courts' at the boundary of the Hussain Sagar Lake.*

v. *HMDA to ensure the regular operation of STPs maintained by them and to reuse the entire treated sewage than discharging into the Lake/ water bodies.*

vi. *To submit a time bound action plan for the construction & operation of the proposed 17 STPs at the Kukatpally catchment area. To ensure that laying sewer collection network to convey sewage to proposed 17 STPs is completed at par with the proposed STPs, a time bound action pian may also be provided.*

vii. *The irrigation department may provide the requested information about the Full Tank Level (FTL) and repair of the surplus weir near the Viceroy Hotel.*

viii. *After discussing with the concerned departments of the State Government, it was learnt that the FTL, Sluice gates in the Lake & Surplus weirs comes under Irrigation department; the maintenance of Lake, STPs around the lake and the I&D structure built at the mouth of the Hussain Sagar lake come under the HMDA. The drains carrying the sewage to the water bodies comes under the purview of GHMC and the construction of STPs to treat the sewage generated by the city is with the HMWSSB.*

ix. *The concerned departments shall upload the work carried by them to improve the water quality of the lake in their respective website for the public access."*

11. The matter was last considered on 08.07.2021 requiring further action in the light of the recommendations and filing of an action taken report.

12. In pursuance of above, a status of compliance dated 24.08.2021 has been reported by the Chief Secretary, Telangana as follows:-

"

S. No.	***Recommendation of the Joint Committee***	***Status***

i)	*The GHMC which is responsible for the sewage management and solid waste in the Hyderabad has not attended any of the meeting conducted by the Joint Committee in spite of informing the meeting schedules.*	*GHMC submitted the draft FTL map of Hussain Sagar Lake, contour plan and inflows & outflows calculation sheet to the members of the Joint Committee through email on 22.03.2021. The copy of draft FTL & other enclosures are placed as Annexure-I.*
ii)	*GHMC to quantify the sewage generated in the entire city and submit a time bound action plan for the treatment of the entire sewage generated in the Hyderabad city limits.*	*It is to submit that, HMWS&SB has quantified the total sewage generation as 1.950 MLD within ORR covering GHMC. 25 STPs with capacity 772.3 MLD are existing. Further, HMWS&SB engaged M/s. Shah Technical Consultants, Mumbai for preparation of Comprehensive Sewerage Master Plan to formulate the DPRs for STPs and Sewer Network for the GHMC area. Accordingly, the consultants have proposed 31 STPs in GHMC area with a treatment capacity of 1259.50 MLD in 3 packages.* *Agency for construction of 17 STPS with a capacity of 376.50 MLD falling under the Hussainsagar catchment is finalized vide G.O.Rt. No. 441, dated:07.06.2021. Work is in progress.* *The remaining 14 STPs decentralised along river Musi and along water bodies with a capacity of 883MLD in two packages are awaiting administrative sanction.*
iii)	*To ensure full-fledged operation of Solid waste management system including door to door collection with segregation of wet and dry waste. To ensure that no solid waste/ garbage find its way to water bodies either by dumping/throwing in the vicinity of water bodies.*	*It is to submit that, 5978 TPD of MSW is collected through 100% door to door collection.* *No solid waste/garbage is dumped into the water bodies. The GINC has provided integrated MSW processing facility of 65001-PD including Waste to Energy Plant of capacity of 19.8 MW at Jawaharnagar, Medchal-Malkajgiri District.*
iv)	*HMDA has once again called a global tender for the Bio-remediation of Hussain Sagar Lake, without tapping the pollution at the source a fruitful result cannot be borne. The reply may be given for the queries raised by applicant regarding the bio-remediation carried out by M/s Matrix Environmental Inc,*	*HMDA has entrusted the work of bioremediation of Hussain Sagar lake to M/s. Matrix environment INC initially for a period of six months for an amount of Rs.1.52 crones by calling global tenders and the agency executed the work for 6 months from March to August 2020. During the intervention period, there was significant and consistent improvement in the water quality of the lake.*

	Hyderabad and the tender issued for Modern food court" and "Japanese food courts" at the boundary of the Hussain Sagar Lake.	*Since the agreement period was completed in the month of August 2020, a new RFP was prepared for Bio-remediation of Hussain Sagar lake and global tenders were invited. Six firms participated of which four are technically qualified by the expert committee accordingly as per the recommendations of the expert committee the price bids of the four agencies were opened and the committee examined the proposals on 19-032021, there was an ambiguity in the quoted price of the bidders.* *It was decided to recall a shorter notice in response only two firms participated in the tender altogether and the price with the lowest quote M/s. NACOF has been accepted. An agreement have been concluded with the said agency from 9.4.2021 at an agreement value of Rs.1,04,99,950/- all applicable taxes and are executing the work.*
v)	*HMDA to ensure the regular operation of STPs maintained by their and to reuse the entire treated sewage than discharging into the Lake/ water bodies.*	*3 STPs were established by HMDA for HussainSagar lake with capacities of 20MLD at Balkapurnala, 30 MLD at Picket nala and 5 MID at Rangadharnuni Cheruvu, kukatpally and the treated water is being discharged into the lake. The treated water is discharged into Hussainsagar to maintain hydraulic balance of the lake.* *TSPCB is monitoring the performance of these STPs on monthly basis and are meeting the standards. The analysis reports are placed as Annexure-11*
vi)	*To submit a time bound action plan for the construction & operation of the proposed 17 STPs at the Kukatpally catchment area. To ensure that laying sewer collection network to convey sewage to proposed 17 STPs is completed at par with the proposed STPs, a time bound action plan may also be provided.*	*The period of implementation of the project is 24 months.* *It is to submit that, the construction of 17 STPs, is inclusive of construction of I&D structures to divert the flow from nalas to STPs and O&M for 15 years period is also included in the package.* *The designs and drawings are being approved for construction of STPs.* *The project of sewer collection network is in the process of administrative sanction.* *At present 11 I&D structures were constructed to prevent the inflow of sewage from four major nalas into Hussain sagar lake. The entire sewage is being diverted through trunk sewer mains to STP at Amberpet functioning with a capacity of 339 MLD.*

vii)	*The irrigation department may provide the requested information about the Full Tank Level (FTL) and repair of the surplus weir near the Viceroy Hotel.*	*The information of FTL map of Hussain Sagar Lake, contour plan and inflows & outflows calculation sheet are placed at Annexure-I.* *The Hussain Sagar Lake is having two surplus weirs and six number of sluices. The flood water can be directly discharged through surplus weirs whereas the sluices are choked up due to non-maintenance and non-operation since long time. It is desired to bring all the sluices into operation so the repair works are taken up as flood control measure and regulation of discharges. In order to facilitate repairs to the sluices and weir, additional discharges are released through the weir into the natural surplus course. The applicant herein assumed that, the Government of Telangana is dewatering and desilting Hussain Sugar Lake. There is a marginal increase of flow of water from the above sluices due to the repair of sluices and said flow of water is already curtailed after completion of the repair works.* *Further in reply to the RTI filed by the applicant on the above subject all the Departments have given their replies and that, there is no proposal of dewatering and desilting of Hussain Sagar Lake as alleged by the applicant. The entire process of repairs for upstream and downstream is taken up in a regular course as a part of pre monsoon maintenance.* *The following works were taken up during the period in which inspection was conducted by the committee* a. *Repair works to left side surplus weir.* b. *Repairs to sluice no 1 and sluice no 2 near to the left side surplus weir.* c. *Repairs to sluice no 3 called Kukkala Thumu near Dhobighat.* d. *Repairs to sluice no 4 called Khajana Thumu near Dhobighat.* e. *Construction of submerged Sluice with pipes at vent no 14 with a discharging capacity of about 550 cusecs.* *It is further submitted that all these works and their related works were completed except some balance repair works to the surplus weir.* *Regarding repair works to left side surplus weir, it is submitted that the surplus weir with Gated* *Mechanism is proposed in the existing weir location and the tenders have been floated*

		for the work with last date of bid submission on 25.08.2.021. Once the tender is finalised, the work will be taken up and completed within 18 months.
viii)	*After discussing with the concerned Department of the State Government, it was learnt that the FTL, Sluice gates in the Lake & Surplus weirs comes under Irrigation Department the maintenance of Lake, STPs around the lake and the I&D structure built at the mouth of the HussainSagar lake come under the HMDA. The drains carrying the sewage to the water bodies comes under the purview of GHMC and the construction of STPs to treat the sewage generated by the city is with the HMWSSB.*	*No action recommended*
ix)	*The concerned Department shall upload the work carried by them to improve the water quality of the Lake in their respective website for the public access.*	*The respective departments will upload the work carried out in their websites for public access.*

It is to submit that, the total C&D waste generated from demolition of old Secretariat building is 147469.02 tons and it was shifted to the processing facility located at Jeedimetla. The month wise processing details of the waste at C&D waste processing plant located at Jeedimetla is as follows:

Month	*Quantity of the MD waste processed which is generated from the Old Secretariat in Tons*
Jul-20	*710.00*
Aug-20	*15539.00*
Se-20	*11542.75*
Oct- 2.0	*11382.75*
Nov-20	*9962.00*
Dec-20	*10914.60*
Jan-21	*6219.27*
Feb-2.1	*15856.56*
Mar-21	*27768.07*
Apr-21	*17537.02*
May-21	*15768.00*
Jun-21	*4269.00*
Total	*147469.02*

Further, the applicant raised objections that in the guise of repairing the surplus weir, there was tampering of the 1-711 of the Hussain Sagar Lake by lowering the weir and the lake bed was exposed and further material was dumped near the Kukatpally nalla side.

The allegations made are baseless and it is reiterated that the Hussain Sagar Lake is having two surplus weirs and six number of sluices. The flood water can be directly discharged through surplus weirs whereas the sluices are choked up due to non-maintenance and non-operation since long time. It is desired to bring all the sluices into operation so the repair works are taken up as flood control measure and regulation of discharges. In order to facilitate repairs to the sluices and weir, additional discharges are released through the weir into the natural surplus course. The applicant herein assumed that the Government of Telangana is dewatering and desilting Hussain Sagar Lake. There is a marginal increase of flow of water from the above sluices due to the repair of sluices and said flow of water is already curtailed after completion of the repair works.

Further in reply to the RTI filed by the applicant on the above subject all the Departments have given their replies and that, there is no proposal of dewatering and desilting of Hussain Sagar Lake as alleged by the applicant. The entire process of repairs for upstream and downstream is taken up in a regular course as a part of pre monsoon maintenance

Monitoring of Hussainsagar Lake:

I. Hussainsagar Lake water quality:

TSPCB is carrying out monitoring of water quality of Hussainsagar Lake every month at following 9 locations: -

1. *Hussainsagar lake outlet at Boats club*
2. *Hussainsagar lake outlet at Viceroy Hotel*
3. *Hussainsagar lake at Necklace road*
4. *Hussainsagar lake Opposite NTR garden*
5. *Hussainsagar lake at Lepakshi Handicrafts*
6. *Hussainsagar lake at Midstream at Budha statue*
7. *Hussainsagar lake at Sanjeevaiah Park*
8. *Hussainsagar lake at Sailing club*
9. *Hussainsagar lake at Bridge-I inlet*

The water quality of Hussainsagar lake fluctuates between Class-D and Class-E during the period January to July 2021.The same are placed as Annexure-III.

Monitoring of feeder channels:

TSPCB is also monitoring 5 feeder channels joining Hussainsagar lake. As per the analysis reports, BOD values are ranging between 12 to 123 mg/L, COD values are ranging between 52 to 500 mg/L. The analysis report is annexed as Annexure-IV.

*The TSPCB will continue monthly monitoring of Husaainsagar lake and sensitise the stake holder departments on the quality of lake water for taking necessary measures.***"**

Consideration today and final order

13. We have taken up the matter for consideration and passing final order and heard the learned counsel for the applicant and the State Authorities. As shown from the above narrative, pollution of Hussain Sagar Lake is continuing which is a matter of serious concern. The Lake is a significant wetland and also received attention of the Hon'ble Supreme Court. Vide order dated 25.04.2005 in *SLP (C) No. 5595-96/2004, G. Haragopal (DR.) & Ors. South Central Railway & Ors. vs. Central Railway & Ors.*, an Expert Committee was constituted which, apart from other issues, was to ascertain the level of pollution in the lake and recommend measures. The report is said to have been submitted, though not on record of present proceedings. This aspect has since been further looked into by the Committees appointed from time to time under orders of this Tribunal. The factual position and action plan for remedial having already been identified, further action needs to be taken in the light thereof and monitored at highest level in the administration to uphold rule of law and protect environment and public health.

14. The Tribunal has considered the issue of protection of wetlands and keeping them free from the sewage and other pollution in several orders. Reference may particularly be made to order dated 25.11.2021 in *O.A. No.*

351/2019, Raja Muzaffar Bhat vs. State of Jammu and Kashmir & Ors. as follows:-

> ***"****1to17…..xxx……xxx……xxx*
>
> *18. District Environment Plan of each District in terms of order of this Tribunal dated 05.07.2021 in OA 360/2018, Shree Nath Sharma vs. Union of India & Ors. should also cover the wetlands in the District. If necessary, the said plans be revised accordingly by the District Magistrates concerned* ***by providing that the core activity for conservation and protection of wetlands may primarily focus on not discharging of sewage, disposal of solid waste and other wastes, preventing siltation, demarcation of wetlands/flood protection zone and removal of encroachments. There should be regular monitoring of water quality under water quality management programme at strategic locations (around 10 locations) to ensure that it is compliant with TC/FC norms. Water quality of the wetlands with respect to BOD needs to be less than 3 mg/l, feacal coliform should meet norms and contamination due to toxic constituents either directly or through runoff from the catchment should be prevented. Biodiversity of the wetlands needs to be maintained. Monitoring of steps for compliance of Rules in relation to such Wetlands ought to be at District level by the District Magistrate, at State level by State Wetland Authority and at National level by National Wetland Authority. We are confident that such initiatives in monitoring will go a long way in protecting the Wetlands which have significant environmental functions****."***

15. As per Media reports[1] Musi River is polluted requiring remedial measures. Available data shows that Hussain Sagar lake is in bad shape. Huge load of about 376.5 MLD of sewage entering the lake daily. Out of estimated sewage generation of 1950 MLD in GHMC, only 772.3 MLD sewage is being treated. Futuristic plans to bridge the gap of 1259.5 MLD

[1] Hussain Sagar becomes most polluted lake in Telangana – The Siasat Daily : https://www.siasat.com/hussain-sagar-becomes-most-polluted-lake-in-telangana-2119448/
Hussain sagar's water still not up to standards of cleanliness – The Times of India: https://timesofindia.indiatimes.com/city/hyderabad/hussainsagars-water-still-not-up-to-standards-of-cleanliness/articleshow/69708133.cms
Pollution at Hyderabad's Hussain Sagar gets worse, lake loses ability to 'self-purify' – The News Minute: https://www.thenewsminute.com/article/pollution-hyderabads-hussain-sagar-gets-worse-lake-loses-ability-self-purify-56945
Hyderabad: Water quality in Musi, Hussain Sagar improves – Telangana Today: https://telanganatoday.com/hyderabad-water-quality-in-musi-hussain-sagar-improves

with 31 STPs are yet to see the light of the day. Water quality data of CPCB and PCB on different locations of Hussain Sagar bears testimony to unsatisfactory state of affairs. The data is as follows:

WATER QUALITY STATUS OF HUSSAIN SAGAR LAKE DURING THE YEAR 2020 & 2021

Station Code	Name Of Monitoring Location	Year	Dissolved Oxygen (mg/L)		pH		BOD (mg/L)		Faecal Coliform (MPN/100ml)		Faecal Streptococci (MPN/100ml)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
Primary Water Quality Criteria for Outdoor Bathing notified under the E(P) Rules, 1986			**> 5 mg/L**		**6.5 - 8.5**		**< 3 mg/L**		**< 2500 MPN / 100 mL**		**< 500 MPN / 100 mL**	
1391	HUSSAIN SAGAR LAKE, BUDAMERU	**2020**	0.4	6	6.92	8.1	8	**28**	14	540	BDL	**1600**
		2021	BDL	2.4	7.52	7.98	5.8	8	39	120	11	63

It is seen from the data in Annexure-III of the report that the water quality of Hussain Sagar Lake is above 20 mg/l of BOD with high fecal coliform.

16. Further, plan of restoration is not an integrated one covering catchment demarcation, hydrology, ecological integrity etc. in terms of observations in OA No. 351/2019, *Raja Muzaffar Bhat (supra)* and its operational components as laid down in OA 125/2017*, Court on its own Motion v. State of Karnataka,* relating to Bellandur lake at Bengaluru.

17. In the light thereof, we consider it appropriate to direct that further monitoring may be conducted by a joint Committee to be headed by the Addl. Chief Secretary, Urban Development, Telangana with nominees of National Wetland Authority, State Wetland Authority, State PCB, CPCB and Director, Environment, Telangana being Members. The State Wetland Authority will be the nodal agency for coordination and compliance. The mandate of the Committee will be to ensure that the lake is free from sewage or industrial pollution and water quality of the lake is maintained

and Wetland Rules and environmental norms are followed. The Committee may meet within one month and after taking stock of the situation, prepare an updated plan which may be executed within next six months. The plan may provide for treatment of 376.5 MLD of sewage entering into Hussain Sagar, preventing contamination of five feeder channels, preventing industries disposing effluents in Kukatpally drain and restoration measures for water quality, if necessary, by adopting in situ remediation processes, with aeration and ozonation, if found to be giving appropriate results, regulating encroachments as per law and other relevant aspects. Recharging of Hussain Sagar may be ensured and the treated sewage having low BOD and fecal coliform be considered for maintaining hydrological equilibrium of lake. The Committee must meet atleast once in a month and place its minutes on the website of State Wetland Authority. The Committee will be at liberty to interact with stake holders, including any other experts/institutions.

The application is disposed of. If any grievance survives, it will open to aggrieved parties to take remedies afresh, as per law.

A copy of this order be forwarded to the Addl. Chief Secretary, Urban Development, Telangana, Director, Environment, Telangana, National Wetland Authority, State Wetland Authority, State PCB and CPCB by email for compliance.

Adarsh Kumar Goel, CP

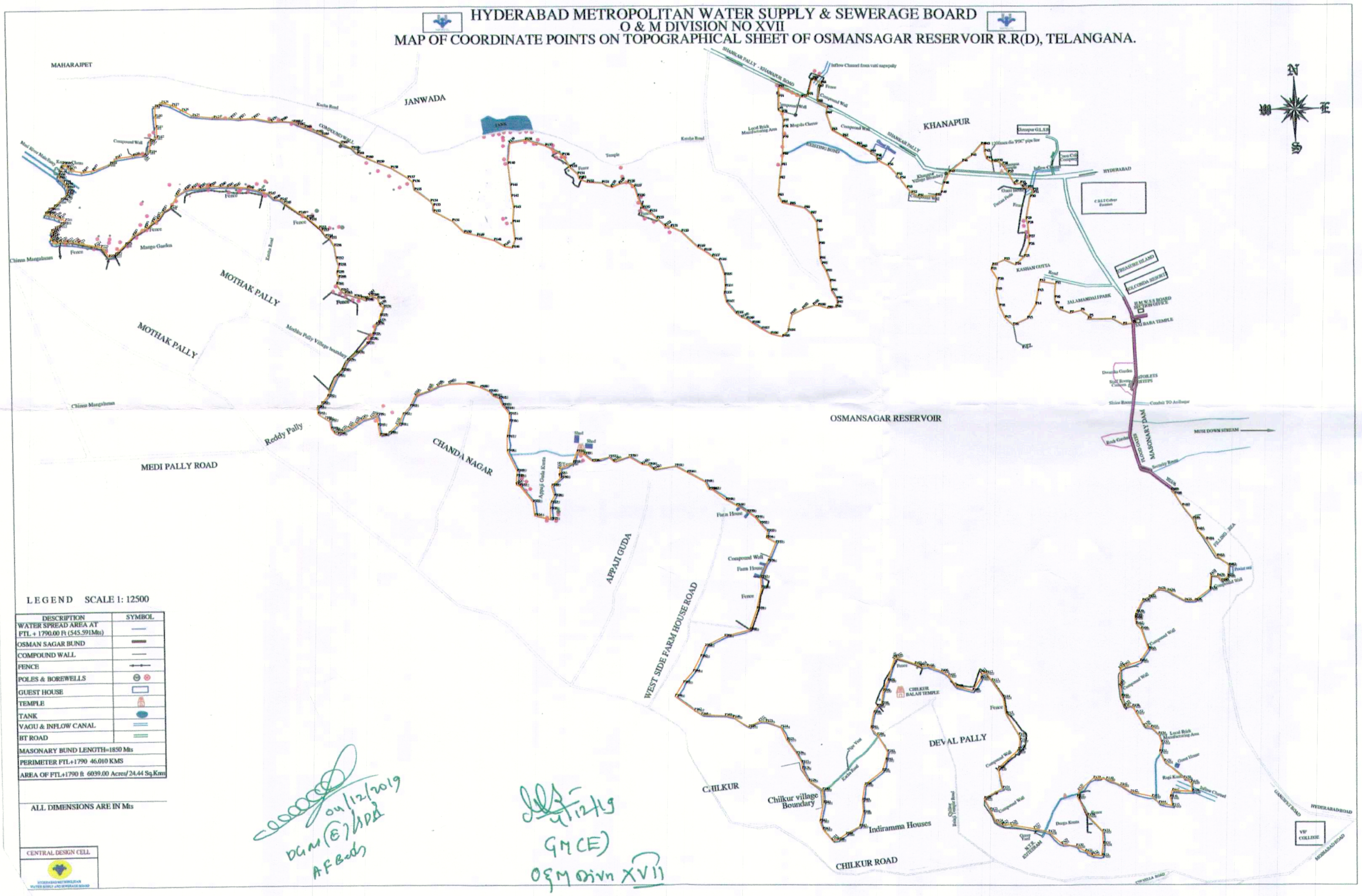
K. Ramakrishnan, JM

Sudhir Agarwal, JM

Dr. Satyagopal Korlapati, EM

Prof. A. Senthil Vel, EM

July 6, 2022
Original Application No. 85/2015(SZ)
A



NOTE:

R 0

LEGEND :

- FULL TANK LEVEL (FTL)
- EXISTING FTL PILLAR
- TOE LINE
- GPS CONTROL PONITS
- BUND TOP
- BT ROAD
- CART TRACK
- ROCK / BOULDERS
- CHURCH / TEMPLE / MOSQUE
- TOMB / CHHATRI / GRAVES
- BORE WELL POINT
- POWER LINE WITH POLE
- TRANSFORMER
- HT-TOWER
- WATER SUMP
- WELL
- BUILDINGS
- COMPOUND WALL
- INLET or OUTLET
- TREE
- CULVERT
- DRAIN or STREAM
- FENCING
- RAILWAY TRACK
- VILLAGE BOUNDARY
- BUFFER ZONE 9m FROM FTL LINE

LAKE DETAILS:

1. PRESENT WATER SPREAD AREA	:	-
2. AREA OF THE TANK UPTO FTL	:	6039Acres
3. WATER LEVEL	:	-
4. FULL TANK LEVEL (FTL)	:	-
5. FULL TANK LEVEL PERIMETER	:	46010.000m
6. BUND LENGTH	:	1850m
7. DATE OF SURVEY	:	-

Revn.	Description	Date	Signature
R 0	Draft Copy		

HYDERABAD METROPOLITAN DEVELOPMENT AUTHORITY

SURVEY OF LAKES IN EXTENDED HMDA AREA

FTL MAP OF **OSMANSAGAR RESERVOIR**
GANDIPET(V),GANDIPET (M), RANGA REDDY (D)

aarvee associates
architects engineers & consultants pvt.ltd.
Ravula Residency, Srinagar Colony Main Rd., Hyderabad-82, India
Tel: +91 -40-23737633; Fax: +91 -4023736277
e-mail: irrigation@aarvee.net; web:www.aarvee.net

Scale	1:22000		
Dealt	V.Vamsi		
Drawn	G.Ravikumar		
Checked	V.Vamsi		
Approved	Lingaiah		

Drg. No.	AA/IRR/1669/ID	Sheet No.	1	Date	05-12-19

OSMAN SAGAR COORDINATES (1790!0")

S.No	LATTIDUDE	LONGITUDE
1	N17 23 9.47	E78 18 59.66
2	N17 23 9	E78 18 56.96
3	N17 23 10.63	E78 18 53.74
4	N17 23 10.42	E78 18 46.84
5	N17 23 11.13	E78 18 47.34
6	N17 23 12.79	E78 18 44.79
7	N17 23 12.08	E78 18 41.66
8	N17 23 13.13	E78 18 38.72
9	N17 23 14.57	E78 18 37.57
10	N17 23 16.18	E78 18 37.28
11	N17 23 20.08	E78 18 37.41
12	N17 23 20.7	E78 18 32.89
13	N17 23 18	E78 18 32.44
14	N17 23 14.32	E78 18 31.82
15	N17 23 10.45	E78 18 29.45
16	N17 23 8.63	E78 18 25.4
17	N17 23 10.5	E78 18 23.12
18	N17 23 13.69	E78 18 21.46
19	N17 23 18.22	E78 18 20.49
20	N17 23 20.97	E78 18 20.92
21	N17 23 23.77	E78 18 18.96
22	N17 23 24.93	E78 18 19.28
23	N17 23 26.45	E78 18 22.68
24	N17 23 25.19	E78 18 25.9
25	N17 23 27.35	E78 18 28.33
26	N17 23 30.64	E78 18 29.71
27	N17 23 32.72	E78 18 29.76
28	N17 23 36.47	E78 18 29.38
29	N17 23 37.66	E78 18 28.82
30	N17 23 43.64	E78 18 29.92
31	N17 23 44.78	E78 18 30.85
32	N17 23 45.52	E78 18 30.66
33	N17 23 46.2	E78 18 29.26
34	N17 23 46.28	E78 18 27.82
35	N17 23 47.39	E78 18 27.05
36	N17 23 47	E78 18 25.51
37	N17 23 50.2	E78 18 23.52

S.No	LATTIDUDE	LONGITUDE
38	N17 23 52.48	E78 18 21.91
39	N17 23 53.25	E78 18 20.38
40	N17 23 53.14	E78 18 18.71
41	N17 23 53.96	E78 18 17.34
42	N17 23 55.86	E78 18 16.72
43	N17 23 57.8	E78 18 16.72
44	N17 23 57.82	E78 18 15.72
45	N17 23 54.62	E78 18 12.87
46	N17 23 53.1	E78 18 10.35
47	N17 23 50.08	E78 18 6.69
48	N17 23 46.94	E78 18 5.06
49	N17 23 44.46	E78 18 4.4
50	N17 23 43.68	E78 18 2.84
51	N17 23 43.48	E78 17 57.88
52	N17 23 44.33	E78 17 55.95
53	N17 23 45.71	E78 17 54.66
54	N17 23 48.23	E78 17 52.7
55	N17 23 49.17	E78 17 51.78
56	N17 23 51.75	E78 17 49.12
57	N17 23 53.17	E78 17 45.93
58	N17 23 54.15	E78 17 45.74
59	N17 23 55.36	E78 17 44.03
60	N17 23 56.66	E78 17 41.54
61	N17 23 57.37	E78 17 40.18
62	N17 23 59.58	E78 17 36.07
63	N17 24 1.24	E78 17 32.97
64	N17 24 5.77	E78 17 31.31
65	N17 24 7.32	E78 17 31.54
66	N17 24 8.96	E78 17 28.75
67	N17 24 13.02	E78 17 28.94
68	N17 24 14.03	E78 17 29.68
69	N17 24 15.33	E78 17 27.34
70	N17 24 14.78	E78 17 26.91
71	N17 24 10.79	E78 17 25.98
72	N17 24 10.19	E78 17 24.14
73	N17 24 12.83	E78 17 17.59
74	N17 24 10.14	E78 17 17.59
75	N17 24 6.38	E78 17 17.59

S.No	LATTIDUDE	LONGITUDE
76	N17 24 5.97	E78 17 18.61
77	N17 24 3.48	E78 17 19.05
78	N17 24 1.83	E78 17 18.97
79	N17 23 58.93	E78 17 18.96
80	N17 23 54.36	E78 17 18.95
81	N17 23 51.39	E78 17 18.64
82	N17 23 47.81	E78 17 18.1
83	N17 23 43.11	E78 17 17.76
84	N17 23 41.28	E78 17 18.89
85	N17 23 40.81	E78 17 21.22
86	N17 23 39.9	E78 17 25.32
87	N17 23 38.36	E78 17 27.19
88	N17 23 36.08	E78 17 28.84
89	N17 23 33.67	E78 17 29.06
90	N17 23 30.11	E78 17 29.63
91	N17 23 26.07	E78 17 29.96
92	N17 23 24.69	E78 17 30.5
93	N17 23 22.64	E78 17 31.78
94	N17 23 19.9	E78 17 32.87
95	N17 23 17.34	E78 17 33.33
96	N17 23 15.17	E78 17 34.76
97	N17 23 13.97	E78 17 34.98
98	N17 23 12.82	E78 17 34.49
99	N17 23 12.53	E78 17 32.21
100	N17 23 13.25	E78 17 29.55
101	N17 23 13.27	E78 17 28.32
102	N17 23 12.24	E78 17 25.33
103	N17 23 10.6	E78 17 21.97
104	N17 23 6.17	E78 17 20.93
105	N17 23 4.59	E78 17 19.39
106	N17 23 5.31	E78 17 16.08
107	N17 23 6.67	E78 17 13.43
108	N17 23 8.2	E78 17 10.85
109	N17 23 9.34	E78 17 9.07
110	N17 23 9.7	E78 17 7.71
111	N17 23 10.81	E78 17 6.07
112	N17 23 13.85	E78 17 3.31
113	N17 23 16.21	E78 17 2.62

S.No	LATTIDUDE	LONGITUDE
114	N17 23 18.13	E78 17 2.85
115	N17 23 21.27	E78 17 2.67
116	N17 23 25.31	E78 17 1.05
117	N17 23 26.39	E78 16 59.07
118	N17 23 27.92	E78 16 56.79
119	N17 23 28.89	E78 16 54.92
120	N17 23 33.01	E78 16 50.2
121	N17 23 34.36	E78 16 47.14
122	N17 23 34.47	E78 16 45.64
123	N17 23 36.56	E78 16 43.08
124	N17 23 38.33	E78 16 41.09
125	N17 23 39.32	E78 16 39.02
126	N17 23 42.54	E78 16 37.56
127	N17 23 45.15	E78 16 36.57
128	N17 23 46.33	E78 16 34.7
129	N17 23 45.88	E78 16 32.41
130	N17 23 44.93	E78 16 30.24
131	N17 23 46.06	E78 16 27.38
132	N17 23 46.23	E78 16 23.05
133	N17 23 47.22	E78 16 20.76
134	N17 23 48.36	E78 16 20.33
135	N17 23 50.24	E78 16 18.13
136	N17 23 53.48	E78 16 16
137	N17 23 56.02	E78 16 11.09
138	N17 23 57.55	E78 16 5.3
139	N17 23 56.63	E78 16 0.83
140	N17 23 50.97	E78 16 0.41
141	N17 23 45.01	E78 16 1.25
142	N17 23 42.06	E78 16 1.54
143	N17 23 38.97	E78 16 2.22
144	N17 23 35.07	E78 16 1.96
145	N17 23 30.23	E78 16 2.67
146	N17 23 28.13	E78 16 1.89
147	N17 23 28.42	E78 15 59.8
148	N17 23 30.05	E78 15 56.68
149	N17 23 31.22	E78 15 51.79
150	N17 23 31.86	E78 15 48.12
151	N17 23 35.04	E78 15 44.73

S.No	LATTIDUDE	LONGITUDE
152	N17 23 37.49	E78 15 39.33
153	N17 23 39.16	E78 15 39.27
154	N17 23 40.31	E78 15 38.48
155	N17 23 43.36	E78 15 33.81
156	N17 23 45.6	E78 15 33.29
157	N17 23 46.69	E78 15 31.85
158	N17 23 49.33	E78 15 27.05
159	N17 23 50.79	E78 15 23.08
160	N17 23 52.04	E78 15 19.94
161	N17 23 53.07	E78 15 17.34
162	N17 23 54.62	E78 15 15.72
163	N17 23 56.03	E78 15 12.76
164	N17 23 58.25	E78 15 7.15
165	N17 23 58.88	E78 15 5.54
166	N17 24 0.12	E78 15 2.13
167	N17 24 0.82	E78 15 0.22
168	N17 24 1.6	E78 14 58.96
169	N17 24 1.74	E78 14 55.64
170	N17 24 1.57	E78 14 52.72
171	N17 24 2.45	E78 14 47.78
172	N17 24 2.17	E78 14 43.7
173	N17 24 2.41	E78 14 41.29
174	N17 24 2.46	E78 14 36.08
175	N17 24 2.91	E78 14 30.03
176	N17 24 4.42	E78 14 26.91
177	N17 24 5.77	E78 14 24.12
178	N17 24 6.43	E78 14 21.13
179	N17 24 5.29	E78 14 19.21
180	N17 24 2.62	E78 14 19.37
181	N17 23 59.61	E78 14 19.69
182	N17 23 56.86	E78 14 19.98
183	N17 23 56.06	E78 14 17.89
184	N17 23 52.83	E78 14 17.9
185	N17 23 52.15	E78 14 16.23
186	N17 23 51.75	E78 14 13.29
187	N17 23 50.92	E78 14 8.31
188	N17 23 49.45	E78 14 6.58
189	N17 23 47.54	E78 14 1.97

S.No	LATTIDUDE	LONGITUDE
190	N17 23 47.03	E78 13 59.07
191	N17 23 47.47	E78 13 55.38
192	N17 23 48.21	E78 13 54.59
193	N17 23 49.19	E78 13 53.89
194	N17 23 48.03	E78 13 53.09
195	N17 23 46.75	E78 13 52.23
196	N17 23 46.15	E78 13 52
197	N17 23 45.29	E78 13 52.24
198	N17 23 44.21	E78 13 53.52
199	N17 23 43.56	E78 13 54.1
200	N17 23 42.74	E78 13 54.59
201	N17 23 41.71	E78 13 54.68
202	N17 23 41.03	E78 13 54.47
203	N17 23 40.66	E78 13 54.18
204	N17 23 39.37	E78 13 52.65
205	N17 23 37.56	E78 13 50.75
206	N17 23 36.69	E78 13 49.21
207	N17 23 35.51	E78 13 48.3
208	N17 23 35.22	E78 13 49.63
209	N17 23 34.87	E78 13 51.18
210	N17 23 34.32	E78 13 52.61
211	N17 23 33.75	E78 13 54.08
212	N17 23 32.76	E78 13 52.77
213	N17 23 31.53	E78 13 51.13
214	N17 23 30.77	E78 13 50.12
215	N17 23 29.93	E78 13 50.6
216	N17 23 29.47	E78 13 50.55
217	N17 23 29.04	E78 13 49.97
218	N17 23 27.87	E78 13 50.56
219	N17 23 27.6	E78 13 51.87
220	N17 23 27.93	E78 13 52.93
221	N17 23 27.73	E78 13 54.85
222	N17 23 27.72	E78 13 56.36
223	N17 23 27.5	E78 13 57.98
224	N17 23 26.85	E78 14 2.69
225	N17 23 26.59	E78 14 4.4
226	N17 23 24.03	E78 14 6.67
227	N17 23 24.61	E78 14 8.35

S.NO	LATTIDUDE	LONGITUDE
228	N17 23 27.4	E78 14 11.23
229	N17 23 29.88	E78 14 13.79
230	N17 23 31.96	E78 14 17.3
231	N17 23 33.63	E78 14 19.27
232	N17 23 34.54	E78 14 20.83
233	N17 23 36.6	E78 14 22.18
234	N17 23 37.68	E78 14 24.09
235	N17 23 41.16	E78 14 26.06
236	N17 23 42.61	E78 14 28.41
237	N17 23 43.08	E78 14 30.32
238	N17 23 43.13	E78 14 32.53
239	N17 23 43.67	E78 14 35.4
240	N17 23 43.68	E78 14 38.22
241	N17 23 43.6	E78 14 40.38
242	N17 23 43.64	E78 14 42.38
243	N17 23 43.41	E78 14 45.98
244	N17 23 42.65	E78 14 49.26
245	N17 23 41.85	E78 14 52.13
246	N17 23 40.38	E78 14 53.81
247	N17 23 40.21	E78 14 55.51
248	N17 23 39.39	E78 14 56.61
249	N17 23 36.62	E78 15 0.85
250	N17 23 35.54	E78 15 3.14
251	N17 23 34.81	E78 15 3.93
252	N17 23 32.65	E78 15 6.66
253	N17 23 31.94	E78 15 7.45
254	N17 23 30.4	E78 15 8.53
255	N17 23 29.86	E78 15 9.68
256	N17 23 27.76	E78 15 11.06
257	N17 23 24.28	E78 15 11.71
258	N17 23 22.55	E78 15 12.42
259	N17 23 20.53	E78 15 11.88
260	N17 23 19.24	E78 15 12.41
261	N17 23 17.34	E78 15 11.82
262	N17 23 15.64	E78 15 13.16
263	N17 23 14.88	E78 15 14.27
264	N17 23 14.02	E78 15 16.97
265	N17 23 13.6	E78 15 18.89

S.No	LATTIDUDE	LONGITUDE
266	N17 23 13.08	E78 15 20.26
267	N17 23 14.36	E78 15 21.26
268	N17 23 14.38	E78 15 21.92
269	N17 23 13.62	E78 15 23.59
270	N17 23 11.71	E78 15 24.36
271	N17 23 11.25	E78 15 25.4
272	N17 23 8.88	E78 15 24.4
273	N17 23 6.92	E78 15 24.05
274	N17 23 6.54	E78 15 23.37
275	N17 23 3.68	E78 15 22.36
276	N17 23 2.37	E78 15 21.68
277	N17 23 1.18	E78 15 20.63
278	N17 22 58.6	E78 15 17.75
279	N17 22 56.47	E78 15 15.15
280	N17 22 53.72	E78 15 13.81
281	N17 22 52.14	E78 15 12.28
282	N17 22 46.53	E78 15 9.62
283	N17 22 44.56	E78 15 7.86
284	N17 22 43.43	E78 15 6.7
285	N17 22 41.63	E78 15 6.94
286	N17 22 40.36	E78 15 8.97
287	N17 22 39.72	E78 15 10.29
288	N17 22 37.52	E78 15 10.79
289	N17 22 36.34	E78 15 11.81
290	N17 22 36.04	E78 15 12.78
291	N17 22 36.88	E78 15 14.11
292	N17 22 37.73	E78 15 16.14
293	N17 22 39.1	E78 15 18.18
294	N17 22 39.99	E78 15 19.53
295	N17 22 40.77	E78 15 22.33
296	N17 22 41.58	E78 15 23.79
297	N17 22 38.62	E78 15 24.23
298	N17 22 35.92	E78 15 24.85
299	N17 22 36.55	E78 15 27.27
300	N17 22 38.95	E78 15 29.67
301	N17 22 38.88	E78 15 30.29
302	N17 22 41.77	E78 15 31.22
303	N17 22 44.09	E78 15 33.28

S.No	LATTIDUDE	LONGITUDE
304	N17 22 47.16	E78 15 34.85
305	N17 22 48.49	E78 15 38.68
306	N17 22 49.7	E78 15 41.15
307	N17 22 50.52	E78 15 44.28
308	N17 22 50.57	E78 15 49.34
309	N17 22 49.67	E78 15 53.28
310	N17 22 48.52	E78 15 55.85
311	N17 22 47.3	E78 15 57.06
312	N17 22 46.65	E78 15 58.75
313	N17 22 44.71	E78 15 59.73
314	N17 22 43.78	E78 16 0.64
315	N17 22 42.2	E78 16 1.62
316	N17 22 40.22	E78 16 1.77
317	N17 22 35.94	E78 16 1.14
318	N17 22 32.05	E78 16 1.23
319	N17 22 26.56	E78 16 4.16
320	N17 22 25.11	E78 16 4.02
321	N17 22 22.86	E78 16 3.97
322	N17 22 22.59	E78 16 4.9
323	N17 22 18.22	E78 16 8.81
324	N17 22 14.53	E78 16 9.34
325	N17 22 13.57	E78 16 13.87
326	N17 22 16.36	E78 16 13.77
327	N17 22 17.99	E78 16 13.85
328	N17 22 19.91	E78 16 14.89
329	N17 22 22.68	E78 16 14.02
330	N17 22 24.87	E78 16 16.63
331	N17 22 25.41	E78 16 16.19
332	N17 22 27.41	E78 16 16.4
333	N17 22 29.14	E78 16 20.09
334	N17 22 32.13	E78 16 21.06
335	N17 22 31.54	E78 16 23.05
336	N17 22 29.61	E78 16 25.56
337	N17 22 30.79	E78 16 30.27
338	N17 22 29.51	E78 16 31.79
339	N17 22 30.99	E78 16 35.93
340	N17 22 28.85	E78 16 39.9
341	N17 22 28.78	E78 16 41.56

S.No	LATTIDUDE	LONGITUDE
342	N17 22 27.46	E78 16 43.14
343	N17 22 28.5	E78 16 49.19
344	N17 22 26.83	E78 16 52.72
345	N17 22 24.26	E78 16 57.82
346	N17 22 22.24	E78 16 58.99
347	N17 22 22.26	E78 16 59.82
348	N17 22 19.4	E78 17 3.94
349	N17 22 17.94	E78 17 6.87
350	N17 22 16.27	E78 17 10.09
351	N17 22 14.68	E78 17 12.41
352	N17 22 13.12	E78 17 13.77
353	N17 22 10.99	E78 17 15.86
354	N17 22 9.22	E78 17 15.53
355	N17 22 7.91	E78 17 18.26
356	N17 22 2.73	E78 17 16.1
357	N17 21 58.31	E78 17 14.1
358	N17 21 55.48	E78 17 14.36
359	N17 21 49.74	E78 17 13.14
360	N17 21 43.95	E78 17 11.15
361	N17 21 42.13	E78 17 3.98
362	N17 21 39.4	E78 16 58.44
363	N17 21 36.42	E78 16 57.13
364	N17 21 32.38	E78 16 55.08
365	N17 21 29.23	E78 16 52.36
366	N17 21 25.49	E78 16 50.08
367	N17 21 21.72	E78 16 55.67
368	N17 21 20.55	E78 16 57.63
369	N17 21 20.36	E78 17 4.38
370	N17 21 19.89	E78 17 6.72
371	N17 21 17.37	E78 17 11.24
372	N17 21 18.89	E78 17 14.26
373	N17 21 18.85	E78 17 16.09
374	N17 21 17.44	E78 17 20.41
375	N17 21 13.95	E78 17 22.23
376	N17 21 10.29	E78 17 25.03
377	N17 21 7.82	E78 17 26.56
378	N17 21 6.19	E78 17 26.72
379	N17 21 2.75	E78 17 28.66

S.No	LATTIDUDE	LONGITUDE
380	N17 21 0.41	E78 17 32.58
381	N17 20 56.81	E78 17 32.95
382	N17 20 51.73	E78 17 31.93
383	N17 20 49.49	E78 17 32.85
384	N17 20 46.45	E78 17 35.6
385	N17 20 46.62	E78 17 37.01
386	N17 20 48.28	E78 17 39.38
387	N17 20 50.41	E78 17 43.31
388	N17 20 54.3	E78 17 44.34
389	N17 20 57.65	E78 17 44.03
390	N17 21 1.94	E78 17 44.62
391	N17 21 5.85	E78 17 49.74
392	N17 21 8.77	E78 17 50.66
393	N17 21 11.03	E78 17 51.15
394	N17 21 15.65	E78 17 48.06
395	N17 21 17.54	E78 17 46.15
396	N17 21 21.67	E78 17 46.89
397	N17 21 23.46	E78 17 47.9
398	N17 21 24.2	E78 17 49.23
399	N17 21 27.63	E78 17 49.63
400	N17 21 30.48	E78 17 50.92
401	N17 21 36.5	E78 17 52.73
402	N17 21 36.85	E78 17 53.26
403	N17 21 35.24	E78 17 58.57
404	N17 21 34.39	E78 18 0.4
405	N17 21 34.62	E78 18 2.11
406	N17 21 33.31	E78 18 6.11
407	N17 21 32.09	E78 18 8.18
408	N17 21 29.14	E78 18 10.51
409	N17 21 28.08	E78 18 15.2
410	N17 21 31.44	E78 18 17.51
411	N17 21 32.68	E78 18 17.61
412	N17 21 33	E78 18 18.88
413	N17 21 30.86	E78 18 20.62
414	N17 21 26.4	E78 18 23.91
415	N17 21 21.92	E78 18 24.81
416	N17 21 16.12	E78 18 28.59
417	N17 21 14.62	E78 18 28.91

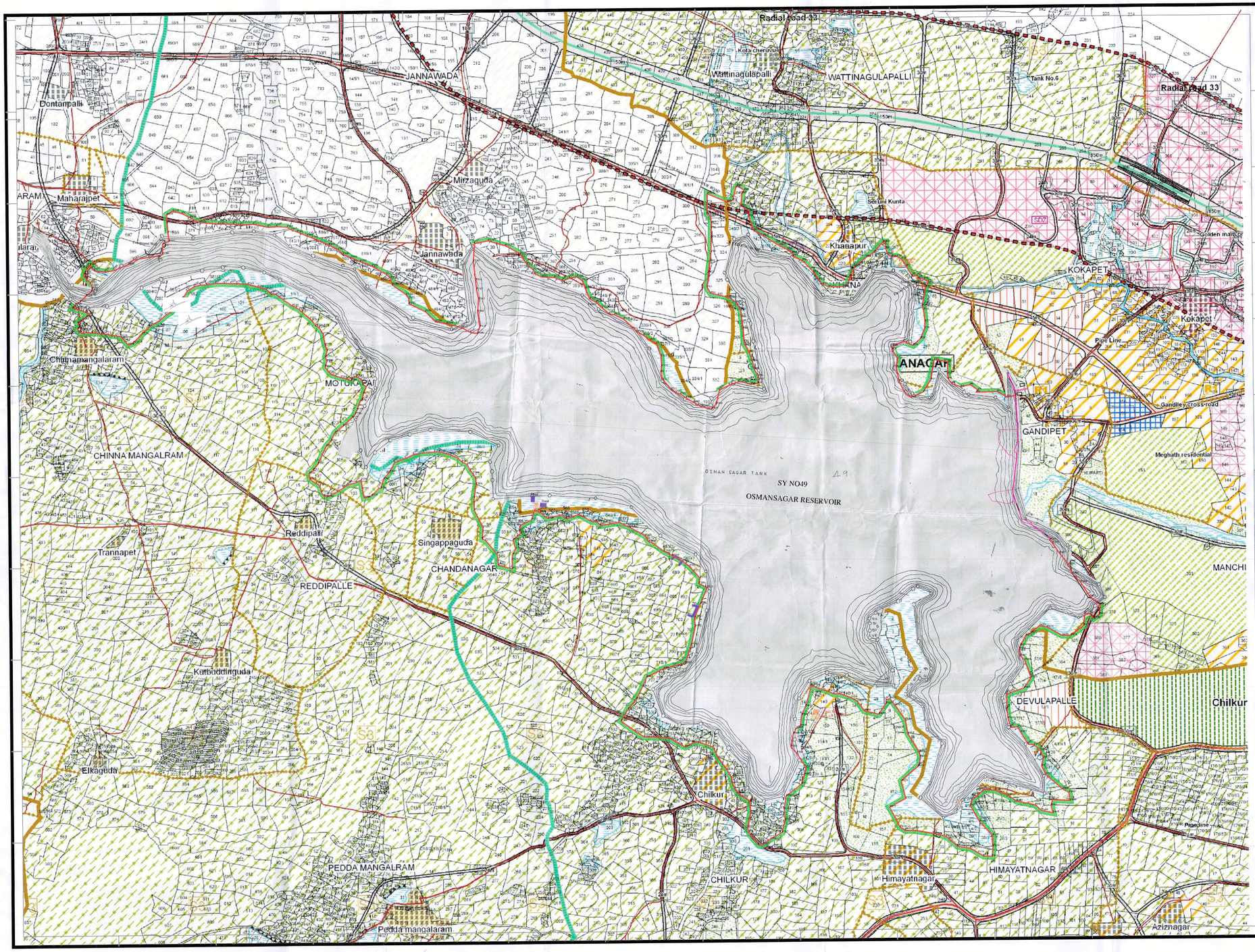
S.No	LATTIDUDE	LONGITUDE
418	N17 21 12.03	E78 18 28.62
419	N17 21 11.59	E78 18 28.1
420	N17 21 6.93	E78 18 22.74
421	N17 21 1.44	E78 18 24.18
422	N17 20 58.58	E78 18 18.9
423	N17 20 55.49	E78 18 20.69
424	N17 20 52.3	E78 18 22.32
425	N17 20 51.27	E78 18 24.23
426	N17 20 51.41	E78 18 26.58
427	N17 20 50.43	E78 18 33.33
428	N17 20 49.56	E78 18 37.46
429	N17 20 46.29	E78 18 41.45
430	N17 20 45.78	E78 18 45.43
431	N17 20 44.33	E78 18 48.05
432	N17 20 43.22	E78 18 50.02
433	N17 20 43.18	E78 18 52.72
434	N17 20 46.45	E78 18 53.06
435	N17 20 49.87	E78 18 52.87
436	N17 20 54.14	E78 18 48.55
437	N17 20 59.27	E78 18 45.5
438	N17 21 0.99	E78 18 46
439	N17 21 4.4	E78 18 50.09
440	N17 21 4.2	E78 18 53.7
441	N17 21 2.63	E78 18 57.81
442	N17 21 0.78	E78 19 0.73
443	N17 20 59.59	E78 19 6.86
444	N17 20 57.86	E78 19 8.86
445	N17 20 57.17	E78 19 12.7
446	N17 20 59.46	E78 19 12.07
447	N17 21 1.31	E78 19 12.59
448	N17 21 1.11	E78 19 18.31
449	N17 21 3.62	E78 19 17.95
450	N17 21 4.74	E78 19 15.85
451	N17 21 9.3	E78 19 10.28
452	N17 21 11.91	E78 19 8.88
453	N17 21 14.5	E78 19 9.39
454	N17 21 16.79	E78 19 8.49
455	N17 21 18.61	E78 19 6.3

NO	LATTIDUDE	LONGITUDE
456	N17 21 18.82	E78 19 4.46
457	N17 21 22.55	E78 19 1.98
458	N17 21 24.27	E78 19 0.91
459	N17 21 24.16	E78 18 58.84
460	N17 21 26.92	E78 18 57.81
461	N17 21 29.69	E78 18 57.44
462	N17 21 34.48	E78 18 57.32
463	N17 21 35.1	E78 18 58.47
464	N17 21 36.63	E78 19 2.99
465	N17 21 39.97	E78 19 5.28
466	N17 21 45.5	E78 19 3.14
467	N17 21 46.78	E78 19 1.69
468	N17 21 48.35	E78 19 1.36
469	N17 21 49.01	E78 19 1.41
470	N17 21 50.07	E78 19 1.77
471	N17 21 53.18	E78 19 3.45
472	N17 21 54.13	E78 19 5.19
473	N17 21 56.37	E78 19 7.91
474	N17 21 55.96	E78 19 10.52
475	N17 21 53.4	E78 19 15.46
476	N17 21 53.4	E78 19 18.31
477	N17 21 56.54	E78 19 22.57
478	N17 22 0.29	E78 19 22.88
479	N17 22 0.19	E78 19 24.71
480	N17 21 58.86	E78 19 25.92
481	N17 21 60.06	E78 19 27.68
482	N17 22 3.15	E78 19 27.99
483	N17 22 5.64	E78 19 24.58
484	N17 22 10.21	E78 19 21.46
485	N17 22 12.85	E78 19 18.73
486	N17 22 15.84	E78 19 17.48
487	N17 22 19.4	E78 19 14.5
488	N17 22 22.6	E78 19 12.2
489	N17 22 23.59	E78 19 11.25

29/11/2019

Sub Divisi... Beed
O & M Divi...

29/11/19
GM(E)
O&M Divn XVII



NOTE:

R 0

LEGEND :

- FULL TANK LEVEL (FTL)
- EXISTING FTL PILLAR
- TOE LINE
- GPS CONTROL PONITS
- BUND TOP (MAIN BUND)
- BT ROAD
- CART TRACK
- ROCK / BOULDERS
- CHURCH / TEMPLE / MOSQUE
- TOMB / CHHATRI / GRAVES
- BORE WELL POINT
- POWER LINE WITH POLE
- TRANSFORMER
- HT-TOWER
- WATER SUMP
- WELL
- BUILDINGS
- COMPOUND WALL
- INLET or OUTLET
- TREE
- CULVERT
- DRAIN or STREAM
- FENCING
- RAILWAY TRACK
- VILLAGE BOUNDARY
- BUFFER ZONE 9m FROM FTL LINE

LAKE DETAILS:

1. PRESENT WATER SPREAD AREA	:	-
2. AREA OF THE TANK UPTO FTL	:	6039Acres
3. WATER LEVEL	:	-
4. FULL TANK LEVEL (FTL)	:	-
5. FULL TANK LEVEL PERIMETER	:	46010.000m
6. BUND LENGTH	:	1850m
7. DATE OF SURVEY	:	-

Note:Drawing was prepared based on Coordinates provided by Hyderabad Metro Water suppaly&sewerage board

Revn.	Description	Date	Signature
R 0	Draft Copy		

hmda Growing Global

HYDERABAD METROPOLITAN DEVELOPMENT AUTHORITY

SURVEY OF LAKES IN EXTENDED HMDA AREA

CADASTRAL MAP OF **OSMANSAGAR RESERVOIR**
GANDIPET(V),GANDIPET (M), RANGA REDDY (D)

aarvee associates
architects engineers & consultants pvt.ltd.
Ravula Residency, Srinagar Colony Main Rd., Hyderabad-82, India
Tel: +91-40-23737633; Fax: +91-4023736977
e-mail: irrigation@aarvee.net; web:www.aarvee.net

Scale	1:22000				
Dealt	V.Vamsi				
Drawn	G.Ravikumar				
Checked	V.Vamsi				
Approved	Lingaiah				
Drg. No.	AA/IRR/1669/ID	Sheet No.	1	Date	05-12-19

Hyderabad 4 JULY 2022
No. RTI/DC-RR/5/2022

To
The Public Information Officer
o/o The District Collector/District Magistrate
Lakdikapul, Hyderabad

Dear PIO,

Sub: Information under RTI ACT 2005 – Right to Information – Reply within 48 hours

Ref:
1- 'Petition U/section 133 CrPC for removal of Public Nuisance' delivered at your office Inward on 23 June 2022 -
2- Part IVA Constitution of India:Article 51A (g): 'It shall be the duty of every citizen of India—(g) to protect and improve the natural environment including forests, lakes, rivers and wildlife, and to have compassion for living creatures.'

Following information is requested:

1- Action Taken Report on our Complaint/Petition U/section 133 CrPC for removal of Public Nuisance' delivered at RR District Collector office Inward Section on 23 June 2022 .

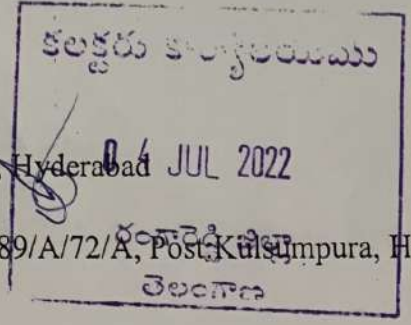
Please give us the document within 48 hours under section 7 of RTI act as this information is regarding water body pertaining to Article 21 Right to Life.

Comply Self-Disclosure under Section 4 RTI and Supply forthwith material information.

In case the subject matter of any of the information requested for is held by or related to another public authority you are requested to transfer the application or such part of it as may beappropriate to the public authority concerned with an intimation to the undersigned. (art 6(3) of RTI2005)

Postal order of Rs.10/- No. _____ enclosed/Revenue stamp

Thanks



Dr Lubna Sarwath
WICCI State President-Telangana, Hyderabad

Postal Address: House No. 12-3-389/A/72/A, Post:Kulsumpura, Hyderabad-500006
Mobile: 9963002403
email: sarwath.lubna@gmail.com