BEFORE THE NATIONAL GREEN TRIBUNAL

SOUTHERN ZONE, CHENNAI

ORIGINAL APPLICATION No. 85 OF 2015 (SZ)

&

MA No. 174/2016 & 232/2016 (SZ)

IN THE MATTER OF:

Dr.Lubna Sarwath .... Applicant(s)

Versus

State of Telangana & Others .... Respondent(s)

JOINT COMMITTEE REPORT

RUNNING INDEX

Place: Hyderabad

Date: 22-01-2021.

BEFORE THE NATIONAL GREEN TRIBUNAL (SOUTHERN ZONE), CHENNAI

Original Application No. 85 of 2015, (SZ) &

M.A. No. 174/2016 & 232/2016 (SZ)

Report of the Joint Committee in compliance with the order dated 14/09/2020 of Hon'ble NGT (SZ), Chennai in the O.A. No.85 of 2015(SZ) &M.A. No.174/2016 & 232/2016 (SZ) in the matter of Lubna Sarwath Vs State of Telangana & Ors.

1. Introduction:

In compliance with the Order dated 22/01/2020 of Hon'ble National Green Tribunal (Southern Zone), Chennai in the Original Application No. 85 of 2015 (SZ), a Joint Committee was constituted and the Committee already submitted its report to the Hon'ble Tribunal based on the meeting and site visit held on 16.03.2020 and 17.03.2020. In the said report, the Joint Committee submitted their observations, conclusions and recommendations in accordance with the Terms of Reference (ToR) to the Committee referred therein the Order dated 22/01/2020.Hon'ble NGT after examining the Joint Committee report and the objections filed by the applicant an Order dated 14/9/2020 was passed in the above matter, wherein it was directed the same Committee constituted should look into the aspects furnished below and submit further report on or before 22.12.2020:

(i). To ascertain as to whether the temporary measures that has been taken by the State Authority will be sufficient to protect the Lake from pollution.

(ii). To ascertain the objections raised by the applicant in her objection to the committee report.

(iii). If any further steps need to be taken as a temporary measure till the STPs are established and functioning, the committee is also directed to give their recommendations for that purpose which will effectively protect the Hussainsagar Lake being polluted by the discharge of untreated sewage being drained from these areas.

(iv). To conduct the analysis of the quality of the water from the nallah's and also Hussainsagar Lake, so as to ascertain as to whether there is any improvement in the water quality after the alleged temporarily measures have been taken by the Government in this regard.

2. Joint Committee meeting and site visit:

In compliance with the Order dated 14/9/2020 of Hon'ble NGT, Chennai, as a Nodal agency, Telangana State Pollution Control Board (TSPCB) co-ordinated for the second meeting. The second Joint Committee meeting and site inspection was held on 15/12/2020 and 16/12/2020 respectively, comprising the following Joint Committee members along with the Officials from TSPCB, HMDA, HMWS&SB:

(i). Dr. Y.R.S. Rao, Scientist-G, Deltaic Regional Centre, Kakinada, National Institute of Hydrology, Kakinada.

(ii). Dr. Shashidhar, Professor, IIT, Hyderabad.

(iii). Dr. M.T. Karuppiah, Scientist–E, MoEF&CC, Regional Office, Chennai.

(iv). Smt. Poornima B M, Scientist 'D', Central Pollution Control Board, Regional Directorate, Chennai.

3. Status of temporary measures taken by state authority to protect the lake from pollution:

Hyderabad Metropolitan Development Authority (HMDA) entrusted Bioremediation of Hussainsagar Lake to M/s. Matrix Environment Inc for a period of six months by calling Global tenders and reportedly the M/s. Matrix Environment commenced the work in the month of March, 2020 and continued till August, 2020.Since the agreement period was only for six months up to August, 2020, the bioremediation of Hussain Sagar lake has been stopped. HMDA has again prepared a new RFP (Request for Proposals) for Remediation of Lake and Global tenders are invited.

Bioremediation of Hussain Sagar lake alone will not be sufficient to protect the lake from pollution unless otherwise the pollution from the source is stopped completely. The sewage generated from the Greater Hyderabad Municipal Corporation (GHMC) area flows in four major nallah's and joins the lake. To prevent the influx of sewage from these four nallah's, HMDA have constructed Interception & Diversion (I&D) structures to divert sewage based on dry weather flows. The height of concrete barrier built in nallah's to prevent the sewage from flowing to lake does not prevent during peak and wet weather flows. HMDA claimed that entire sewage is diverted to the Goalnaka nallah. But, still around 30-40% of sewage influx into Hussainsagar Lake. The map below shows the proposed project plan by HMDA and HMWS&SB to protect the lake from pollution.

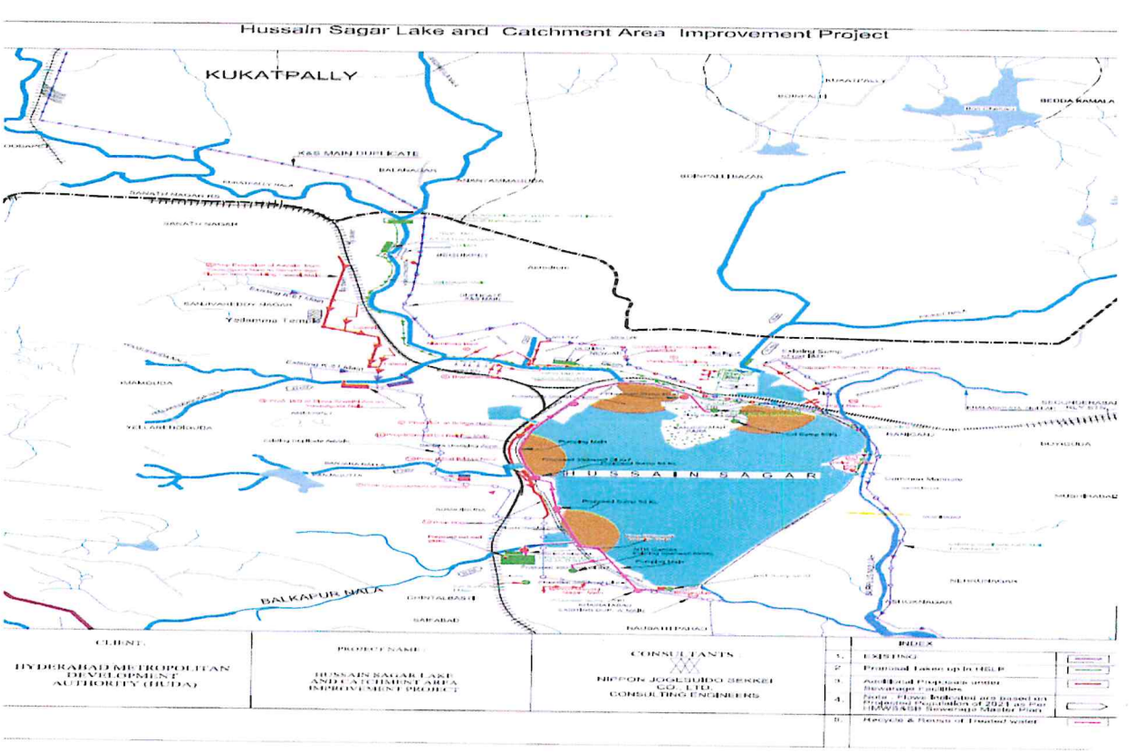

Figure 1: Proposed project plan by HMDA and HMWS&SB to prevent pollution of lake.

4. Reply for the objections raised by the applicant

The point wise reply has been attempted by the joint committee relevant to the objective of this committee constituted by Hon'ble NGT, SZ:

i. During the committee visit on March 16-17, 2020 no alleged frothing was observed, hence in the report there was no mention of frothing. The joint committee completely disagrees with the allegations made by the petitioner that the samples collected by the committee did not include the results of heavy metals. The samples were analysed for heavy metals such as copper, nickel, cadmium, zinc, lead and total chromium for both water and sediments and the results were submitted to NGT in the previous report.

ii. For points no. 10 & 12 comments is required by TSPCB. (It has been observed that 6 number of the industries complied with ZLD system and 93 industries are sending their effluents to CETP and are being regulated by the State PCB. But, still it appears that seepage from the industrial area and washings from unorganised sectors may join the Kukatpally Nallah.

iii. Regarding the demolition of Secretariat building, the matter is being separately dealt by the Hon'ble NGT in the O. A. No. 107 of 2020in the matter of Anumula Revanth Reddy Vs. Union of India& Ors., wherein the Joint Committee already submitted the report and the matter is still pending before the Hon'ble Tribunal.

iv. **Sluice gates and surplus weirs:** During previous visit in March 16-17, 2020, the concerned authority assured that the repairing works of sluice gates and surplus weir at the outlet of the Hussain Sagar Lake will be completed immediately after monsoon season. During this visit of Joint Committee did not observed any changes in the existing structure new work undertaken. State Irrigation department (HL&WBMC) informed that Hussain sagar lake has two surplus weirs and six sluice gates to control flood water during monsoon. Regular repairs of sluices at upstream and downstream are taken up as a part of pre monsoon maintenance for minimizing flood due to inflow of water into Hussain Sagar lake.

The following repair works were taken between the year 2015 and 2017 and no repair works carried out thereafter. The repair works for surplus weirs were not taken up due to continuous flow of water from the lake and after that no other works are carried out:

- Repair works to left side surplus weir
- Repairs to sluice no. 1 & 2 near to the left side surplus weir
- Repairs to sluice no. 3 called Kukkala Thumu near Dhobighat
- Repairs to sluice no. 4 called Khajana Thumu near Dhobhighat.
- Construction of submerged sluice with pipes at vent no. 14 with a discharging capacity of about 550 cusecs.

It was informed that repair works to surplus weir will be completed by this year-end to bring total weir portion to its original level. The committee visited and seen the sluice gates no. 1, 2, 3 &4, other two sluice gates 5 & 6 is not operated & repaired due to encroachments. The sluice gates no. 1 & 2 are at 508m above MSL and sluice gates 3 & 4 are at 506m above MSL.

Photograph of the sluice gate no. 1

5. Status of water quality in nallah's & Hussain Sagar lake after temporary measures taken by the Government:

HMDA initiated Bioremediation in Hussain Sagar lake for a period of six months from March 2020 to August 2020 through M/s Matrix Environment Inc. The bioremediation was carried out only in the lake and sources of pollution to the lake are not controlled, the bioremediation yields good result only when there is no continuous flow of polluted water into the lake. The committee visited the lake in December after four months of bioremediation, during September to October there was heavy downpour in Hyderabad and this may have changed the quality of water to a greater extent. Analysing the water samples nearly after four months does not give the true representation of the work carried out by M/s Matrix Environment Inc. Therefore, the joint committee decided not to analyse the water samples of the lake to ascertain the improvement after the temporary measures taken by the State Government.

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.

View of part of the untreated sewage directly joining in the Hussainsagar Lake from the Kukatpally Nallah.

View of newly constructed I&D structure at Kukatpally Nallah.

View of partial mixing of untreated sewage with treated water from STP of Picket Nallah.

View of overflow /discharge from the Hussain Sagar Lake again confluence into the surplus channel with the stream of untreated sewage and the status of sluice gate.

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