OFFICE OF THE EXECUTING COMMITTEE

Constituted by the Hon'ble National Green Tribunal in Original Application no.138 and 139 of 2016 and OA No.606 of 2018

(Official Address: Tower No.5, 4th Floor, Forest Complex, Sector 68, SAS Nagar) Tel. No. 0172-2298091

Email: *cecghaggar@gmail.com*

To

The Registrar General,
National Green Tribunal,
Faridkot House, Copernicus Marg,
Near India Gate,
New Delhi-110001

No CEC/ 2021/1223
Dated: 15.2.2021

Subject: **Consolidated report of Executing Committee, constituted by the Hon'ble National Green Tribunal in its order dated 7.8.2018 in OA No. 138 of 2016 and OA No. 139 of 2016 in the matter of "Stench Grips Mansa's Sacred Ghaggar River (Suo-Moto Case) and Yogendera Kumar" based on compliance reports submitted by State of Himachal Pradesh, U.T Chandigarh, State of Haryana and Punjab in compliance of order dated 28.10.2020 of Hon'ble National Green Tribunal.**

The Hon'ble National Green Tribunal in order dated 7.8.2018 had constituted an Executing Committee under the Chairmanship of Justice Pritam Pal Former Judge, Punjab and Haryana High Court for executing the orders of the Hon'ble NGT in OA No. 138 of 2016 and OA No. 139 of 2016 in the matter of "Stench Grips Mansa's Sacred Ghaggar River (Suo-Moto Case)" and Yogender Kumar. Subsequently, the Hon'ble Tribunal vide its order dated 21.05.2019 and 01.10.2019, included the name of Dr. Babu Ram, former Member Secretary, Punjab Pollution Control Board and Ms. Urvashi Gulati, IAS, former Chief Secretary, Haryana, respectively, as Members of the Executing Committee.

The Executing Committee has submitted its five reports to Hon'ble National Green Tribunal on 28.2.2019, 14.6.2019, 1.10.2019, 8.1.2020 and 15.6.2020, which have already been considered by the Hon'ble Tribunal. The Executing Committee submitted its 6th report on 07.09.2020, which has been considered by the Hon'ble Tribunal on 28.10.2020. Based on the conclusions and recommendations made by the Executing Committee w.r.t various activities conducted by the State of Himachal Pradesh, U.T Chandigarh, State of Haryana and Punjab regarding installation of new STPs, upgradation of Existing STPs, performance of existing STPs, water quality of river Ghaggar & groundwater quality of ground water sources along the catchment area of river Ghaggar, laying of irrigation network to utilize the treated sewage for irrigation, installation of STPs in rural areas, gaps in completing the different works and treatment of sewage of the towns of all the three States and UT. Chandigarh, Hon'ble Tribunal has passed the detailed order dated 28.10.2020. The operating paras 12, 13, 14 and 15 of the said order are reproduced as under.

"Para-12

We accordingly direct the Chief Secretaries of the Himachal Pradesh, Punjab, Haryana and UT Chandigarh must meet (physically or online) within one month for brainstorming with reference to the recommendations of the Executing Committee for meaningful prompt action and fixing of the accountability for the erring officers. Such meeting may be convened and facilitated as per further direction in this order. Remedial action should not only include setting up of requisite equipment and interim measures but also making persons to whom the job is entrusted personally accountable in terms of their performance. After first meeting also, the four Chief Secretaries must meet atleast once in a month to take stock of the situation. First such meeting may be held on or before 30.11.2020 and meaningful action must be taken latest by 31.01.2021. In case of default, the Tribunal may have no option except to take coercive measures against the erring authorities.

Para-13

We also direct that the Secretary, Ministry of Jal Shakti (MoJS) may also attend such meetings with a view to facilitate the deliberations and to remove bottlenecks, if any. Since the issues involve different States, the Secretary of MoJS will be the nodal agency for calling the meetings and coordinating with the Chief Secretaries. Similarly, NMCG and CPCB who are also involved in monitoring abatement of pollution of 351 river stretches may also attend such meetings.

Para-14

As earlier mentioned, in OA 673/2018, the issue of abatement of pollution in the 351 river stretches is being dealt with by this Tribunal and last order was passed on 21.09.2020 in the light of reports of the CPCB and Central Monitoring Committee headed by the Secretary, MoJS. Ghaggar is also one such highly polluted stretch and is governed by the said order. In the said order, it was inter-alia observed:

"24. We have duly considered the CPCB, CMC and OC reports as above and noted the gaps and recommendations. We accept the recommendations of the Committees already quoted above that the States should furnish quality information and comply with the directions of this Tribunal in terms of orders dated 06.12.2019 and 29.06.2020. The violation of mandate of 100% treatment of sewage may be visited with the assessment and recovery of compensation and violation of timelines for setting up of pollution control devices may also be likewise strictly enforced with the compensation regime in place. There is also need for fully utilizing and augmenting the existing infrastructure as already noted above.

25. The States/UTs may consider using HAM as a business model as well as OCOP concept, FSSM Policy, alternative models for treatment of sewage/faecal sludge, decentralized STPs and also strengthen the online monitoring system. We are also of the view that flood plain zones of all the rivers need to be mapped and demarcated and encroachments removed there from. The same be utilized for plantation, creation of bio-diversity parks and constructed wetlands or other recreational purposes, consistent with the environmental concern. We agree with the OC that river side mining needs to be regulated. To reduce the timelines for setting up of STPs, many States/UTs are consuming time in preparing DPRs whereas model DPRs can be prepared and used for shortening the timelines.

Similarly, SOPs need to be prepared for the timeline to be taken in setting up of STPs as well as for maintenance and operation of existing STPs particularly those not meeting the norms. Number of monitoring stations also needs to be suitably increased. We are also of the view that the State RRCs must function effectively and the Chief Secretaries must hold monthly meetings as it is found from the report of the OC for the State of UP that the Chief Secretaries may not be doing so. Huge failures of the States/UTs may show poor governance as far as environment is concerned which may need to be remedied. As found by the CMC, neither delay is explained nor accountability is fixed for the failure of the concerned officers which is not a happy situation.

Covid-19 and Water Pollution

15. *Needless to mention that the water pollution can magnify health issues in the wake of Covid-19 pandemic. If the State authorities continue to ignore the issue, it will have alarming adverse effect on the lives of the citizens.*

16. *The Chief Secretaries may give the status of compliance as on 31.01.2021 to the Executing Committee as well as to the MoJS on or before 15.02.2021 and the Executing Committee may give its consolidated report, considering the said status reports and its own recommendations on or before 28.02.2021 by e-mail at judicialngt@gov.in preferably in the form of searchable PDF/OCR Support PDF and not in the form of Image PDF.*

List for further consideration on 16.03.2021."

Therefore, based on compliance reports submitted by State of Himachal Pradesh, U.T Chandigarh, State of Haryana and Punjab in compliance of order dated 28.10.2020 of Hon'ble National Green Tribunal, consolidated report of the Executing Committee is submitted for consideration of the Hon'ble Tribunal. The above said report is being sent through email at ***judicial-ngt@gov.in.***

DA/As above

(Justice Pritam Pal) 15.2.21
Former Judge,
Punjab & Haryana High court
Chairman
Executing Committee

Consolidated Report of the

Executing Committee constituted by

Hon'ble National Green Tribunal

in OA No. 138 of 2016

&

OA No. 139 of 2016

in the matter of

"Stench Grips Mansa's Sacred Ghaggar River (Suo-Moto Case)" and Yogender Kumar

Based on compliance reports submitted by State of Himachal Pradesh, U.T Chandigarh, State of Haryana and Punjab in compliance of order dated 28.10.2020

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Submitted on :

15th February, 2021

Contents

Consolidated report of Executing Committee, constituted by the Hon'ble National Green Tribunal in its order dated 7.8.2018 in OA No. 138 of 2016 and OA No. 139 of 2016 in the matter of "Stench Grips Mansa's Sacred Ghaggar River (Suo-Moto Case) and Yogendera Kumar" based on compliance reports submitted by State of Himachal Pradesh, U.T Chandigarh, State of Haryana and Punjab in compliance of order dated 28.10.2020 of Hon'ble National Green Tribunal.

1.0 Constitution of the Executing Committee and Submission of reports to Hon'ble National Green Tribunal by the Executing Committee

The Hon'ble National Green Tribunal in order dated 7.8.2018 had constituted an Executing Committee under the Chairmanship of Justice Pritam Pal Former Judge, Punjab and Haryana High Court for executing the orders of the Hon'ble NGT in OA No. 138 of 2016 and OA No. 139 of 2016 in the matter of "Stench Grips Mansa's Sacred Ghaggar River (Suo-Moto Case)" and Yogender Kumar. Subsequently, the Hon'ble Tribunal vide its order dated 21.05.2019 and 01.10.2019, included the name of Dr. Babu Ram, former Member Secretary, Punjab Pollution Control Board and Ms. Urvashi Gulati, IAS, former Chief Secretary, Haryana, respectively, as Members of the Executing Committee.

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> 25. The States/UTs may consider using HAM as a business model as well as OCOP concept, FSSM Policy, alternative models for treatment of sewage/faecal sludge, decentralized STPs and also strengthen the online monitoring system. We are also of the view that flood plain zones of all the rivers need to be mapped and demarcated and encroachments removed there from. The same be utilized for plantation, creation of bio-diversity parks and constructed wetlands or other recreational purposes, consistent with the environmental concern. We agree with the OC that river side mining needs to be regulated. To reduce the timelines for setting up of STPs, many States/UTs are consuming time in preparing DPRs whereas model DPRs can be prepared and used for shortening the timelines. Similarly, SOPs need to be prepared for the timeline to be taken in setting up of STPs as well as for maintenance and operation of existing STPs particularly those not meeting the norms. Number of monitoring stations also needs to be suitably increased. We are also of the view that the State RRCs must function effectively and the Chief Secretaries must hold monthly meetings as it is found from the report of the OC for the State of UP that the Chief Secretaries may not be doing so. Huge failures of the States/UTs may show poor governance as far as environment is concerned which may need to be remedied. As found by the CMC, neither delay is explained nor accountability is fixed for the failure of the concerned officers which is not a happy situation.

26. While dealing with the control of pollution of River Ganga, the Tribunal noted that following action points for monitoring:

i. Setting up of STPs, Interception and Division (I&D) of drains and preventing untreated sewage and effluents
ii. Use of treated water
iii. Use of sludge manure
iv. Status of septage management
v. Compliance in relation to industries
vi. Installation of STPs/treatment facilities in Hotels/Ashrams and Dharmshalas.
vii. Water quality monitoring of river Ganga and its tributaries.
viii. Maintenance of environmental flow in river Ganga.
ix. Disposal of Bio-medical waste.
x. Compliance of Solid Waste Management (SWM) Rules, 2016.
xi. Preparation of maps and zoning of flood plains.
xii. Mining activity under supervision of the concerned authorities.
xiii. Action against identified polluters, law violators and officers responsible for failure for vigorous monitoring. CMC/RRCs/ OC for UP may conduct further monitoring keeping in mind the above action points."

Covid-19 and Water Pollution

Para-15

Needless to mention that the water pollution can magnify health issues in the wake of Covid-19 pandemic. If the State authorities continue to ignore the issue, it will have alarming adverse effect on the lives of the citizens.

Para-16

The Chief Secretaries may give the status of compliance as on 31.01.2021 to the Executing Committee as well as to the MoJS on or before 15.02.2021 and the Executing Committee may give its consolidated report, considering the said status reports and its own recommendations on or before 28.02.2021 by e-mail at judicialngt@gov.in preferably in the form of searchable PDF/OCR Support PDF and not in the form of Image PDF.

List for further consideration on 16.03.2021."

2.0 Submission of compliance reports by the State of Himachal Pradesh, U.T Chandigarh, State of Punjab and Haryana.

As per the directions of the Hon'ble National Green Tribunal, State of Himachal Pradesh, U.T Chandigarh, State of Punjab and Haryana have submitted their compliance reports on dated 8.2.2021, email dated 8.2.2021, email dated 9.2.2021 and dated 5.2.2021, respectively, which are annexed as per **Annexure-2, 3, 4, and 5**, respectively.

3.0 Consolidated report of the Executing Committee based on compliance report submitted by the States/ UT; Chandigarh.

3.1 State of Himachal Pradesh

The State of Himachal Pradesh has submitted the compliance of recommendations made by the Executing Committee in its 6th report, which is mentioned as under.

3.1.1 Compliance of the recommendations made by the Executing Committee in its 6th report as per order dated 28.10.2020 in OA No. 138 of 2016.

<table>
<tr><th>Sr. No.</th><th colspan="2">Conclusions and Recommendations in 6th Report.</th><th>Compliance Status</th></tr>
<tr><td rowspan="2">1</td><td rowspan="2">The Executing Committee recommends that 02 STPs each capacity 1 MLD to treat the sewage of Parwanoo town should be installed by 31.3.2021</td><td>The Executing Committee recommends that <u>01 STP of capacity 1MLD at Sector-2, Parwanoo</u> should be installed by 31.03.2021.</td><td>• Sewer pipes have been procured. As on 26-01-21, 4100m sewer line of dia 150mm, 900m sewer line of dia 200mm has been laid and 151 manholes have been constructed.
• Equalization Tank: - PCC and Raft foundation work has been completed. 1st and 2nd Lift has been completed.
• MBBR I and MBBR II: - PCC and Raft foundation work has been completed. 1st and 2nd Lift has been completed, 3rd lift is in progress.
• Sludge Sump: - PCC and Raft foundation work has been completed, 1st lift has been completed, 2nd lift is under is in progress.
• Filtrate Sump all civil work completed.</td></tr>
<tr><td>The concerned department of the State should make immediate arrangements to get the land transferred so that work of <u>STP located in village Tipra</u>, may be started. And should be installed by 31.03.2021.</td><td>• STP at Tipra: Tender work of both STPs has been awarded on 19.03.2020. The land transfer case for STP Tipra is pending at CCF, Forest Department. The Forest Department has also given permission for the site clearance/ development to the Jal Shakti Vibhag.</td></tr>
<tr><td>2</td><td>The Executing Committee recommends that STP of capacity 1.5 MLD in Kala Amb and 1 MLD in Trilokpur should be completed by</td><td><u>STP of capacity 1.5 MLD in Kala Amb</u> should be completed by 31.03.2021</td><td>Work has been awarded on 7.03.2020. Pipes for the sewer line have been procured. Approx. 4.6 km sewer line has been laid.
The completion time schedule of STP Kala Amb is as below:-
<table>
<tr><td>Approval of Design</td><td>Approved</td></tr>
<tr><td>Site Development</td><td>Completed</td></tr>
<tr><td>Completion of civil works</td><td>31.01.2021 (Under Progress)</td></tr>
<tr><td>Installation of machineries</td><td>20.02.2021</td></tr>
<tr><td>Pipe tank and networking</td><td>28.02.2021</td></tr>
<tr><td>Project completion and trial run</td><td>31.03.2021</td></tr>
</table></td></tr>
<tr><td></td><td></td><td><u>STP of 1.5 MLD capacity in Trilokpur</u> should be completed by 31.03.2021.</td><td>Sewer pipes procured for sewer line. The land handed over to contractor. The hydraulic design has been approved by the competent authority. Approx. 5 km sewer line has been laid as on 26.01.2021. The Civil Construction work started on site.

The completion time schedule of STP Trilokpur is as below:-</td></tr>
</table>

<table>
<tr><th>Sr. No.</th><th>Conclusions and Recommendations in 6th Report.</th><th>Compliance Status</th></tr>
<tr><td></td><td>31.3.2021</td><td>
<table>
<tr><td>Approval of Design</td><td>Approved</td></tr>
<tr><td>Site Development</td><td>Completed</td></tr>
<tr><td>Completion of civil works</td><td>31.12.2020 (Still under Progress)</td></tr>
<tr><td>Installation of machineries</td><td>31.01.2021</td></tr>
<tr><td>Pipe tank and networking</td><td>28.02.2021</td></tr>
<tr><td>Project completion and trial run</td><td>31.03.2021</td></tr>
</table>
</td></tr>
<tr><td>3</td><td>Presently, 2 small STPs each of capacity 0.07 MLD have been installed in Parwanoo area and are in working condition. One STP is meeting with prescribed norms and 2nd STP of capacity 0.07 MLD has recently been commissioned.</td><td>The two 70 KLD STPs have been installed and commissioned at Khadeen and Sector 5 Parwanoo.</td></tr>
<tr><td>4</td><td>The Executing Committee recommends that <u>CETP of capacity 5 MLD in Kala Amb area</u> should be completed by 30.06.2021.</td><td>Land for the construction of CETP has been allotted and tender has been awarded on 31st August, 2020. Process design for the CETP has also been approved by NIT Bhopal. Land levelling/ site development work has been started on 20.11.2020.
The completion time schedule of CETP Kala Amb is as below: -
<table>
<tr><td>Approval of design and drawing by competent authority (IIT Roorkee or any other IIT/NIT)</td><td>Approved</td></tr>
<tr><td>Site Development</td><td>Completed</td></tr>
<tr><td>Completion of civil work</td><td>31.01.2021 (Under progress)</td></tr>
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<tr><td>Project completion and trial run</td><td>31.03.2021</td></tr>
</table>
</td></tr>
<tr><td>5</td><td>The Executing Committee recommends that <u>HPPCB shall continue to make surprise inspection of the industries</u> as per the time schedule prescribed by HPPCB/CPCB and <u>action against the defaulting industries</u> may be taken under the provisions of the Water Act, 1974.</td><td>Details of Inspections and Sampling carried out in Sukhna and Markanda Catchment from October 2020 to 31.01.2021.
<table>
<tr><th>Parwanoo</th><th>Kala Amb</th></tr>
<tr><td>No. Of Inspections- 93
No. Of Samples- 42
<u>Show Cause Notices issued- 4</u>
Environmental Compensation- Nil</td><td>No. Of Inspections- 72
No. Of Samples- 41
<u>Show Cause Notices issued- 3</u>
<u>Environmental Compensation- Rs. 668750/-</u></td></tr>
</table>
• HPPCB constituted Surveillance squad which carried out inspection of about 50 nos. of the industries falling in the catchment of Sukhna Nallah and River Markanda.</td></tr>
<tr><td>6</td><td>The Executing Committee recommends that the <u>State of Himachal Pradesh</u> shall <u>ensure sewage of all the villages, located in the catchment area of Sukhna Nallah and river Markanda,</u></td><td>All the villages in the catchment of Sukhna Nallah at Parwanoo and Markanda at Kala Amb have been covered in the Action Plan for the sewage treatment and industrial wastewaters treatment of proposed STPs and CETPs at Parwanoo and Kala Amb respectively.</td></tr>
</table>

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<tr><th>Sr. No.</th><th>Conclusions and Recommendations in 6th Report.</th><th>Compliance Status</th></tr>
<tr><td></td><td><u>should be connected to the STPs and</u> CETP being installed in these areas.</td><td>
<table>
<tr><th>S. No</th><th>Name of Work / STP</th><th>Name of Villages</th></tr>
<tr><td>i)</td><td>Sewage Treatment Plants for Parwanoo Town.</td><td>Villages Nariyal, Ambota, Dhagged , Taksal, Gumma of GP Taksal will be connected with the STP and the other villages of GP Jabli, Dharampur, Gulhari, Jangeshu, Garkhal Sanawar, Kasauli Garkhal, Madhala and Kalu Jhanda have been mapped with the proposed STPs for septage management.</td></tr>
<tr><td>ii)</td><td>Providing sewerage system for Kala Amb and Moginand area. Laying of sewerage network and pre-treatment plant.</td><td>Villages Moginand, Ogli, Rampur Jattan, Kala Amb of GP Kala Amb will be connected with the CETP at Kala Amb. Other surrounding Rural Areas have achieved ODF status and double pit treatment shall be provided in these areas.</td></tr>
<tr><td>iii)</td><td>Providing sewerage system for Trilokpur and Kheri area: Laying of sewerage network and Setting up of sewerage treatment plant.</td><td>Villages Trilokpur, Kheri, Johron of GP Trilokpur will be connected with the STP. Other surrounding Rural Areas have achieved ODF status and double pit treatment shall be provided in these areas.</td></tr>
</table>
</td></tr>
<tr><td>8</td><td>The State of HP should install STP's and CETP in Kala Amb area and Parwanoo area by 31.03.2021, so that organic parameters and F.Coli are always within the prescribed norms and water quality of the drains/ river may be further improved.</td><td>Compliance is being ensured as per detail in point number 1, 2 & 4.</td></tr>
<tr><td>9</td><td>The <u>concerned department of State</u> of Himachal Pradesh should <u>prepare a detailed scheme to utilize the treated sewage for construction activities, toilet flushing, industrial usage, plantation, road cleaning, watering of green belt</u> or any other use within 02 months.</td><td>Reuse of Treated Waste Water (Action plan proposed under OA No 593)
• For reuse of Treated Waste Water (TWW), tertiary treatment of effluent is proposed to enable the bulk water users for utilization.
• Arrangement for collection of the TWW will be provided at all STPs for bulk users by JSV.
• No user charges shall be levied, however, the users have to make their own arrangements to carry the treated waste water either through tankers or pipe lines.
• The bulk water users will be identified by Industries Department/ HPSPCB.</td></tr>
<tr><td>10</td><td><u>HPPCB should monitor the ground water quality of groundwater sources located</u> in the catchment area of Sukhna Nallah and River Markanda, as per the frequency prescribed by CPCB. In case any ground water source is found contaminated, the same shall</td><td>HPSPCB is regularly monitoring the ground water quality.
2 nosSampling locations are in catchment of Sukhna Nallah:
i. Hand Pump near Shiwalik Café
ii. Bore well at HPMC
3 nosSampling locations are located in catchment of Markanda:
i. Well at Residential Area Kala Amb.
ii. Well at Industrial Area Kala Amb
iii. Hand Pump at Kala Amb</td></tr>
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<tr><td></td><td>be sealed by HPPCB and display board be erected at the site with caption as "Water is not fit for drinking purposes"</td><td>Comparative analysis of Ground water monitoring results is appended as <u>Annexure-A.</u></td></tr>
<tr><td>11</td><td>In order to <u>maintain environmental flow (e-flow)</u> in <u>Sukhna Nallah and Markanda</u> river, more check dams and water retaining structures may be provided <u>so as to retain and store the excess rain water flow and discharge the same in a regulated manner in the drains/nallahs</u> during non-Monsoon periods.</td><td>The <u>following steps have</u> been taken to maintain environmental flow in the river/ Nallah
• Total <u>27 nos of Check Dams</u> have been <u>constructed by the Forest Department in Sukhna</u> (Priority-I) at <u>Parwanoo.</u></td></tr>
<tr><td>12</td><td>HPPCB shall constitute teams to conduct surprise inspections of the catchment area of Sukhna Nallah and river Markanda to ensure that there is no discharge of septage and faecal sludge from septage tank in these Nallahs.</td><td>• 2 Nos of Joint Inspection at regional level (HPPCB, Gram Panchayat, Industries Department) has been carried out each in Sukhna Nallah and River Markanda on 16-07-2020 and 1-07-2020 respectively and no such incidence of discharging of septage and faecal sludge from septage tank in these Nallahs was observed.
• Total 10 nos. of inspection has been carried out by Surveillance Squad constituted by HPSPCB.
• No illegal discharge of septage or feacal sludge has been observed.
• All proposed STPs in the catchment has been equipped with septage management.
• Further it is pertinent to mention here that during routine surveillance and monitoring conducted by the Regional offices, HPSPCB, this aspect is regularly checked as well.</td></tr>
<tr><td>12B</td><td>Policy/guidelines for management of septage and faecal sludge from rural areas and other un-sewered areas may be framed within 3 months.</td><td>• Himachal Pradesh has achieved Open Defecation Free status, therefore, in rural areas toilet facilities with septic tanks for each household are available and in use.
• Further, an action plan for septage management for rural areas in compliance of Hon'ble NGT order in O.A. No. 593 of 2017 has been prepared which will incorporate the mapping of STPs for the management of the septage in the semi-urban/ peri-urban areas.
• Total 166 Gram Panchayats in State have been covered for Septage management under existing STPs and proposed STPs all over State.
• As regard the STPs in the catchment of Sukhna Nallah and River Markanda, the proposed STP of Parwanoo has been mapped for the septage management in nearby areas.
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<table>
<tr><th>Sr. No.</th><th>Conclusions and Recommendations in 6th Report.</th><th>Compliance Status</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>iii)</td><td>Providing sewerage system for Trilokpur and Kheri area: Laying of sewerage network and Setting up of sewerage treatment plant.</td><td>Villages Trilokpur, Kheri, Johron of GP Trilokpur will be connected with the STP. Other surrounding Rural Areas have achieved OFD status and double pit treatment shall be provided in these areas.</td></tr>
</table>
A policy/ guideline for management of septage & faecal sludge from rural areas in r/o of District Sirmaur has been formulated.
</td></tr>
<tr><td>13</td><td><u>No STP</u> along Sukhna Nallah and Markanda river has been constructed, therefore, <u>there is need to treat sewage of the towns of Kala Amb area and Parwanoo area by providing in-situ remediation technology in the drains.</u> In-situ remediation technology work undertaken at Samtel Nallah and proposed on Jattan Wala Nallah at 2 locations should be installed and commissioned by 31.10.2020.</td><td>River Markanda catchment in Kala Amb:
• The tender for installation of phyto-remediation in Jattanwala Nallah at 2 locations has been awarded. Jal Shakti Vibhag has started the construction work of phyto-remediation in Jattanwala nallah at 1st site.
• Weir construction on both the sites has been completed. Construction of reed bed was initiated at Site No. 1, which was stopped due to land dispute with local residents.
• Construction of reed beds has been initiated at Site No. 2 for which work is in progress.
Sukhna Nallah catchment in Parwanoo:
• The civil work & plantation of plants has been completed and facility has been made operational.
• Water sampling will be done after replacing dried out plants.
• More plants will be planted in upcoming months.</td></tr>
<tr><td>14</td><td><u>HPPCB shall install Real Time Water Quality Monitoring Stations</u> in Jattan Wala Nallah, Markanda River and Sukhna Nallah by 31.12.2020</td><td><u>2 (Two)Real Time Water Quality Monitoring Stations are installed</u> at
1. <u>River Markanda</u>
2. <u>River Kaushalaya</u> at village Kamli
• The systems are also connected to HPSPCB server and the Real Time data is being transmitted to State Board Server regularly.
• The Parameters DO, BOD, TSS, pH, Temp. and Flow Rate are being monitored and the equipment installed are functioning properly.
<u>Sukhna Nallah and Jattanwala Nallah</u> are <u>seasonal drains</u>, hence <u>installation of RTWQMS is not feasible.</u></td></tr>
</table>

3.1.2 Visit to the pollution sources and control thereof in Kala Amb area on 28.12.2020 by the Executing Committee.

The Executing Committee has visited the pollution sources and control thereof in Kala Amb area on 28.12.2020 and the report alongwith recommendations of the Executing Committee is Annexed as per **Annexure-6.**

3.1.3 Visit to pollution sources and control thereof in Parwanoo area on 27.1.2021 by the Executing Committee.

The Executing Committee has also visited the pollution sources and control thereof in Parwanoo area on 27.1.2021 and the report alongwith recommendations of Executing Committee is annexed as per **Annexure-7.**

3.1.4 Water quality of Sukhna Nallah, river Kaushalya, Jattan Wala Nallah and river Markanda

The water quality of Sukhna Nallah, river Kaushalya, Jattan Wala Nallah and river Markanda, as monitored by HPSPCB in the month of September 2020 to November 2020,indicates as under.

- The values of BOD and F.coli in Sukhna Nallah have been found varied between 0.4-2.2 mg/l and 14-21 MPN/100ml.
- The water quality of river Kaushalya indicates the value of BOD varying between 0.4-0.8 mg/l and F.coli between 11-21 MPN/100 ml.
- The values of BOD and F.coli in Jattan Wala Nallah were found between 18-25 mg/l and 13000-17000 MPN/100 ml.
- The water quality of river Markanda d/s of Jattan Wala Nallah indicates the value of BOD varying between 8-9 mg/l and F.coli between 1700-3300 MPN/100 ml.

3.1.5 Ground water quality in catchment area of Sukhna Nallah and Jattan Wala Nallah

The analysis results of ground water samples, analyzed by HPSPCB in the month of August, 2020 to November, 2020, indicate that all the values are within the norms except slightly higher value of Total Alkalinity, Total hardness and TDS in the catchment area of Sukhna Nallah at Parwanoo, which may be due to geogenic reasons.

3.1.6 Recommendations of the Executing Committee.

1. **STP of capacity 1 MLD, being installed in sector-2, Parwanoo, should be completed by 31.3.2021.**
2. **Sewerage network shall be completed simultaneously with the completion of STP, Sector-2, Parwanoo.**
3. **The treated sewage of STP, sector-2 of capacity 1 MLD shall be utilized for construction activities, road cleaning, green belts and other useful usage.**
4. **Jal Shakti Bibhag shall get land transferred from department of forests for installation of 2nd STP of capacity 1 MLD at Tipra within 15 days.**
5. **STP, Tipra of capacity 1 MLD may be completed by 30.6.2021**
6. **CETP of capacity 2.5 MLD shall be completed by 31.3.2021.**
7. **CETP of capacity 2.5 MLD, proposed to be installed in 2nd phase shall be started constructing at the earliest possible to ensure that no untreated effluent is discharged into Jattan Wala Nallah and River Markanda further leading to river Ghaggar.**
8. **Effluent Treatment Plant of capacity 0.15 MLD for electroplating industries may be based on Zero Liquid Discharge (ZLD) technology as**

the metal contents may contaminate the surface water quality of the river.

9. STP of capacity 1.5 MLD for treatment of sewage of villages Trilokpur, Kheri and Johron, Kala Amb area, may be completed by 31.3.2021.
10. The treated sewage of STP shall be utilized for industrial usage, construction activities, gardening and other useful purposes.
11. The dried sludge of STP shall be disposed of in an environmentally sound manner.
12. In-situ bio remediation/ Phyto remediation technology set up in Jattan Wala Nallah (Kala Amb area), shall be made operational within 15 days.
13. In the in-situ bio remediation system installed in Samtel Nallah, the plants, which have become dry, should be replaced with new plants within 1 month and ensure that adequate number of plants are planted, which may function as Phyto-remediation system in the drain to treat sewage/wastewater as an interim measure.
14. Himachal State Pollution Control Board shall collect the effluent samples at the inlet and outlet of the Phyto remediation technology setup in Jattan Wala Nallah and Samtel Nallah within 15 days to assess effectiveness of the system.
15. The water quality of Sukhna Nallah and Kaushalya river is meeting with class-B as per water quality criteria prescribed by CPCB. Efforts may be made to upgrade the quality of these Nallahs/river to class A or otherwise atleast it may be maintained to class B.
16. The water quality of Jattan Wala Nallah and river Markanda has been found contaminated due to presence of high value of BOD and F.coli, therefore, in order to improve the water quality of Jattan Wala Nallah and river Markanda, the recommendations are reiterated as under :
    - CETP of capacity 2.5 MLD shall be completed by 31.3.2021.
    - CETP of capacity 2.5 MLD, proposed to be install in 2nd phase shall be started constructing at the earliest possible to ensure that no untreated effluent is discharged into Jattan Wala Nallah and River Markanda further leading to river Ghaggar.
    - Effluent Treatment Plant of capacity 0.15 MLD for electroplating industries may be based on Zero Liquid Discharge (ZLD) technology as the metal contents may contaminate the surface water quality of the river.
    - STP of capacity 1.5 MLD for treatment of sewage of villages Trilokpur, Kheri and Johron, Kala Amb area, may be completed by 31.3.2021.
    - The treated sewage of STP shall be utilized for industrial usage, construction activities, gardening and other useful purposes.

17. **HPSPCB shall continue to make surprise inspection of the industries as per the time schedule prescribed by HPSPCB/CPCB and action against the defaulting industries may be taken under the provisions of Water Act, 1974.**

18. **The State of Himachal Pradesh shall ensure sewage of all the villages located in the catchment area of Sukhna Nallah and river Markanda should be connected to STPs and CETP being installed in these areas.**

19. **HPPCB shall constitute teams to conduct surprise inspections of the catchment area of Sukhna Nallah and river Markanda to ensure that there is no discharge of septage and faecal sludge from septage tank in these Nallahs.**

20. **HSPCB shall continue to monitor ground water quality of ground water sources in catchment area of river Ghaggar as per the frequency maintained by it and in case any ground water sample is found contaminated, the same may be sealed and a display board mentioning that " Ground water is not fit for drinking".**

21. **The Executing Committee held its 19th meeting w.r.t control of pollution in river Ghaggar with the State Level Officer of State of Himachal Pradesh on 26.11.2020 and minutes of the meeting have been conveyed to the Member Secretary, HPSPCB vide no. CEC/2020/1130 dated 27.11.2020 (copy enclosed as per Annexure-8). The Executing Committee recommends that the various departments of State of Himachal Pradesh may also implement the recommendation made/direction given by the Executing Committee as per the time schedule mentioned in the minutes of the meeting.**

3.2 U.T, Chandigarh

3.2.1 Sources of pollution in river Ghaggar from Chandigarh area and control thereof

3.2.1.1 Domestic wastewater, its treatment and Mode of disposal

Total quantity of domestic wastewater of Municipal Corporation, Chandigarh is about 243 MLD and for treatment of sewage, following STPs have been installed:

i) BRD: 49.5 MLD,
ii) Raipur kalan: 22.5 MLD,
iii) Diggian: 135 MLD,
iv) Raipur Khurd: 5.63 MLD,
v) Dhanas: 7.5 MLD and
vi) Maloya: 22.5 MLD
vii) 2nd STP at Raipur Kalan: 5.625 MLD, which is under trial.

Out of total 243 MLD treated sewage, about 45 MLD treated sewage is utilized for watering of various parks, green belts and individual houses of Chandigarh. For the discharge of remaining quantity of treated / untreated sewage of Chandigarh, there are following 03 main sources.

i) Sukhna Choe
ii) N-Choe
iii) Patiala-ki-rao

Sukhna Choe and N-Choe further lead to river Ghaggar, which is 7 Km away from Chandigarh.

3.2.1.2 Industrial wastewater and treatment.

It has been reported that all the industrial units of Chandigarh area have installed their individual ETPs and treated wastewater of the industries is discharged into sewerage system which further leads to sewage treatment plants. Most of the industries are located in industrial area, Phase-1 and industrial area Phase-II and Hotels/Restaurants/hospitals in Sectors. CPCC has claimed that consent to operate under the provisions of the Water Act, 1974 is granted to only those industries which have proper effluent treatment plant and/ or air pollution control device. Therefore, all the industries of Chandigarh, which are in operation, have installed effluent treatment plants and/or air pollution control devices

3.2.1.3 Closing of outlets falling into Sukhna Choe and N-Choe

It has been reported as under:

- All the 11 discharge outlets, falling into Sukhna Choe, where untreated wastewater was being discharged, have been plugged except one point near Raipur Khurd, which is expected to be plugged on 7.2.2021.

- All the 08 discharge outlets, falling into N-Choe, where untreated wastewater was being discharged, have been plugged. Now, no untreated wastewater is discharged into N-Choe in Chandigarh.

3.2.1.4 Gap between Wastewater generation and treatment capacity

It has been reported that by installing a 2nd STP at Raipur Kalan of capacity 5.625 MLD and completion of STP of capacity 1.8 MLD at Kishangarh alongwith existing 6 STPs, there is more than 100% treatment capacity (treatment capacity is 248 MLD against wastewater generation of 243 MLD) and as such there shall be no gap in generation of wastewater and treatment capacity.

3.2.1.5 Performance of existing Sewage Treatment Plants

Out of 7 operational STPs, 3 STPs (Raipur Kalan, Raipur Khurd and Diggian) fail to achieve the desired BOD level and 4 STPs (3 BRD, Raipur Kalan, Raipur Khurd and Diggian) fail to achieve the desired level of F.Coli, 02 STPs at Maloya and Dhanas are meeting with the desired level of BOD and F.Coli.

3.2.1.6 Installation of new STP and Upgradation of existing STPs

The status w.r.t new STPs and upgradation of existing STPs is as under:

- STP of capacity 1.8 MLD (0.4 MGD) at village Kishangarh is under construction and likely to be completed by 30.6.2021.
- The work of upgradation/rehabilitation of 05 STPs (Diggian, 3 BRD, Raipur Kalan, Raipur Khurd and Dhanas) has been started and shall be completed between September, 2021 to August, 2022.
- Online monitoring system (OCEMS) shall be installed simultaneously with the completion of the upgradation work of 5 STPs.

3.2.1.7 Installation of in-situ bio remediation technology in Sukhna Choe and N-Choe

The report indicates that in-situ bio remediation technology work in both the drains (Sukhna Choe and N-Choe) shall be completed by 28.2.2021.

3.2.2 Installation of Real Time Water Quality Monitoring Stations (RTWQMS) in river Ghaggar

It has been mentioned as under:

- Real Time Water Quality Monitoring Station (RTWQMS) has been installed in N-Choe and is under trial run.
- Tender for installation of RTWQMS at Sukhna Choe has been opened. The work shall be completed by 28.2.2021.

3.2.3 Groundwater quality

The groundwater quality, monitored by CPCC in the year, 2020, indicates that total alkalinity, total hardness, calcium, magnesium and TDS in the ground water samples have been found higher than the desirable limits.

3.2.4 Water quality of Sukhna Choe, N-Choe at their exit points and river Ghaggar

The monitoring of water quality of Sukhna Choe and N-Choe, conducted by CPCC in the year, 2020, indicates as under:

- The values of BOD (113-202 mg/l), COD (193-499 mg/l) and F.coli (2,40000-7000000 MPN/100 ml) in Sukhna Choe are higher than the permissible limits.
- The values of BOD (33-210 mg/l), COD (63-428 mg/l) and F.coli (93000-7900000 MPN/100 ml) in N-Choe are higher than the permissible limits.
- The water quality of river Ghaggar monitored by CPCC in the year, 2020 indicates that the value of TSS (166-3545 mg/l) and F.coli (2000-2200000 MPN/100 ML), which are higher than the permissible limits.

The analysis results of wastewater flowing into Sukhna Choe and N-Choe, which further lead to river Ghaggar, indicate that either the sewage treatment plants are not operated properly and untreated sewage is discharged into these choes or some of the outlets, carrying untreated sewage, are directly falling into these Choes, which ultimately lead to river Ghaggar and contaminating the water quality of the river.

3.2.5 Recommendations of the Executing Committee

1. **Out of total 08 STPs [3 BRD: 49.5 MLD, Raipur Kalan: 22.5 MLD, Diggian: 135 MLD, Raipur Khurd: 5.63 MLD, Dhanas: 7.5 MLD, Maloya: 22.5 MLD, Raipur Kalan 2ndSTP : 5.625 MLD (under trial run) and Kishangarh: 1.8 MLD (under construction)], 06 STPs are in operation, whereas 2nd STP Raipur kalan: 5.625 MLD has been constructed but under trial run. STP Kishangarh of capacity 1.8 MLD is under construction and is likely to be completed by 30.6.2021.**

   The Executing Committee recommends as under:

   - **2nd STP Raipur kalan of capacity 5.625 MLD should be made operational by 28.2.2021**
   - **New STP at Kishangarh of capacity 1.8 MLD, which is under construction, should be completed by 31.3.2021.**

2. **It has been reported that all the 11 outlets, falling into Sukhna Choe, have been plugged except 01 outlet near Raipur khurd, which is likely to be plugged by 7.2.2021 and all the 08 outlets, falling into N-Choe, have been plugged. Moreover, there is no gap in treatment capacity. However, the analysis results of water quality of Sukhna Choe and N-Choe and subsequently river Ghaggar indicate that the values of BOD, COD and F.coli are higher than the permissible limits. These facts indicate that there are some of the outlets which are carrying untreated sewage of Chandigarh area and are directly falling into these choes or the Municipal Corporation Chandigarh is not operating their sewage treatment plants properly.**

Therefore the Executing Committee recommends as under:

- **Chandigarh pollution control committee shall make detailed survey along Sukhna Choe and N-Choe within 01 month and ensure that no outlet carrying untreated sewage/wastewater is discharged into Sukhna Choe and N-Choe.**
- **The upgradation work of 05 STPs (3 BRD: 49.5 MLD, Raipur Kalan: 22.5 MLD, Diggian: 135 MLD, Raipur Khurd: 5.63 MLD and Dhanas: 7.5) should be completed by 30.6.2021.**
- **2nd STP of capacity 5.625 MLD at Raipur kalan should be made operational by 28.2.2021 and CPCC shall monitor the performance of STP by 15.3.2021.**
- **STP of capacity 1.8 MLD (0.4 MGD) at Kishangarh should be completed by 31.3.2021.**

3. **The data w.r.t monitoring of groundwater quality indicate that ground water sources at some locations in the catchment area of Sukhna Choe and N-Choe have been found containing higher values of parameters namely total hardness, calcium and TDS.**

   The Executing Committee recommends that CPCC in association with officers of Municipal Corporation Chandigarh shall identify such ground water sources, whose ground water has been found containing higher values of total hardness, calcium and TDS parameters and these points may be sealed and display boards mentioning "Ground water is not fit for drinking, may be erected at these sites.

4. **In order to improve the water quality of Sukhna Choe and N-Choe, the work of installation of in-situ bio remediation technology in both the Choes has been started and these may be completed by 28.2.2021.**

5. **For the monitoring of water quality of Sukhna Choe and N-Choe, real time water quality monitoring Station has been installed in N-Choe and is under trail run. Tender for installation of RTWQMS at Sukhna Choe has been opened and under allotment.**

   The Executing Committee recommends that real time water quality monitoring stations at N-Choe may be commissioned by 15.2.2021 and in Sukhna Choe, RTWQMS may be installed by 28.2.2021.

6. **Presently, as per the report, treated wastewater about 45 MLD, out of total 243 MLD, is utilized in various parks, green belts and houses in Chandigarh.**

   It is recommended that Municipal Corporation, Chandigarh shall prepare plan for utilization of tertiary treated sewage after upgradation of all the existing STPs to utilize the same for road cleaning, bus stand and railway stations for cleaning purposes so as to reduce the quantity of treated sewage to discharge into Sukhna Choe and N-Choe.

7. **CPCC shall continue to monitor the water quality of Sukhna Choe , N-Choe and river Ghaggar on monthly basis so that improvement, if any, in water quality of these Choes may be observed.**
8. **The Executing Committee held its 19th meeting w.r.t control of pollution in river Ghaggar with the State level officers of U.T Chandigarh on 2.11.2020 and minutes of the meeting have been conveyed to the Member Secretary, CPCC vide no. CEC/2020/1101 dated 3.11.2020 (copy enclosed as per Annexure-9).**

The Executing Committee recommends that the various departments of U.T Chandigarh may also implement the recommendations made/directions given by the Executing Committee as per the time schedule mentioned in the minutes of the meeting.

3.3 State of Punjab.

The State of Punjab has submitted the compliance of recommendations made by the Executing Committee in its 6th report, which is mentioned as under:

3.3.1 Compliance of recommendations of Executing Committee made in its 6th report as per order dated 28.10.2020 in OA 138 of 2016

Sr. No	Conclusions & Recommendations of Executive Committee	Concerned Department	Status of Compliance as on 31st January, 2021
1.	30 towns have been identified, which are located in the catchment area of river Ghaggar. For these 30 towns, 48 STPs are required to be installed, out of which 21 STPs for 20 towns have been completed and commissioned. Punjab Pollution Control Board is carrying out the monitoring of all these STPs on monthly basis and the performance of these STPs monitored during March, 2020 to July, 2020 indicates that 4 towns in the month of March, 5 towns in the month of May, 6 towns in the month of June and 4 towns in the month of July were not found meeting with prescribed standards. Punjab Pollution Control Board should take legal action under the provisions of Water Act, 1974 against the operating agencies of the STPs namely Sardulgarh, Bareta, Bhikhi, Mohali, Rajpura, Patiala, Bhudhlada and Zirakpur which were found non-compliant during monitoring by PPCB from March, 2020 to July, 2020. Non-compliance in these STPs observed by Punjab Pollution Control Board may be conveyed to the	Punjab Pollution Control Board (PPCB)	(i) Action taken By PPCB during the month of March to July, 2020 are as under: - Environmental Compensation of Rs. 4,60,000/- & Rs. 9,20,111/- imposed to the operating agencies of Sardulgarh and Bareta, respectively. However, same is yet be deposited by respective MCs. - Complaint filed against Nagar Panchyat, Bhikhi at Hon'ble Court of CJM, Mansa under Water Act. - Advisory issued to STPs at Mohali, Rajpura, Patiala & Zirakpur. - Action under process against STP Bhudlada&Zirakpur. (ii) The updated status of these 8 STPs from August, 2020- January, 2021 is annexed at **Annexure-I.** (iii) The STPs of Baretta, Bhikhi & Sardulgarh based on WSP technology, found consistently non-compliant. The Department has planned the upgradation of these STPs. DPR for upgradation of these STPs is under approval and these STPs likely to be upgraded by 31.12.2023.

<table>
<tr><th>Sr. No</th><th>Conclusions & Recommendations of Executive Committee</th><th>Concerned Department</th><th>Status of Compliance as on 31st January, 2021</th></tr>
<tr><td></td><td>concerned operating agencies of STPs and these agencies may be directed to comply with the observations in time bound manner and operate the STPs efficiently so as to meet with the prescribed standards.</td><td></td><td></td></tr>
<tr><td>2.</td><td>11 STPs in 9 towns are under construction. Construction work has been started in 7 STPs [Boha: 2 MLD (52%), Dhuri: 5 MLD (27%), Sangrur: 4 MLD (30%), Bassi Pathana: 3 MLD (14%), Sirhind: 5 MLD (20%), Sirhind: 4 MLD (12%) and Banur: 0.5 MLD (5%)]. In case of 3 STPs (Nabha: 12MLD, Longowal: 5 MLD and Patiala (MES): 6 MLD, the work has been allotted. To treat sewage of 2 MLD of Sirhind town, diversion work of pond water is under progress.

The State of Punjab should accelerate the progress of under construction 11 STPs so that these may be completed by 31.3.2021.</td><td>Punjab Water Supply &Sewerage Board (PWSSB)</td><td>(i) The status of under construction STPs is as under:
<table>
<tr><th>Name of STP</th><th>% completion of work</th><th>Timeline as perDept t.</th></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td>Boha (2 MLD)</td><td>70%</td><td>30.06.21</td></tr>
<tr><td>Patiala (15 MLD)</td><td>80%</td><td>30.04.21</td></tr>
<tr><td>Sirhind (5MLD)</td><td>20%</td><td>30.09.21</td></tr>
<tr><td>Sangrur (4 MLD)</td><td>45%</td><td>30.11.21</td></tr>
<tr><td>Dhuri (5 MLD), BassiPathana (3 MLD), Sirhind-2 No. (6 MLD)</td><td>10-30%</td><td>31.12.21</td></tr>
<tr><td>BanurIssey Khan (0.5 MLD)</td><td>20%</td><td>31.03.21</td></tr>
<tr><td>Nabha (12 MLD)</td><td>Design to be submitted by agency</td><td>31.12.21</td></tr>
<tr><td>Longowal (5 MLD)</td><td>-do-</td><td>31.01.22</td></tr>
<tr><td>Sanour(4 MLD)-</td><td>Work allotted of Badinadi and chotinadi at Patiala where sanour waste water will be treated</td><td>30.09.22</td></tr>
</table></td></tr>
</table>

Sr. No	Conclusions & Recommendations of Executive Committee	Concerned Department	Status of Compliance as on 31st January, 2021
3.	In 14 towns, there is proposal to install 19 STPs, out of which 7 STPs (Dera Bassi: 2 MLD, Dera Bassi: 2 MLD, Lalru: 1 MLD, Ghanaur: 2 MLD, Sanaur: 4 MLD, Nabha: 1 MLD, Nabha MES: 1 MLD) are at tender in stage. In case of 5 STPs (Amloh: 3 MLD, Lalru Mandi: 1 ½ MLD, Dhuri : 6 MLD, Sangrur: 11 MLD, Bassi Pathana: 0.2 MLD), land issues are to be resolved. 5 STPs (Gholu Majra: 0.35 MLD, Lalru: 0.15 MLD, Lalru: 0.35, Banur: 0.15 MLD, Zirakpur: 17 MLD) are at DNIT stage. In case of 01 STP of Cheema town, where there is proposal to install STP of capacity 2 MLD, the Department is exploring the possibility for providing nano bubble technology in the drain to treat sewerage in the town. 01 STP of capacity 3 MLD for Bhadson town, DPR is under preparation. The senior functionaries of Department of Local Government should resolve the issue of land for the STPs namely Amloh (3 MLD), Lalru Mandi (1.5 MLD), Dhuri (6 MLD), Sangrur (11 MLD) and BassiPathana (0.2 MLD) so that the work of these STPs may be started timely and construction work of these STPs should be completed by 30.6.2021. The Department of	Dept. of Local Govt. (DLG)	(i) Land identified for Amloh and Lalru Mandi (ii) Land for Dhuri and Bassi Pathana identified and possession is being taken. (iii) Efforts are being made to acquire land in Sangrur. Nano Bubble Technology being explored for the treatment of sewage at Cheema.

Sr. No	Conclusions & Recommendations of Executive Committee	Concerned Department	Status of Compliance as on 31st January, 2021
	Local Government/Punjab Water Supply & Sewerage Board should finalize the technology to be provided to treat the sewage of Cheema town within 15 days		
4.	3 STPs (Bareta: 3 MLD, Bhikhi: 3 MLD, Sardulgarh: 4 MLD) are based on old technology and these have been proposed to be upgraded based on new technology. Funds have been tied up and are at DPR stage. STP of capacity 46 MLD of Patiala town is being enhanced to 61 MLD and 75% progress has been achieved upto 31.7.2020. The old technology based 03 STPs should be upgraded based on new technology by 30.6.2021. The work of enhancement of STP of 46 MLD of Patiala town to 61 MLD should be completed by 31.12.2020.	DLG/PWSSB	DPR for Technology upgradation of 3 old technology based STPs namely Baretta (3MLD), Bhikhi (3MLD), &Sardulgarh (4MLD) is under approval. These STPs are likely to be upgraded by 31.12.23. 80% of work completed for capacity enhancement of STP Patiala. The said STP is likely to be completed by 31.03.21.
5.	The treatment of sewage to cover the gap of 66.47 MLD shall be completed by 30.06.2021 and PWSSB or any other Executing Agency shall ensure that after 31.03.2021 there shall be no gap in sewage to be treated.	PWSSB	(i) 30 new STPs are being set up to cover the gap of 73.47 MLD with details as under: - 17 STPs (88.70 MLD) are under Construction - 12 STPs (31.40 MLD) are at Tender Stage - 1 STPs (3 MLD) is at DPR Stage (ii) Timelines for Completion of STPs: - 31.03.21: 2 STP (15.5 mld) - 31.03.22: 11 STPs (47.20 mld) - 31.03.23: 15 STPs (55.9 mld) - 31.12.23: 2 STPs (4.5 mld)
6.	Wastewater generation and capacity of STP installed for 30 towns have been assessed	PPCB and Department of Soil & Water Conservation (DSWC)	PPCB verified that irrigation schemes at 10 towns i.e. Banur, Bareta, Bhikhi, Samana, Sardulgarh, Sunam, Lehragagga, Moonak, Patran and Khanauri to utilize the treated sewage for irrigation in 1541 hectares

Sr. No	Conclusions & Recommendations of Executive Committee	Concerned Department	Status of Compliance as on 31st January, 2021
	and it has been observed that there is gap of 66.47 MLD, which is to be treated by providing STPs in different towns. Punjab Pollution Control Board should verify commissioning of irrigation schemes of 10 towns (Banur, Bareta, Bhikhi, Samana, Sardulgarh, Sunam, Lehragagga, Moonak, Patran and Khanauri) to utilize 47 MLD treated sewage in command area of 1541 hectare within 1 month. Irrigation schemes for Rajpura town should be completed by 31.12.2020.		command area has been commissioned and operating successfully. Irrigation Project for STP Rajpura (7 mld) has been commissioned.
7.	The State of Punjab should tie up the funds for laying of irrigation network to utilize the treated sewage of 24 STPs of 17 towns, out of which 4 STPs (Mandi Gobindgarh (25 MLD), Patiala (10 MLD), Dhuri (5 MLD) and Sangrur (11 MLD)) of 3 towns have been commissioned and work for 20 STPs of 14 towns is under progress. The irrigation schemes for these towns should be completed simultaneously with the completion of STPs of the Towns i.e. by 31.03.21.	DSWC	(i) Funds released for irrigation project of Mandi Gobindgarh. (ii) Funds sanctioned for 3 irrigation projects of Patiala, Dhuri & Sangrur under RIDF-25. (iii) The proposal for laying irrigation scheme for 20 STPs in 14 towns amounting to Rs 28.84 crores submitted to the State Govt. under State Plan Scheme on 18.09.2020. The proposal is under consideration.
8.	For 4 towns (Budhladha: 6.5 MLD, Zirakpur: 17 MLD, SAS Nagar: 45.4 MLD, Dera Bassi: 4 MLD), where the irrigation schemes are not feasible due to	DLG	The Department reported that various techniques are being explored to reuse treated wastewater in other areas under Municipal Committees.

Sr. No	Conclusions & Recommendations of Executive Committee	Concerned Department	Status of Compliance as on 31st January, 2021
	urbanization of land and non-availability of irrigation command area near the towns. The Department of Local Government should prepare action plan to utilize the treated sewage of these towns for construction activities, gardening, toilet flushing, washing of vehicles and nearby railway yards etc. by 31.10.2020.		
9.	Punjab Pollution Control Board has carried out the inspection of 31 industries during March, 2020 to July, 2020 and all these industries have been found compliant. However, none of the industry has been inspected by District Level Special Task Force of Distt. SAS Nagar, Patiala, Sangrur and Mansa during the period March to July, 2020. Punjab Pollution Control Board should increase the surveillance of the industries in odd hours to check the operational status of ETPs of the industries and their performance. Similarly, District Level Special Task Force of the Districts in the catchment area of River Ghaggar should visit the industries on surprise basis from time to time.	PPCB	57 industries were visited from August, 2020 to January, 2021, out of which 5 industries were found non-compliant. Show Cause Notices issued to 4 industries to take remedial measures and action against one industry is under process.
10.	There are 389 villages located in the catchment area of river Ghaggar and 87 villages have been	Department of Rural Development &Panchayats (DRDP)	Treatment facilities provided in 42 villages and work in progress in 37 villages.

Sr. No	Conclusions & Recommendations of Executive Committee	Concerned Department	Status of Compliance as on 31st January, 2021
	covered under Phase-1 for installation of sewage treatment facilities in these villages. In Phase-2, 152 villages have been taken and in Phase-3, 150 villages have been covered for setting up of sewage treatment plant. Out of 87 villages covered under Phase-1, STPs in 28 villages have been installed and treatment systems in 14 villages are under construction. The Department of Rural Development &Panchayats should take effective steps to get install Sewage Treatment Plants in 87 villages, covered in Phase-1 by 31.12.2020. The treatment facilities for 152 villages covered under Phase-2 and 150 villages covered under Phase-3, should be installed by 31.3.2021.		
11.	The Department of Health has organized the 21 Health Check up camps during the period March, 2020 to June, 2020 and in these camps, 575 patients have been checked and out of these patients, 8 patients have been found suffering with water borne diseases. Punjab Pollution Control Board should identify the ground water sources where 8 patients have been found suffering with water borne diseases and the ground water samples of these sources may be	PPCB	(i) One Hand pump and one dugwell sealed in Village Lachuru Kalan, Dist. Patiala and village Issapur, Distt. SAS Nagar, respectively. (ii) 26 samples of ground water collected in the month of September & October 2020 out of which 3 were found not meeting with the permissible limits laid down in IS 10500-2012.

Sr. No	Conclusions & Recommendations of Executive Committee	Concerned Department	Status of Compliance as on 31st January, 2021
	analyzed and in case these are found contaminated, the same may be sealed and the department of Water Supply & Sanitation may be asked to supply safe drinking water to the inhabitants of these areas.		
12.	A Technical Committee has been constituted by the Govt. of Punjab for providing various technological options for treatment of wastewater of rural areas. This committee has been entrusted with the work of framing guidelines for management of Septage and Faecal sludge. The committee is in the process of framing regulation for management of septage Department of Science Technology & Environment (DSTE) may be directed to ask the Committee to frame policy/guidelines for Management of Septage and Faecal Sludge by 30.9.2020 and action plan may be prepared for the management of the same by 30.11.2020 and shall start implementation of the same by 31.12.2020.	DSTE/PPCB	(i) Draft policy/guidelines for Management of Septage and Faecal Sludge has been prepared. (ii) The comments invited from the stakeholder Departments such as Department of Rural Development &Panchayats, Department of Local Govt., Department of Water Resources and Department of Water Supply & Sanitation on Draft policy/guidelines.
13.	Presently, in-situ bio remediation technology has been provided in the drain carrying sewage of Bhadson town, which is consisting of facultative pond followed by free water constructed wet land system. The second system of In-situ bio remediation has been	DLG/PWSSB	(i) In-situ remediation technology already installed at Bhadson Drain, Distt. Patiala by PWSSB and on Bulana Drain, Distt Kaprthala by PPCB as pilot projects. (ii) The performance of these technologies is under evaluation and would be replicated in rest of the drains depending upon its success.

Sr. No	Conclusions & Recommendations of Executive Committee	Concerned Department	Status of Compliance as on 31st January, 2021
	installed in Bholana drain to treat the sewage of villages and other colonies. The technology is based on bio remediation followed by phyto-remediation and supplemented by Nano bubble technology. The in-situ bio remediation technology should be installed in other drains, carrying untreated sewage and not connected to STPs by 31.10.2020.		

3.3.2 Recommendations of the Executing Committee.

Based on the compliance of recommendations, made by the Executing Committee in its 6th report, submitted by the State of Punjab, the following recommendations are made by the Executing Committee.

1. **The analysis results of the treated effluent samples collected and analyzed by Punjab Pollution Control Board indicate that STPs Sardulgarh, Baretta, Bhikhi and Budhladha are not meeting with the prescribed standards. Therefore, Punjab Water supply & Sewerage Board should upgrade these STPs by 31.3.2021 so that these STPs may meet with the prescribed standards by the Punjab Pollution Control Board.**
2. **Punjab Water supply & Sewerage Board should operate STPs for the towns Mohali and Zirakpur, properly and effectively. Punjab Pollution Control Board shall collect the effluent samples of these STPs within 15 days and in case these STPs are found not meeting with the standards, necessary directions may be issued for upgradation of these STPs by 31.3.2021.**
3. **With regard to installation of 11 STPs, Punjab Water supply & Sewerage Board has submitted that STPs Boha (2 MLD: 70% progress), Patiala (15 MLD: 80% progress), Sirhind (5 MLD: 20% progress), Sangrur (4 MLD: 45% progress), progress between 10-30% in case 4 STPs [Dhuri (5 MLD), Bassi Pathana (3 MLD), Sirhind-2 No. (6 MLD) and Banur (0.5 MLD)], has been achieved. In case of STPs Nabha (12 MLD) and Longowal (5 MLD), design is yet to be submitted by the agency. For STP of capacity 4 MLD for Sanour town, the work of Badi Nadi and Chhoti Nadi at Patiala, where Sanour wastewater will be treated, has been allotted. However, the timelines for completion of STPs have been given beyond 30.9.2021, whereas, as per the directions of the Hon'ble NGT, these STPs should be completed by 31.3.2021**

as the Hon'ble NGT has declined the request of State of Punjab for extension in time period for installation of STPs.

4. Regarding installation of STPs for the town namely Amloh (3 MLD), Lalru Mandi (1.5 MLD), Dhuri (6 MLD), Sangrur (11 MLD), Bassi Pathana (0.2 MLD), in the last report, it was mentioned that land issues for the said STPs are to be resolved. However, as per current status upto 31.1.2021, land has been identified for STPs at Amloh, Lalru Mandi, Dhuri and Bassi Pathana. Whereas, for STP for Sangrur town, land is yet to be acquired. For Cheema town, Nano-Bubble is being explored.

   The Executing Committee recommends that STPs for the town Amloh, Lalru Mandi, Dhuri and Bassi Pathana should be completed by 30.6.2021. For the installation of STPs for Sangrur town, land is yet to be acquired, therefore, Punjab Water supply & Sewerage Board shall install STP by 30.6.2021.

   For treatment of sewage of Cheema town, Punjab Water supply & Sewerage Board shall install STP with suitable technology by 30.6.2021.

5. The capacity enhancement of STP 46 MLD of Patiala town to 61 MLD should be completed by 31.3.2021 as presently 80% of the enhancement work has been completed.

6. It order to cover the gap of 73.47 MLD through treatment system, it has been mentioned that 17 STPs (88.7 MLD) are under construction, 12 STPs (31.4 MLD) are at tending stage and 1 STP (3 MLD) is at DPR stage. Timelines for completion of 28 STPs (107.6 MLD) has been mentioned between 30.3.2022 to 31.12.2023 and only 2 STPs (15.5 MLD) have been claimed to be completed by 31.3.2021.

   The Executing Committee recommends that all the 28 STPs (107.6 MLD) should be completed by 30.6.2021 and 2 STPs of capacity 15.5 MLD by 31.3.2021.

7. Regarding verification of irrigation scheme of 10 towns (Banur, Bareta, Bhikhi, Samana, Sardulgarh, Sunam, Lehragagga, Moonak, Patran and Khanauri), Punjab Pollution Control Board has reported that these irrigation scheme catering 1541 hectares have been commissioned and are operating successfully. Also, irrigation project for STP Rajpura (7 MLD) has been commissioned.

   It is recommended that department of Soil & Water conservation shall continue to operate these irrigation schemes to utilize treated sewage of 10 towns for irrigation.

8. Funds for laying of irrigation network to utilize treated sewage of Mandi Gobindgarh have been released, whereas, funds for 3 irrigation projects of Patiala, Dhuri and Sangrur have been sanctioned under RIDF-25. Further, for laying irrigation network to utilize treated sewage of 20 STPs in 14 towns, proposal of irrigation schemes amounting to Rs. 28.84 Crores has been sent to the State Govt., which is under consideration.

The Executing Committee recommends that irrigation network to utilize treated sewage of Mandi Gobindgarh and other towns (Patiala, Dhuri and Sangrur) should be laid by 30.6.2021 and 30.9.2021, respectively. Irrigation network for utilization of treated sewage of 20 STPs in 14 towns may be provided by 30.9.2021.

9. In order to utilize treated sewage of STPs of 4 towns (Budhlada: 6.5 MLD, Zirakpur: 17 MLD, SAS Nagar: 45.4 MLD and Dera Bassi: 4 MLD, Dept. of Local Govt. has reported that various techniques are being explored to reuse treated wastewater in other areas.

   The Executing Committee recommends that treated sewage of these towns may be utilized for construction activities, gardening, toilet flushing, and washing of vehicles and nearby railway yards by 30.6.2021.

10. With regard to inspection of industries in odd hours to check the operational status of ETPs, it has been informed that 57 industries were visited from August, 2020, to January, 2021, out of which 5 industries have been found non-complying and Show Cause notices have been issued to these industries.

    It is recommended that Punjab Pollution Control Board shall continue to make surprise inspections of the industries and legal action may be taken against violating industries under the provisions of Water Act, 1974.

11. For installation of treatment facilities to treat sewage of villages, department of Rural Development & Panchayat has reported that in 42 villages, treatment facilities have been provided and 37 villages, it is in progress.

    It is recommended that treatment facilities for the remaining 45 villages covered under phase-I, should be completed by 31.3.2021 and treatment facilities, for treatment of sewage of 152 villages covered in phase-II and 150 villages covered in phase-III should be completed by 30.6.2021.

12. The ground water samples of 01 hand pump and 01 dugwell were found contaminated and these have been sealed by Punjab Pollution Control Board. Besides, 26 more ground water samples were collected in the month of September and October, 2020, out of which 03 were found beyond the permissible limits.

    It is recommended that Punjab Pollution Control Board should seal the ground water samples which have been found contaminated in the month of September and October, 2020 and display boards, mentioning "Ground water is not fit for drinking", may be erected at these sites. Punjab Pollution Control Board shall also continue to monitor ground water sources located in the catchment area of river Ghaggar with the frequency as prescribed by CPCB.

13. For framing policy/guidelines for management of septage and Feacal sludge, Deptt. of Environment has informed that comments in the matter have been sought from stake holder departments namely Dept. of Local Govt., Deptt. of Water resources and Dept. of Water Supply and Sanitation

on draft policy/ guidelines.

It is recommended that these policy guidelines should be finalized by the Dept. of Environment by 31.3.2021.

14. **Deptt. of Local Govt. and Punjab Water supply & Sewerage Board have reported that in situ remediation technology has been installed at Bhadson Drain, District Patiala and Bhulana Drain, District Kapurthala as pilot project. The performance evaluation of these technologies is under process and accordingly upon its success, it will be replicated for other drains.**

The Executing Committee is of the view that Dept of Local Govt. and Punjab Water supply & Sewerage Board in consultation with Punjab Pollution Control Board shall install insitu remediation technology in other drains, which are carrying untreated sewage and not connected to STPs by 30.6.2021.

15. It is submitted that in the report submitted by the State of Punjab, the conclusions and recommendations part, as mentioned in 6th report submitted by the Executing Committee to the Hon'ble National Green Tribunal on 7.9.2020, is missing w.r.t. the following points for which the Executing Committee again recommends as under: -

i) **In 30 towns, laying of sewerage network is in progress except Bhadson and Sanaur town where no sewerage network has been laid down so far. These towns may be provided with 100% sewerage network by 31.12.2020.**

The Executing Committee recommends that sewerage system in Bhadson (21.7 Kms) and Sanaur(25 Kms) town may also be laid and it should be laid simultaneously with the construction of STPs for these towns i.e. by 31.3.2021.

ii) **Punjab Pollution Control Board is monitoring the water quality of river Ghaggar on monthly basis. The monitoring data for the month December, 2019 to February, 2020 and March 2020 to July 2020 indicate that there is improvement in water quality of river Ghaggar at Bhankharpur, Chattbir, downstream of Jharmal Nadi, upstream of Dhakansu Nallah, downstream of Dhakansu Nallah, Rattanheri, before mixing Sagarpara drain, after mixing of Sagarpara drain, Khanauri, Moonak and at Sardulgarh.**

The Executing Committee recommends that the State of Punjab and State of Haryana should take adequate steps to upgrade STPs to bring faecal coliform, which is high at almost all the points, within the norms by 31.3.2021

iii) **Punjab Pollution Control Board has carried out groundwater sampling of ground water sources at 7 locations in the catchment area of river Ghaggar. Out of 2 groundwater samples, in 01 sample total alkalinity and in 2nd sample TDS has been found higher than the permissible limits. Punjab Pollution Control Board should seal these ground water sources and a display board mentioning that "Water is not fit for drinking" should be erected at the site.**

The Executing Committee recommends that Punjab Pollution Control Board shall increase the number of ground water samples in proportion to the

length of the river Ghaggar passing through State of Punjab and ground water samples should be collected as per the frequency already described.

iv) The Department of Soil & Water Conservation shall pursue the matter with Department of Finance, State of Punjab to release the funds to utilize the treated sewage of 4 towns namely Mandi Gobindgarh (25 MLD), Patiala (10 MLD), Dhuri (5 MLD) and Sangrur (11 MLD) for irrigation.

v) Punjab Pollution Control Board is carrying out the monitoring of all the existing 21 STPs of the State on monthly basis. The monitoring data for the period March to June, 2020 indicate that 12 STPs of 12 towns (Zirakpur, Mohali, Lalru, Zirakpur, Mohali, Banur, PUDA, Rajpura, Bhikhi, Sardulgarh, Bareta and Budhladha) have been found non-compliant w.r.t. achievement of the standards for the parameters. Accordingly, Punjab Pollution Control Board has taken action against these STPs under the provisions of the Water Act, 1974.

The Executing Committee recommends as under:

Punjab Pollution Control Board should send the non-compliance of these 12 STPs to the concerned operating agency/responsible authority and get the compliance be made from these agencies in a time bound manner, so that these STPs may start functioning effectively and efficiently.

In case, the non-compliances are not removed, Punjab Pollution Control Board shall take legal action against concerned operating agencies.

16. The Executing Committee held its 19th meeting w.r.t control of pollution in river Ghaggar with the State level officers of State of Punjab on 19.11.2020 and minutes of the meeting have been conveyed to the Member Secretary, PPCB vide no. CEC/2020/1125 dated 20.11.2020 (copy enclosed as per Annexure-10).

The Executing Committee recommends that the various departments of State of Punjab may also implement the recommendations made/directions given by the Executing Committee as per the time schedule mentioned in the minutes of the meeting.

3.4 State of Haryana

The State of Haryana has submitted the status report w.r.t. each activity for cleaning of river Ghaggar, which is annexed as per **Annexure-5.** The report in brief is mentioned as under

3.4.1 Performance of existing sewage treatment plants.

The data submitted by State of Haryana indicate that out of 59 STPs, 43 STP (72.9%) are complying with prescribed norms. The remaining 16 STPs (27.1%) are not complying with the prescribed norms. Further, only 7 STPs out of 59 STPs complying with F. Coli parameter.

3.4.2 Status of STPs which are under construction.

The data indicates as under:

- 9 STPs (Nangal & Alipur: 0.5 MLD, Khangesara & Toka: 0.5 MLD, Kot: 0.75 MLD, Barala: 4 MLD, Jind: 7 MLD, Urban Estate, Thanesar: 15 MLD, Kurukshetra: 25 MLD, Sirsa 20 MLD, Fatehabad: 3 MLD) of total capacity 73.75 MLD, have been completed.
- The percentage work of 12 new STPs (12 Cross Road, Ambala: 12 MLD, Khatoli: 0.75 MLD, Sukhdarshanapur : 0.75 MLD, Billa : 0.75 MLD, village Dabra: 8 MLD, Ambala: 5 MLD, Khuda Khurd, Ambala : 12 MLD, Bhuna: 8 MLD, Babyal : 10 MLD, Shahpur Machhonda: 7.5 MLD, Saketri : 1.5 MLD and Sirsa: 7.5 MLD) has been completed to 10-97%.

The Executing Committee recommends as under:

i) **8 STPs, which have been completed between 52% to 97%, may be completed by 31.3.2021.**

ii) **4 STPs, where the progress between 10-28% has been achieved, may be completed by 30.6.2021.**

3.4.3 STPs under planning but funds yet to be tied up

In the report, it has been mentioned that presently at 7 locations, there is almost no discharge is in the area due to less population and it will take 4-5 years to come with full population. However, the State of Haryana has prepared scheme for installation of STPs of capacity 39 MLD. These STPs are likely to be completed between 31.12.2024 to 31.12.2027.

The Executing Committee recommends as under:

- **Some temporary arrangements should be made to divert the sewage of these areas to nearby STPs for its treatment or in-situ remediation in the drain carrying untreated sewage in a time bound manner.**
- **For all the proposed 7 STPs, funds may be tied up immediately by the State of Haryana and these STPs may be setup in a time bound manner.**

3.4.4 STPs which required technologically upgradation and funds have been tied up.

Out of total 9 STPs of capacity 79.5 MLD, 2 STPs of capacity 10 MLD and 3.5 MLD for Kaithal and Bhundri towns, respectively, have been completed. The remaining 6 STPs of capacity 15 MLD, 7.5 MLD, 10 MLD, 6.5 MLD, 10 MLD and 15 MLD for the towns Jind, Ellanabad, Fatehabad, Ratia, Sirsa and Uchana, respectively, have been completed ranging between 55-90%. The work of 1 STP of capacity 2 MLD for Uchana town has just been started.

The Executing Committee recommends as under:

- **3 STPs for the towns namely Jind (15 MLD), Ellanabad (7.5 MLD) and Sirsa (2 MLD), the construction work of which has been completed 85-90%, may be completed by 31.3.2021.**
- **3 STPs for the towns namely Fatehabad (10 MLD), Ratia (6.5 MLD) and Tohana (10 MLD), which have been completed between 55-60% may be completed by 30.6.2021.**
- **1 STP of capacity 2 MLD for Uchana town may be completed by 30.6.2021.**

3.4.5 STPs which required technologically upgradation and funds are yet to be tied up.

19 STPs of capacity 78 MLD required technologically upgradation, out of which DPRs have been approved in case of 17 STPs of capacity 67.5 MLD and in case of 02 STP of capacity 10.5 MLD, DPRs have been approved but land is not available for upgradation.

The Executing Committee recommends as under:

i) **The concerned departments of State of Haryana shall get the funds tied up for 19 STPs by 15.3.2021.**

ii) **Upgradation work of 17 STPs should be completed by 30.6.2021 so that these may meet with the standards prescribed by Haryana State Pollution Control Board.**

iii) **02 STP (for Model Town, Ambala city, 6 MLD capacity and Kalka 4.5 MLD), out of total 19 STPs, where land is not available for upgradation, may also be upgraded at the existing sites with a suitable technology by 30.6.2021.**

3.4.6. Status of laying of sewerage system for 27 towns

It has been submitted that out of 27 towns, where sewerage network is under construction, 100% sewerage network has been completed in case of 21 towns, whereas in case of 6 towns (Pinjore, Ambala city, Ambala Sadar, Kaithal, Jakhal Mandi, Hisar and Mandi Dabhwali) sewerage network has been completed ranging between 20.9 - 96.2%.

The Executing Committee recommends that sewerage network for 6 towns (Pinjore, Ambala city, Ambala Sadar, Kaithal, Jakhal Mandi, Hisar and Mandi Dabhwali) may be completed by 30.6.2021.

3.4.7 Water quality of river Ghaggar in terms of parameter namely DO, BOD and F.Coli parameter.

The water quality of river Ghaggar monitored by Haryana State Pollution Control Board during the period July, 2020 to January, 2021 indicates that the values of F.Coli parameter for values are quite high (35110-352500 MPN/100 ml). Also, the value of BOD (4.7 Mg/l- 7.2 Mg/l) has been observed in the month of June, 2020 to January, 2021. These data indicate that the water quality of river Ghaggar is Class D, as per water quality criteria prescribed by CPCB.

In order to improve the water quality in river Ghaggar in the stretch in Haryana area, the following recommendations are made by the Executing Committee.

i) **All the Executing Agencies (HSPVP, Department of Local Government, Department of Panchayats and Public Health Engineering Department) shall upgrade the existing STPs to meet with the prescribed standards w.r.t. BOD and F.Coli parameter by 30.6.2021.**

ii) **All the STPs which are under construction shall be completed by 31.3.2021.**

iii) **STPs which are under planning shall be completed by 30.6.2021.**

iv) **The sewerage network of all the towns leading to STPs should be completed by 30.6.2021.**

v) **Irrigation scheme for utilization of treated sewerage of the towns may be implemented by 30.6.2021.**

3.4.8 Installation of Real Time Water Quality Monitoring Station (RTWQMS)

It has been mentioned in the report submitted by State of Haryana that the action is under process and permission in principle of the concerned departments has been granted for the location for installation of Real Time Water Quality Monitoring Stations (RTWQMS).

The Executing Committee recommends that Haryana State Pollution Control Board shall take immediate steps to install Real Time Water Quality Monitoring Stations (RTWQMS) in river Ghaggar at appropriate locations by 31.3.2021.

3.4.9 Ground water quality in the catchment area of river Ghaggar

The ground water quality of ground water sources, located in the catchment area of river Ghaggar, is monitored by Haryana State Pollution Control Board on quarterly basis.

- In Panchkula town, 8 ground water samples have been analyzed and all these ground water samples have been found complying with the prescribed standards.

- In Ambala town, 7 ground water samples have been analyzed, out of which 6 ground water samples have been found non- compliant.
- In Kurukshetra Town, only 1 ground water sample has been analyzed and same has been found compliant w.r.t. prescribed standards.
- In Jind, 2 ground water samples have been analyzed and out of which 01 ground water sample has been found non- compliant.
- In District Kaithal, 15 ground water samples have been collected and analyzed and out of these 14 ground water samples have been found non-compliant.
- In District Hisar, 5 ground water samples have been analyzed and out of which 3 ground water samples have been found non-compliant.
- In Sirsa area, 23 ground water samples have been analyzed and out of which 13 ground water samples have been found non-compliant.
- In Fatehabad area, 18 ground water samples have been collected and out of which 14 ground water samples have been found non-compliant.

The Executing Committee recommends as under:

i. **Haryana State Pollution Control Board shall seal ground water sources, which have been found non-compliant w.r.t various parameters and display board mentioning "Water is not fit for drinking" may be erected at these sites.**

ii. **Haryana State Pollution Control Board shall continue to monitor the groundwater quality of groundwater sources located in the catchment area of river Ghaggar as per the frequency maintained by it.**

3.4.10. Status of irrigation schemes for utilization of treated sewage of STPs.

The status w.r.t. irrigation schemes to utilize the treated sewage for irrigation has been submitted as under: -

A) Towns/STPs where Irrigation Projects Commissioned as on 30.6.2020

Sr. no.	Town	Name of STP	Capacity (MLD)	Command Area (ha)
1	Pehowa	STP Pehowa, Kurukshetra	1.47	76
2	Ladwa	STP Ladwa, Kurukshetra	1.22	63
3	Shahbad	STP Shahbad, Kurukshetra	3.00	151

B) Presently, no irrigation project for utilization of treated sewage of the towns is under progress.

C) A consolidated project estimate costing Rs. 1098.25 Cr. has been prepared for utilization of 1828 MLD (747 Cs) treated waste water, out of 2795.20 MLD from 207 STPs (Ghaggar and Yamuna) of various departments for irrigation of 1.62 lakh hectare. The project estimate stands discussed in the Standing Technical Committee of the departments on 26.08.2019 and approved. The approval accorded by Govt. on 04.01.2020. The project is likely to be completed in 5 years

time which after further depends upon the availability of funds. Further action in the matter to prepare DPR of individual projects, its approval, preparation of estimates, tenders etc. will be taken afterwards. As far as, the quantity of treated sewage is concerned which can be spared for irrigation with the quality parameters as finalized by Agriculture deptt., the same will be provided by the department which owns the STP, so as to enable the Department of Irrigation and Water Resources to formulate specific scheme for such quantity.

D) Out of 207 STPs, 35 STPs have been selected for installation of micro-irrigation projects, out of which 15 projects fall under Ghaggar action plan and irrigation schemes for these 15 STPs (Ambala: 6 MLD, Ambala: 5 MLD, Panchkula: 4.75 MLD, Panchkula: 5 MLD, Kaithal: 10 MLD, Kaithal: 10 MLD, 4 STPs of Fatehabad: 10 MLD, 3 MLD, 6.5 MLD and 10 MLD, Sirsa: 15 MLD, Hisar 2 STPs of capacity: 7.5 and 4 MLD. Jind 2 STPs : 15 MLD and 5 MLD) shall be completed during June, 2021 to December, 2022.

The Executing Committee recommends as under:

- **All the 15 irrigation projects to utilize the treated sewage of STPs located in the towns namely Ambala, Panchkula, Kaithal, Fatehabad, Sirsa, Hisar and Jind, which are located in the catchment area of river Ghaggar should be completed by 31.3.2021.**
- **Out of total 207 STPs, located in the catchment area of river Ghaggar and Yamuna, for which action plan has been approved by Government of Haryana in the month of January, 2020 for Rs. 1098.25 crore to utilize 1828 MLD sewage, priority may be given to the remaining 44 STPs (59-15) of Ghaggar catchment area to utilize their treated sewage for irrigation.**

3.4.11 Action against the operating agencies w.r.t non compliance of STPs during the period July, 2020 to January, 2021.

It has been reported that 39 STPs of Panchkula, Jind, Narwana, Kaithal, Pundri, Hisar, Sirsa and Fatehabad have been monitored by Haryana State Pollution Control Board in the past and all these STPs were found non complaint. However, during the monitored of these STPs carried out in the month of November, 2020 to January, 2021, these STPs have been found complying with the prescribed norms except the STPs namely 4.5 MLD Kalka, 3.75 MLD Narwana, 2 MLD Uchana, 5 MLD Jind, 5 MLD Kalayat, 3.5 MLD Pundri, 5 MLD Azadnagar, Hisar, 5 MLD village Nattar-1, Sirsa, 5 MLD Nattar-2, Sirsa and 5 MLD Ellandabad.

The Executing Committee recommends as under:

- **Haryana State Pollution Control Board shall initiate action against the non compliant STPs, which have been monitored by it during the period November, 2020 to January, 2021.**

- **The concerned executive agency of State of Haryana shall make necessary upgradation in the existing STPs by 31.3.2021 so that these may meet with the prescribed standards.**

3.4.12 Inspection of the industries by District Level Special Task Force during the period July, 2020 to January, 2021 and action against the defaulting industries

It has been mentioned in the report that District level Special Task Force has carried out inspections of 7 industries in Panchkula area, 5 in Ambala, 6 in Kaithal and 4 in Hisar, out of which 02 industries in Panchkula have been found non complaint with the prescribed standards, whereas the analysis results of the effluent samples collected from the 05 industries in Ambala region are awaited.

The Executing Committee recommends that Haryana State Pollution Control Board and District Level Special Task Force shall continue to make surprise inspections of the industries located in the catchment area of river Ghaggar and action against the defaulting industries may be taken as per the provisions of the Water Act, 1974 in a time bound manner.

3.4.13 Status of installation of STPs for the villages.

It has been mentioned in the report that out of total 45 villages selected for installation of STPs, 35 villages have been taken in Phase-I and 10 villages in Phase-II. The funds requirement for STPs for 45 villages is Rs.24.9 crore. The timelines for completion of STPs in 35 village has been mentioned as 30.6.2021 and for STPs in 10 villages, timelines have been mentioned as 31.3.2022.

The Executing Committee recommends that STPs for treatment of sewage of 45 villages, falling in catchment area of river Ghaggar, should be completed by 30.6.2021.

3.4.14 Status of Health Check-up camps organized during the month July, 2020 to January, 2021.

The data submitted by the Health Department, State of Haryana indicate that 102 Health Check up camps (0 in Panchkula, 87 in Kaithal, 0 in Sirsa and 15 in Fatehabad) have been organized during the month July, 2020 to January, 2021 and in these camps 4302 patients were examined, out of which 453 patients were found suffered with water borne diseases.

The Executing Committee recommends as under: -

i) **Department of Health, State of Haryana shall continue to organize Health Check up camps in the areas falling under the catchment area of river Ghaggar on monthly basis and list of the patients found suffered with water borne diseases may be prepared and necessary remedial action may be taken accordingly.**

ii) **In the areas where the patients suffering from water borne diseases are identified, these areas may be supplied with potable drinking water by the Department of Public Health Engineering Department as well as Department of Urban Local Bodies.**

3.4.15 Information, Education and Communication activities (IEC activities) (July, 2020 to January, 2021).

It has been reported that in order to conduct IEC activities in District Panchkula, Jind, Kaithal, Hisar and Sirsa, awareness programs regarding environment pollution and especially in river Ghaggar have been organized. Tree Plantation drive has also been made in Jind and Kaithal area.

The Executing Committee recommends that Haryana State Pollution Control Board and the Department of Urban Local Bodies shall continue to organize IEC activities to make the public aware about environment pollution, pollution in river Ghaggar and not allowing the people for throwing any solid waste, plastic waste or Pooja material in the drains/nallahs/rivers/canals so as to maintain the water quality of drains/nallahs/ canals and river Ghaggar.

3.4.16 Environmental Flow

It has been mentioned in the report that river Ghaggar is non-perennial river and discharge varies from zero to maximum during flood seasons. Practically, during normal season water flows only in creek and is not measurable. Around 15-20% of the lowest possible discharge in the lean season is required for maintaining E-flow. It has been claimed that maintaining of E-flow in river Ghaggar is not possible by the State of Haryana.

The Executing Committee recommends that the Department of Irrigation shall provide check dam/water retaining structures in the catchment area of river Ghaggar to retain excess flow of water during rainy season and discharge the same in a regulated way during non-monsoon period so as to maintain eco system and aquatic life in the river.

3.4.17 Septage and Faecal sludge management.

It has been reported as under.

- State level policy for Septage management has already been framed and many ULBs have also adopted at local level, but its implementation and monitoring mechanisms are yet to be framed.
- Chief Secretary advised the ULBD to immediately implement the system through special efforts and further directed that District level drives be initiated by ULBD along with district administration and District Level Task Forces and such tankers, engaged in illegal discharge may be seized by the concerned authorities after following due procedure.

- MCs have started challaning of the tankers disposing septage illegally. From the month of June, 2020 to till date, 285 nos. of tankers have been challaned by MC, Gurugram, Yamunanagar, Hisar, Ambala Cantt & Nissing and penalty of Rs. 71,43,000/- has been recovered from the violators, out of which 20 Challans amounting to Rs. 3,22,500/- were issued in month of December, 2020.
- 87 tankers have been deployed for disposal through tankers in the nearby STPs. Out of these, 31 tankers have installed GPS system for tracking. 102 MLD of sewage has been disposed through tankers since Jan,2020 to Jan, 2021.

The Executing Committee recommends as under:

- **The Department of Urban Local Bodies, Municipal Corporations and Haryana State Pollution Control Board shall continue to make surprise inspections along the drains/nallahs/rivers/canals in each month and tankers, if found discharging faecal sludge/septage into these water bodies, the same may be challaned with heavy fine alongwith legal action under the provisions of the Water Act, 1974.**
- **Urban Local Bodies Department, PHED, HSVP, D & P in consultation with Haryana State Pollution Control Board shall quantify the discharge of septage and faecal sludge to be disposed of at particular STPs keeping in view the capacity of STPs and quantity of sewage being treated at the STPs so that disposal of such sludge may not hamper the functioning of STPs.**

3.4.18 Watershed management

It has been reported as under:

- The Action Plan amounting to Rs. 2368.68 lakh for construction of 1174 number of soil & water conservation structures in the catchment area of Ghaggar has been approved for the year 2020-21.
- Water Harvesting Structures, Check Dams, Earthen gully Plugs, Earthen Embankments, Percolation Ponds, Farm Ponds, Wire Structures and Retaining Wall in the Districts namely Panchkula, Ambala, Kurukshetra, Fatehabad and Sirsa with number of such structures as 468, 195, 219, 237 and 55 (total 1174) amounting to Rs.23.68.68 lakh, have been proposed, out of which 276, 45, 51, 25 and 18 projects have been completed in the Districts Panchkula, Ambala, Kurukshetra, Fatehabad and Sirsa. The cost of these completed projects is Rs.1527.53 lakh.

The Executing Committee recommends that all the remaining 759 structures (Water Harvesting Structure, Check Dams, Earthen gully Plugs, Earthen Embankments, Percolation Ponds, Farm Ponds, Wire Structures and Retaining Wall) may be completed at the earliest so as to manage the watershed in the catchment area of river Ghaggar.

3.4.19 In-situ bio remediation in the drains carrying untreated sewage and not connected to STPs.

The data submitted by the State of Haryana w.r.t in-situ bio remediation technology

to be setup in the drains carrying untreated sewage and not connected to STPs as under.

- The Nodal Department for execution of phyto-remediation/bio-remediation technology has been identified. The SPV also asked the Department to submit the locations where the phyto remediation/bio-remediation may be set up.
- ULB Department has started phyto-remediation/insitu bio remediation works in the drains in Municipal Corporation, Yamuna Nagar – Jagadhri, as a pilot project, which will be replicated at other places. Municipal Corporation of Sonepat has also invited tenders for the bio/phyto remediation of drains.
- Municipal Corporations, Gurugram and Faridabad are in the process of preparing the proposal for phyto-remediation/insitu bio remediation technology.
- Municipal Corporation of Panipat has already floated the tenders for the process in their jurisdiction.
- GMDA has also initiated a pilot project as an interim treatment for untreated discharge of Leg I via geo-synthetic dewatering tubes in consultation with CPCB.
- PHED has undertaken the *in-situ* phyto/bio remediation in its new STPs at Indri and Beri.
- Chief Secretary, during the review meeting has also directed that all concerned Departments shall expedite the work on phyto-remediation/insitu bio remediation

The Executing Committee recommends as under:

i. **In-situ remediation technology to be setup in the drains carrying untreated sewage and not connected to STPs by the Urban Local Bodies department in Yamunanagar, Sonepat, Gurugram, Faridabad, Panipat may be completed by 31.3.2021.**

ii. **Pilot project as an interim treatment for untreated discharge of Leg I shall be completed by 31.3.2021.**

iii. **In-situ Phyto/bio remediation technology in its new STPs at Indri and Beri shall be completed by PHED by 31.3.2021.**

However, the report, submitted by the State of Haryana, is missing w.r.t. following points, which are required to be addressed by the various departments of State of Haryana. These points are as under.

3.4.20 255 Points identified as pollution sources entering into main drains and ultimately into river Ghaggar

255 points have been identified as pollution sources, which are entering into main drains and ultimately into river Ghaggar, out of which 153 points relate to department of Panchayat, 78 points to Urban Local Bodies, 5 points to HSVP, 5 Points to PHED and remaining 14 points to other departments.

The Executing Committee further observed that there is possibility that these points might have been covered under STP projects but still there is need to

analyze the data w.r.t the points which have been connected to STPs and the points where no action has been taken to divert the points into sewerage system further leading to STPs.

The Executing Committee recommends that that Haryana State Pollution Control Board shall analyze the data of 255 disposal points joining to main drains w.r.t following points:

i. **Details of the disposal points carrying treated sewage and quality of treated sewage.**
ii. **Details of disposal points carrying untreated sewage.**
iii. **Details of the points proposed to be connected to sewerage system and further to STPs.**

3.4.21 Diversion/tapping of sewage from 92 locations

Earlier in the meeting with State Level Officer of State of Haryana held on 19.8.2020, it was informed that 92 locations have been identified from which 183 MLD effluent is generated and in order to divert this effluent to nearby STPs, steps have been taken and accordingly 19.17 MLD effluent has been diverted from 12 locations, whereas, the diversion works of 56.3 MLD effluent from 10 locations is under progress. Further, there is need to divert the remaining 107.53 MLD effluent from 70 locations.

The Executing Committee observed that since 107.53 MLD effluent is still to be diverted from 70 locations, as such, there is gap in treatment of the sewage of 107.53 MLD and the matter needs to be taken up with the concerned departments by Haryana State Pollution Control Board.

The Executing Committee recommends as under:

Haryana State Pollution Control Board shall issue necessary directions to PHED, ULB, HSVP, D&P and HSIIDC or any other concerned department to divert sewage from remaining 70 locations carrying 107.53 MLD effluent and ensure that 107.53 MLD effluent should also be treated in the nearby STPs or by installing separate STPs by 30.6.2021.

3.4.22 Gap in treatment of sewage of the towns located on river Ghaggar

In the meeting with the State Level Officer held on 19.8.2020, it was submitted that the present capacity of STPs in these 27 towns is 514 MLD. However, there is gap of 0.7 MLD in Ambala town only. The Executing Committee was also informed that as per the data provided by HSPCB, the untreated sewage of 107.53 MLD through 70 locations is being discharged into river Ghaggar, as such the discharge of 107.53 MLD should also covered under gap in sewage to be treated.

Therefore, the Executing Committee recommends that Haryana State Pollution Control Board shall reanalyze the data w.r.t gap in treatment of sewage in the towns as well as 107.53 MLD sewage through 70 locations being discharged untreated into river Ghaggar within 15 days and necessary direction be issued to the Executing agency (PHED/ULB/HSVP/D&B/other department) to connect the untreated discharge of these 70 locations with sewerage system leading to STPs or install new STPs of adequate capacity by 30.6.2021.

3.4.23. Recommendations made by the Executing Committee in its 19th meeting held on 12.11.2020 with the State level officers of State of Haryana

The Executing Committee held its 19th meeting w.r.t control of pollution in river Ghaggar with the State level officers of State of Haryana on 12.11.2020 and minutes of the meeting have been conveyed to the Member Secretary, CPCC vide no. CEC/2020/1122 dated 13.11.2020 (copy enclosed as per annexure-11).

The Executing Committee recommends that the various departments of State of Haryana may also implement the recommendations made/directions given by the Executing Committee as per the time schedule mentioned in the minutes of the meeting.

(Dr. Babu Ram) (Urvashi Gulati) (Justice Pritam Pal)
Former Judge,
Punjab & Haryana High
Court and now as
Chairman of the Monitoring
Committee

Annexure-1

Item No. 01 Court No. 1

BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI

(By Video Conferencing)

Original Application No. 138/2016 (TNHRC)
(Case No.559/19/11/14)

Stench Grips Mansa's Sacred Ghaggar River

(With report dated 07.09.2020)

Date of hearing: 28.10.2020

CORAM: HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON
HON'BLE MR. JUSTICE SHEO KUMAR SINGH, JUDICIAL MEMBER
HON'BLE DR. SATYAWAN SINGH GARBYAL, EXPERT MEMBER
HON'BLE DR. NAGIN NANDA, EXPERT MEMBER

Amicus Curiae: Ms. Katyayni, Advocate

Respondent(s): Mr. Nalin Kohli, Advocate for HPSPCB
Mr. Rajkumar, Advocate for CPCB
Ms. Richa Kapoor Advocate for PPCB
Mr. Rahul Khurana, Advocate for State of Haryana and HSPCB
Mr. Shubham Bhalla, Advocate for UT Chandigarh

ORDER

1. The issue for consideration is the remedial action for abatement of pollution of river Ghaggar. The river originates in the State of Himachal Pradesh and ends in the State of Rajasthan. The river is included by the Central Pollution Control Board (CPCB) in 351 polluted river stretches of the country in priority – I category, which is a category of highest pollution, having BOD more than 30 mg/l as against the prescribed standard of 3mg/l. The issue of control of pollution in all the said 351 river stretches is also being dealt with generally by this Tribunal in *O.A. No. 673/2018*. The present matter however involves a specific polluted river stretch.

Background of the Proceedings

2. Proceedings in this matter were initiated before this Tribunal on a reference received from the National Human Rights Commission (NHRC). The NHRC took *Suo-Motu* action on the basis of a news item appearing in 'The Tribute' dated 12.05.2014 under the caption "*Stench Grips Mansa's Sacred Ghaggar River*" to the effect that the river Ghaggar had turned into a polluted water body on account of discharge of effluents - industrial as well as municipal. The NHRC considered the matter in the light of reports from the States of Punjab and Haryana as well as the State of Himachal Pradesh. Vide letter dated 17.03.2016, the NHRC sent the record of the matter to this Tribunal.

3. Pursuant to the order of this Tribunal dated 09.12.2016, a joint inspection was carried out by the representatives of the Central Pollution Control Board, Punjab State Pollution Control Board, Haryana Pollution Control Board, Himachal Pradesh State Pollution Control Board. Officials of Union Territory, Chandigarh also joined the said inspection team. The findings of the joint inspection report showed that values of various parameters such as BOD, TSS, Feacal Coliform, Lead and Iron were beyond permissible limits at most of the locations in Himachal Pradesh, Haryana, Punjab and Chandigarh.

Constitution of Executing Committee to monitor orders of the Tribunal and six reports submitted showing repeated and continued failure of the States of HP, Haryana, Punjab and UT Chandigarh in direct violation of law, including order of the Hon'ble Supreme Court in (2017)5 SCC 326

4. The matter was reviewed vide order dated 07.08.2018 and noticing failure of the Regulatory Authorities in taking remedial steps by way of

prevention of pollution and proceeding against the polluters, the Tribunal directed constitution of a Special Task Force (STFs) at the District level as well as at the State level. The State level STF was to be headed by Chief Secretary. The Tribunal directed preparation of action plans with firm timelines so as to ensure that water quality is as per norms within the targeted time. The Tribunal also constituted an Executing Committee, under Section 25 of the National Green Tribunal Act, 2010, headed by a former Judge of Punjab and Haryana High Court, Justice Pritam Pal. The Executing Committee was to furnish an interim report to this Tribunal. Accordingly, report dated 28.02.2019 under the cover letter dated 01.03.2019 was received and considered on 11.04.2019.

5. The Committee has earlier given five reports dated 28.02.2019, 14.06.2019, 01.10.2019, 8.1.2020 and 16.04.2020 which were dealt with by this Tribunal vide earlier orders.

Last order dated 15.6.2020

6. The matter was last considered on 15.06.2020 in the light of Fifth Report dated 16.04.2020. In the said order, the Tribunal referred to the gap in the sewage management in Himachal Pradesh, Chandigarh, Punjab and Haryana as per report dated 28.02.2019 as follows:

> *"Himachal Pradesh – Parwanoo and Kala Amb*
>
> *The gap for Parwanno is 569.414 KLD*
> *The gap for Kala Amb is 1046.24 KLD*
>
> *(i) With regard to Chandigarh the gap is 23.225 MLD*
> *(ii) With regard to Punjab the gap is 75.92 MLD*
> *(iii) With regard to Haryana the gap is 42.9 MLD"*

7. The Tribunal also considered the deteriorated water quality, status of STPs in Himachal Pradesh, Haryana, Punjab and UT Chandigarh and

directed action to be taken by the Himachal Pradesh, Haryana, Punjab and UT Chandigarh to be monitored by the Chief Secretaries and required a further report from the Executing Committee with reference to the status on the ground after six months or as and when considered necessary by the Committee.

8. The Tribunal considered the conclusions in the Fifth Report in all the four States/UT and thereafter observed:

> *"9. We regretfully note flagrant violation of mandate of the Water (Prevention and Control Pollution) Act, 1974 and the Waste Management Rules framed under the Environment (Protection) Act, 1986 as well as repeated directions given by the Hon'ble Supreme Court and this Tribunal. There is repeated failure by the concerned States and its authorities in performing their constitutional obligation in ensuring that no pollution is discharged into the rivers or drains connected thereto.* ***The timeline fixed by the Hon'ble Supreme Court in its judgement in Paryavaran Suraksha case, (2017) 5 SCC 326 to ensure treatment of sewage and effluent is by 31.03.2018 which has expired since long.***
>
> *10. It may be appropriate to note the directions of the Hon'ble Supreme Court:-*
>
> > *"**7.** Having effectuated the directions recorded in the foregoing paragraphs, the next step would be, to set up common effluent treatment plants.* ***We are informed, that for the aforesaid purpose, the financial contribution of the Central Government is to the extent of 50%, that of the State Government concerned (including the Union Territory concerned) is 25%. The balance 25%, is to be arranged by way of loans from banks****. The above loans, are to be repaid, by the industrial areas, and/or industrial clusters.* ***We are also informed that the setting up of a common effluent treatment plant, would ordinarily take approximately two years (in cases where the process has yet to be commenced). The reason for the above prolonged period, for setting up "common effluent treatment plants", according to the learned counsel, is not only financial, but also, the requirement of land acquisition, for the same****.*
> >
> > ***10. Given the responsibility vested in municipalities under Article 243-W of the Constitution, as also, in Item 6 of Schedule XII, wherein the aforesaid obligation, pointedly extends to "public health, sanitation conservancy and solid waste***

45

management", we are of the view that the onus to operate the existing common effluent treatment plants, rests on municipalities (and/or local bodies). Given the aforesaid responsibility, the municipalities (and/or local bodies) concerned, cannot be permitted to shy away from discharging this onerous duty. In case there are further financial constraints, the remedy lies in Articles 243-X and 243-Y of the Constitution. It will be open to the municipalities (and/or local bodies) concerned, to evolve norms to recover funds, for the purpose of generating finances to install and run all the "common effluent treatment plants", within the purview of the provisions referred to hereinabove. Needless to mention that such norms as may be evolved for generating financial resources, may include all or any of the commercial, industrial and domestic beneficiaries, of the facility. The process of evolving the above norms, shall be supervised by the State Government (Union Territory) concerned, through the Secretaries, Urban Development and Local Bodies, respectively (depending on the location of the respective common effluent treatment plant). The norms for generating funds for setting up and/or operating the "common effluent treatment plant" shall be finalised, on or before 31-3-2017, so as to be implemented with effect from the next financial year. In case, such norms are not in place, before the commencement of the next financial year, the State Governments (or the Union Territories) concerned, shall cater to the financial requirements, of running the "common effluent treatment plants", which are presently dysfunctional, from their own financial resources.

11. *Just in the manner suggested hereinabove, for the purpose of setting up of "common effluent treatment plants", the State Governments concerned (including, the Union Territories concerned) will prioritise such cities, towns and villages, which discharge* ***industrial pollutants and sewer, directly into rivers and water bodies.***

12. *We are of the view that in the manner suggested above,* ***the malady of sewer treatment, should also be dealt with simultaneously.*** *We, therefore, hereby direct that "sewage treatment plants" shall also be set up and made functional, within the timelines and the format, expressed hereinabove.*

13. ***We are of the view that mere directions are inconsequential, unless a rigid implementation mechanism is laid down.*** *We, therefore, hereby provide that the directions pertaining to continuation of*

46

industrial activity only when there is in place a functional "primary effluent treatment plants", and the setting up of functional "common effluent treatment plants" within the timelines, expressed above, shall be of the Member Secretaries of the Pollution Control Boards concerned. ***The Secretary of the Department of Environment, of the State Government concerned (and the Union Territory concerned), shall be answerable in case of default. The Secretaries to the Government concerned shall be responsible for monitoring the progress and issuing necessary directions to the Pollution Control Board concerned, as may be required, for the implementation of the above directions.*** *They shall be also responsible for collecting and maintaining records of data, in respect of the directions contained in this order. The said data shall be furnished to the Central Ground Water Authority, which shall evaluate the data and shall furnish the same to the Bench of the jurisdictional* ***National Green Tribunal.***

14. *To supervise complaints of non-implementation of the instant directions, the Benches concerned of the National Green Tribunal, will maintain running and numbered case files, by dividing the jurisdictional area into units. The abovementioned case files will be listed periodically.* ***The Pollution Control Board concerned is also hereby directed to initiate such civil or criminal action, as may be permissible in law, against all or any of the defaulters."***

(emphasis supplied)

11. As already noted, this Tribunal has dealt with the matter in O.A. No. 593 of 2017, Paryavaran Suraksha Samiti & Anr. Vs. UOI & Ors., for monitoring the situation in pursuance to the directions of the Hon'ble Supreme Court and noted the disappointment for failure in this regard by almost all the States and Union Territories. Vide order dated 21.05.2020, this Tribunal observed as follows:-

"8. Before proceeding further, we may also note further order of this Tribunal dated 06.12.2019 in O.A. No. 673/2018 directing as follows:

"XII. Directions:

47. We now sum up our directions as follows:

i. 100% treatment of sewage may be ensured as directed by this Tribunal vide order dated 28.08.2019 in O.A. No. 593/2017 by 31.03.2020 atleast to the extent of in-situ remediation and before the said date, commencement of setting up of STPs and the work of connecting all the drains and other sources of generation of sewage to the STPs must be ensured. If this is not done, the local

47

bodies and the concerned departments of the States/UTs will be liable to pay compensation as already directed vide order dated 22.08.2019 in the case of river Ganga i.e. Rs. 5 lakhs per month per drain, for default in in-situ remediation and Rs. 5 lakhs per STP for default in commencement of setting up of the STP.

ii. ***Timeline for completing all steps of action plans including completion of setting up STPs and their commissioning till 31.03.2021 in terms of order dated 08.04.2019 in the present case will remain as already directed. In default, compensation will be liable to be paid at the scale laid down in the order of this Tribunal dated 22.08.2019 in the case of river Ganga i.e. Rs. 10 lakhs per month per STP.***

iii. *We further direct that an institutional mechanism be evolved for ensuring compliance of above directions. For this purpose, monitoring may be done by the Chief Secretaries of all the States/UTs at State level and at National level by the Secretary, Ministry of Jal Shakti with the assistance of NMCG and CPCB.*

iv. ***For above purpose, a meeting at central level must be held with the Chief Secretaries of all the States/UTs atleast once in a month (option of video conferencing facility is open) to take stock of the progress and to plan further action. NMCG will be the nodal agency for compliance who may take assistance of CPCB and may give its quarterly report to this Tribunal commencing 01.04.2020.***

v. *The Chief Secretaries may set up appropriate monitoring mechanism at State level specifying accountability of nodal authorities not below the Secretary level and ensuring appropriate adverse entries in the ACRs of erring officers. Monitoring at State level must take place on fortnightly basis and record of progress maintained. The Chief Secretaries may have an accountable person attached in his office for this purpose.*

vi. *Monthly progress report may be furnished by the States/UTs to Secretary, Ministry of Jal Shakti with a copy to CPCB. Any default must be visited with serious consequences at every level, including initiation of prosecution, disciplinary action and entries in ACRs of the erring officers.*

48

vii. ***As already mentioned, procedures for DPRs/tender process needs to be shortened and if found viable business model developed at central/state level.***

viii. ***Wherever work is awarded to any contractor, performance guarantee must be taken in above terms.***

ix. CPCB may finalize its recommendations for action plans relating to P-III and P-IV as has been done for P-I and P-II on or before 31.03.2020. This will not be a ground to delay the execution of the action plans prepared by the States which may start forthwith, if not already started.

x. The action plan prepared by the Delhi Government which is to be approved by the CPCB has to follow the action points delineated in the order of this Tribunal dated 11.09.2019 in O.A. No. 06/2012.

xi. Since the report of the CPCB has focused only on BOD and FC without other parameters for analysis such as pH, COD, DO and other recalcitrant toxic pollutants having tendency of bio magnification, a survey may now be conducted with reference to all the said parameters by involving the SPCB/PCCs within three months. Monitoring gaps be identified and upgraded so to cover upstream and downstream locations of major discharges to the river. CPCB may file a report on the subject before the next date by e-mail at judicial-ngt@gov.in.

xii. Rivers which have been identified as clean may be maintained."

(emphasis supplied)

13. The above report shows that some steps have been initiated against non-compliant ETPs/CETPs/STPs while further steps need to be taken. With regard to industries not having ETP or not connected to CETP, pending construction of CETPs as mentioned in the above report, the State PCBs/PCCs may ensure that there is no discharge of any untreated pollutants by the industries and such polluting activities must be stopped and compensation recovered for the non-compliance, if any, apart from any other legal action in accordance with law. As regards non-compliant STPs, further action may be completed by the State PCBs/PCCs and it may be ensured that there is 100% treatment of sewage and till STPs are set up, atleast in-situ remediation takes place. However, on account of Corona pandemic which has affected several on-going activities, the timeline of levy of compensation in terms of order dated 28.08.2019 in O.A. No. 593/2017 read with order dated 06.12.2019 in O.A. No. 673/2018, of 01.04.2020

may be read as 01.07.2020 and 01.04.2021 may be read as 01.07.2021. Further reports may be taken by the CPCB from all the State PCBs/PCCs as per the system evolved by the CPCB from time to time.

26. ***Summary of directions:***

i. All States/UTs through their concerned departments such as Urban/Rural Development, Irrigation & Public Health, Local Bodies, Environment, etc. may ensure formulation and execution of plans for sewage treatment and utilization of treated sewage effluent with respect to each city, town and village, adhering to the timeline as directed by Hon'ble Supreme Court. STPs must meet the prescribed standards, including faecal coliform.

CPCB may further continue efforts on compilation of River Basin-wise data. Action plans be firmed up with Budgets/Financial tie up. Such plans be overseen by Chief Secretary and forwarded to CPCB before 30.6.2020. CPCB may consolidate all action plans and file a report accordingly.

Ministry of Jal Shakti and Ministry of Housing and Urban Affairs may facilitate States/UTs for ensuring that water quality of rivers, lakes, water bodies and ground water is maintained.

As observed in para 13 above, 100% treatment of sewage/effluent must be ensured and strict coercive action taken for any violation to enforce rule of law. Any party is free to move the Hon'ble Supreme Court for continued violation of its order after the deadline of 31.3.2018. This order is without prejudice to the said remedy as direction of the Hon'ble Supreme Court cannot be diluted or relaxed by this Tribunal in the course of execution. PCBs/PCCs are free to realise compensation for violations but from 1.7.2020, such compensation must be realised as per direction of this Tribunal failing which the erring State PCBs/PCCs will be accountable.

ii. The CPCB may study and analyse the extent of reduction of industrial and sewage pollution load on the environment, including industrial areas and rivers and other water bodies and submit its detailed report to the Tribunal.

iii. During the lockdown period there are reports that the water quality of river has improved, the reasons for the same may be got studied and analysed by the CPCB and report submitted to this Tribunal. If the activities reopen,

the compliance to standards must be maintained by ensuring full compliance of law by authorities statutorily responsible for the same.

iv. Accordingly, we direct that States which have not addressed all the action points with regard to the utilisation of sewage treated water may do so promptly latest before 30.06.2020, reducing the time lines in the action plans. The timelines must coincide with the timelines for setting up of STPs since both the issues are interconnected. The CPCB may compile further information on the subject accordingly.

v. Needless to say that since the issue of sources of funding has already been dealt with in the orders of the Hon'ble Supreme Court, the States may not put up any excuse on this pretext in violation of the judgment of the Hon'ble Supreme Court.

27. The CPCB may furnish its report by 15.09.2020 giving the status of furnishing of action plans and their execution as on 31.08.2020 by e-mail at judicial-ngt@gov.in preferably in the form of searchable PDF/OCR Support PDF and not in the form of Image/PDF."

12. The Tribunal has also been monitoring the situation in O.A. No. 606/2018 wherein the Chief Secretaries of the all the States/ UTs have appeared in person before this Tribunal and directions have been issued to comply with the mandate of law. In O.A. No. 673 of 2018, the issue of polluted river stretches is being dealt with, as already noted above. Further, in O.A. No. 148 of 2016, Mahesh Chandra Saxena Vs. South Delhi Municipal Corporation & Ors., the issue of utilization of treated water is being dealt with and the last order was passed by this Tribunal on 21.05.2020. In O.A. No. 325/2015, Lt. Col. Sarvadaman Singh Oberoi Vs. Union of India & Ors., the issue of restoration of water bodies has been dealt with and the last order passed by this Tribunal is of 01.06.202020. It will be appropriate that the States/UTs take further prompt action in the matter and hold erring officers responsible and accountable. The Chief Secretaries of the States/UTs may monitor the situation with the assistance of Environment Cells directly under them as per observations in the orders of the Hon'ble Supreme Court, referred to in the orders of this Tribunal in O.A. No. 606/2018.

13. The States have not filed their response even though the report of the Committee was made available in pursuance of direction in paragraph 12 of order dated 20.01.2020 quoted above.

14. ***We note the presence of learned counsel for the States of Punjab, Haryana, Himachal Pradesh and UT Chandigarh who have nothing meaningful to explain the persistent defaults****. Learned counsel for the State of Himachal Pradesh submitted that he is not able to get complete instructions on account of the lock down. Learned counsel for the UT Chandigarh states*

51

that certain further steps have been taken in the matter of plugging of the outlets and upgradation of STPs but the steps for use of treated water and action in terms of recommendations of the Committee are yet to be taken. Learned counsel for the State of Punjab and the Member Secretary State PCB stated that there is some progress but we find the progress to be highly inadequate and unsatisfactory. Learned counsel for the State of Haryana states that the State of Haryana is not even aware of the standards of fecal coliform and has yet to lay down the standards. We are surprised at this statement. The standard of fecal coliform has been dealt with by this Tribunal vide order dated 30.04.2019 in O.A. No. 1069 of 2018, Nitin Shankar Deshpande Vs. UOI & Ors. The Tribunal noted the standards proposed in the draft Notification dated 24.11.2015 by the MoEF&CC and held that dilution of the standards by Notification in October, 2017 was against the recommendation of the Expert Committee referred to therein. Such relaxed standards led to deterioration of water quality, adversely affecting the environment and public health. The Tribunal observed as follows:-

> *"13. We find that there is no justification for diluted standards for areas other than Mega and Metropolitan Cities. The water quality standards are required to be same for the population of major cities or other cities. No justification has been shown for different standards for persons living in cities other than Mega and Metropolitan Cities. Major population of this country will be affected by diluted standards and only persons in Mega and Metropolitan Cities will have comparatively better standards without any valid reason or distinction. We may note that filters, UV filters etc. are facilities mainly available in major cities and not in smaller cities or villages where the standards are proposed to be diluted.*
>
> *14. Accordingly, we accept the report of the Expert Committee with the modification that the standards recommended for Mega and Metropolitan Cities will also apply to rest of the country. We also direct that the standards will apply not only for new STPs but also for existing/under construction STPs without any delay and giving of seven years time stands disapproved.*
>
> *MoEF & CC may issue an appropriate Notification in the matter within one month from today."*

The norms are <100 MPN(Most Probable Number)/100 ml

15. In view of the above, we direct that the directions already issued by this Tribunal in O.A. No. 673/2018, 606/2018, 148/2016, O.A. No. 325/2015 and 593/2017 and the recommendations of the Committee may be complied with. The Compliance Status may be verified by the Executing Committee and the next report may be furnished by 30.09.2020 by e-mail at judicial-ngt@gov.in preferably in the form of searchable PDF/ OCR Support PDF and not in the form of Image PDF. Simultaneously copy of the report be furnished to the Chief Secretaries/ PCBs and PCCs

52

of the States of Punjab, Haryana, Himachal Pradesh and UT Chandigarh who may give their response within two weeks thereafter.

Consideration of Sixth Report dated 7.9.2020

9. Accordingly, the Sixth Report has been filed by the Executing Committee on 07.09.2020. The report has discussed the matter threadbare and concluded as follows:

"***STATE OF HIMACHAL PRADESH***:

4.1.6. Conclusions and Recommendations

Keeping in view the detailed interaction made with the State level officers of State of Himachal Pradesh with regard to various activities carried out/ to be carried out to clean river Ghaggar, the Executing Committee has made the following conclusions and recommendations.

1. *Sukhna Nallah, a tributary of Kaushalaya River, sub tributary of river Ghaggar, falls in the catchment area of river Ghaggar, therefore, sewage treatment plants to treat sewage of the towns located on Sukhna Choe need to be installed in a time bound manner. The State of Himachal Pradesh is in the process of installing 2 STPs each of capacity 1 MLD in Parwanoo town, out of which, land is available for one STP for which tender work has been awarded. For 2nd STP, land is located in forest area in village Tipra. The concerned department of the State should make immediate arrangements to get the land transferred so that work of STP may be started.*

   The Executing Committee recommends that 02 STPs each capacity 1 MLD to treat the sewage of Parwanoo town should be installed by 31.3.2021

2. *For providing STP of capacity 1.5 MLD in Kala Amb area and 1 MLD in Trilokpur falling in catchment area of river Markanda, construction work has been awarded. The electric fitting at STP Site is in process. The pipeline laying work is under process and 2500 m sewer line has been laid. The construction work of STP shall be started within one week.*

   The Executing Committee recommends that STP of capacity 1.5 MLD in Kala Amb and 1 MLD in Trilokpur should be completed by 31.3.2021

3. *Presently, 2 small STPs each of capacity 0.07 MLD have been installed in Parwanoo area and are in working condition. One STP is meeting with prescribed norms and*

2nd STP of capacity 0.07 MLD has recently been commissioned.

4. *For the treatment of effluent of the industries after their primary treatment and sewage of industrial units and other areas, a CETP of capacity 5 MLD has been proposed for which tender was floated on 15th March, 2020 but no bids were received due to lockdown. Tender for proposed CETP was re-invited by Kala Amb Infrastructure Development Company on 6-6-2020 and technical bids were opened on 30-7-2020 by the committee. There were some observations on technical points as bidders have submitted bids of different technology. Bidders have been asked to give bids on MBBR/SBR technology separately by 12-8-2020.*

The Executing Committee recommends that CETP of capacity 5 MLD in Kala Amb area should be completed by 30.6.2021

5. *There are 48 industries in the catchment area of Sukhna Nallah i.e in Parwanoo area and all these industries have installed their individual effluent treatment plants. Similarly, 94 industries exist in catchment area of river Markanda i.e. in Kala Amb area. These industries have also installed their individual effluent treatment plants. In order to check the performance of ETPs of the industries, 59 industries were inspected by HPPCB from March, 2020 to July, 2020, out of which 5 industries were found violating the norms and these industries were issued show cause notices but now these industries started using their treated wastewater for irrigation.*

Similarly, HPPCB has also visited all the 94 industries of Kala Amb area during March, 2020 to June, 2020, out of which 2 industrial units were found violating the norms and these industries were issued show cause notices.

The Executing Committee recommends that HPPCB shall continue to make surprise inspection of the industries as per the time schedule prescribed by HPPCB/CPCB and action against the defaulting industries may be taken under the provisions of the Water Act, 1974.

6. *In order to treat the sewage of the villages located in the catchment area of Sukhna Nallah at Parwanoo and river Markanda at Kala Amb, it has been claimed that all the adjoining villages have been covered under the Sewage Treatment Plants and CETP being set up at Parwanoo and Kala Amb area.*

The Executing Committee recommends that the State of Himachal Pradesh shall ensure sewage of all the villages, located in the catchment area of Sukhna Nallah and river Markanda, should be connected to the STPs and CETP being installed in these areas

7. *The Ground Water quality in catchment area of river Ghaggar is monitored by the Irrigation and Public Health Irrigation Departments of the State. As per the analysis results, all the parameters are within the prescribed norms.*

8. *Water quality of Sukhna Nallah at Parwanoo, Samtel Nallah and Sector-4 Nallah has been analyzed by HSPPCB for the period December 2019 to February, 2020 and March, 2020to July, 2020. The analysis results indicate that there is improvement in the water quality of Sukhna Nallah w.r.t DO and F.Coli.*

Water quality of Kaushalya River at downstream Parwanoo shows that water quality of the river is complying with Class B standard.

The water quality of River Markanda upstream of Jattan Wala Nallah was also monitored and its analysis result indicate that the water quality of River Markanda is complying with Class B standard.

The water quality of River Markanda downstream of Jattan Wala Nallah was also monitored and it was observed that there is an improvement w.r.t BOD and F.Coli parameters but the value of T.Coli is much higher than the prescribed limits. Similarly, the water quality of the river Markanda downstream of Jattan Wala Nallah also indicate that there is improvement w.r.t. BOD and T.Coli parameters but the value of T.Coli parameter is much higher than the prescribed limits.

The State of Himachal Pradesh should install STPs and CETP in Kala Amb area and Parwanoo area by 31.3.2021, so that organic parameters and F.Coli are always within the prescribed norms and water quality of the drains/river may be further improved.

9. *As per the record and discussion held with the Officers of State of Himachal Pradesh, presently, there is no scheme to utilize the treated sewage. As such, the concerned department of State of Himachal Pradesh should prepare a detailed scheme to utilize the treated sewage for construction activities, toilet flushing, industrial usage, plantation, road cleaning, watering of green belt or any other use within 02 months.*

10. *HPPCB should monitor the ground water quality of groundwater sources located in the catchment area of Sukhna Nallah and River Markanda, as per the frequency prescribed by CPCB. In case any ground water source is found contaminated, the same shall be sealed by HPPCB and display board be erected at the site with caption as "**Water is not fit for drinking purposes**".*

55

11. *In order to maintain environmental flow in Sukhna Nallah and Markanda river, more check dams and water retaining structures may be provided so as to retain and store the excess rain water flow and discharge the same in a regulated manner in the drains/nallahs during non-Monsoon periods.*

12. *HPPCB shall constitute teams to conduct surprise inspections of the catchment area of Sukhna Nallah and river Markanda to ensure that there is no discharge of septage and faecal sludge from septage tank in these Nallahs. Also, policy/guidelines for management of septage and faecal sludge from rural areas and other un-sewered areas may be framed within 3 months.*

13. *Since presently, no STP along Sukhna Nallah and Markanda river has been constructed, therefore, there is need to treat sewage of the towns of Kala Amb area and Parwanoo area by providing in-situ remediation technology in the drains. In-situ remediation technology work undertaken at Samtel Nallah and proposed on Jattan Wala Nallah at 2 locations should be installed and commissioned by 31.10.2020.*

14. *HPPCB shall install Real Time Water Quality Monitoring Stations in Jattan Wala Nallah, Markanda river and Sukhna Nallah by 31.12.2020."*

UT CHANDIGARH

"4.2.20 Conclusions and recommendations

1) *In order to treat sewage of Chandigarh, 6 STPs [STP Diggian:135 MLD, STP 3BRD: 49.5MLD, STP Raipur Kalan 22.5 MLD, STP Raipur Khurd: 5.63 MLD, STP Dhanas:7.5 MLD and MaloyaSTP;22.5 MLD] are in operation. The performance study of these STPs monitored during April, 2020 to June, 2020 indicated as under:*

- *The values of BOD and F.Coli varying between 40-87 mg/I and 7000-490000 MPN/100m1, respectively, which are higher than the prescribed limits, have been observed in case of STP Diggian, STP, 3 BRD, Raipur Kalan, Raipur Khurd and Dhanas.*
- *STP Maloya is meeting with the prescribed limits.*

Therefore, there is need to upgrade all the 5 existing STPs except STP Maloya for which Municipal

56

Corporation Chandigarh have invited tenders and work has been allotted.

2) *Presently, 54 MGD wastewater is generated by the MC Chandigarh and the capacity of existing STPs is 53.9 MGD.*

- *There is proposal to enhance the capacity of STP Raipur Khurd to 2 MGD, STP Raipur Kalan 1.25 MGD and Kishangarh 0.44 MGD, for which tender is being recalled.*
- *STP of capacity 5 MLD at Raipur Kalan has been commissioned but yet to be commissioned.*

The Executing Committee recommends that new STP of Kishangarh (0.44 MGD = 2 MLD) and upgradation of Raipur Khurd STP from 1.25 MGD to 2 MGD= 9 MLD) should be installed by 31.3.2021 so that there shall be no gap in the treatment of sewage.

3) *Since 5 existing STPs are not meeting with the parameters namely BOD and F.Coli parameters, therefore there is need to upgrade these 5 STPs to bring down the parameters within the norm. Accordingly, Municipal Corporation Chandigarh has allotted the work to the qualifying agency.*

The Executing Committee recommends that Municipal Corporation Chandigarh shall upgrade all the existing 5 STPs [STP Diggian:135 MLD, STP 3BRD: 49.5MLD, STP Raipur Kalan 22.5 MLD, STP Raipur Khurd: 5.63 MLD and STP Dhanas:7.5 MLD] except STP Maloya by 31.03.2021.

4) *The Water quality of river Ghaggar has been found deteriorated due to presence of high value of F. Coliform which can be controlled only after technological upgradation of the existing 5 STPs. Municipal Corporation Chandigarh has allotted the work of upgradation of STP* ***and these are likely to be completed by 31.03.2021.***

The Executing Committee expects that the water quality of river Ghaggar shall be improved after the upgradation of these STPs by Municipal Corporation Chandigarh.

5) *There is proposal to install Real Time Water Quality Monitoring Stations at Sukhna Choe and N Choe for which tender is under process for N Choe. In Sukhna Choe, proper space and location is being identified.*

The Executing Committee recommends that Real Time Water Quality Monitoring Stations in Sukhna Choe and N Choe should be installed and commissioned by 31.10.2020.

6) *CPCC is carrying out the ground water quality of ground water sources located in the catchment area of river Ghaggar. It has been claimed by CPCC that ground water*

57

sources at these locations are not used for drinking purposes.

The Executing Committee recommends that though the ground water sources are not used for drinking purposes but even then if the ground water source is found contaminated, it may be sealed by CPCC along with erection of display board, mentioning that water is not fit for drinking purposes.

7) *As per the Action Plan submitted by MC, Chandigarh for utilization of treated sewage, 36 MGD wastewater is treated to the level of tertiary and out of which, 10 MGD treated wastewater is pumped back to the city for use in gardens, green belts, schools, colleges, institutions and houses. Further, there is proposal to utilize about 20 MGD treated wastewater in the green spaces of various Sectors, for washing of coaches, bus depots for cleaning purposes and industrial clusters.*

8) *Regarding inspection of industries by CPCC and District Level Special task Force, it has been claimed that industries could not be inspected due to lockdown in the month of March and April and non-operation of the industries in the month of June to July, 2020.*

It is recommended that CPCC and District Level Task Force shall continue to inspect the industries and check the operational status and performance of ETPs of the industries.

9) *The Department of Health, has not organized any health checkup camps during March, 2020 to July, 2020 and due to Covid-19 situation. Therefore, the said department shall continue to organize health checkup camps soon after the improvement in the situation.*

10) *With regard to maintaining environmental flow in river Ghaggar, it has been reported that river Ghaggar is flowing 7 Kms away from Chandigarh city and Sukhna Choe and N Choe are non-perennial drains and carry storm water only. As such, maintaining of environmental flow is not possible in case of Chandigarh area.*

The claim of UT Chandigarh is not justified because Sukhna Choe and N Choe also carry treated/ untreated sewage of Chandigarh area, whenever, there is chocking in sewerage system or STPs are not in operation, as such, there is need to maintain environmental flow in Sukhna Choe and N Choe for which the concerned department of UT Chandigarh should prepare a scheme to maintain environment flow in these Choes and such schemes may be implemented by 31.12.2020.

58

11) *For watershed management, Chandigarh Forest Department has undertaken various soil and moisture conservation measures in order to arrest soil erosion and checking the flow of silt in Sukhna Lake. More than 100 such check dams have been constructed in Sukhna Wild Life Sanctuary.*

The Executing Committee recommends that Forest Department Chandigarh should construct check dams in the catchment area of Sukhna Choe and N Choe in a time bound manner.

12) *Presently, all the 5 existing STPs are not meeting with the prescribed standards for the parameters, as such, the drains carrying untreated sewage/ partially treated sewage need to be bio remediated at the site. For this purpose, UT Chandigarh has planned to plant Terminalia arjuna and Syzygiumcumini along the Sukhna choe and N-choe. About 2000 Canna plants (wetland plants) shall also be planted along the Sukhna choe and N-choe by the end of August, 2020.*

13) *It has been observed that Sukhna Choe and N-Choe are natural choes and carry storm water of the Chandigarh, therefore, there is no need to provide real time water quality monitoring stations (RTWQMS). Moreover, there is regular flow in Sukhna Choe and N-Choe and there is quite possibility that the treated/ partially treated sewage of the STPs may also be discharged into these choes, as such, in-situ bioremediation technology should be installed in these choes at appropriate location by 31.12.2020."*

STATE OF PUNJAB

"4.3.6. Conclusions and recommendations

1. *30 towns have been identified, which are located in the catchment area of river Ghaggar. For these 30 towns, 48 STPs are required to be installed, out of which 21 STPs for 20 towns have been completed and commissioned. Punjab Pollution Control Board is carrying out the monitoring of all these STPs on monthly basis and the performance of these STPs monitored during March, 2020 to July, 2020 indicates that 4 towns in the month of March, 5 towns in the month of May, 6 towns in the month of June and 4 towns in the month of July were not found meeting with prescribed standards.*

Punjab Pollution Control Board should take legal action under the provisions of Water Act, 1974 against the operating agencies of these STPs. Non-compliance in these STPs observed by Punjab Pollution Control Board may be conveyed to the concerned operating agencies of STPs and these agencies may be directed to comply with the

59

observations in time bound manner and operate the STPs efficiently so as to meet with the prescribed standards.

2. *11 STPs in 9 towns are under construction. Construction work has been started in 7 STPs [Boha: 2 MLD (52%), Dhuri: 5 MLD (27%), Sangrur: 4 MLD (30%), Bassi Pathana: 3 MLD (14%), Sirhind: 5 MLD (20%), Sirhind: 4 MLD (12%) and Banur: 0.5 MLD (5%)]. In case of 3 STPs (Nabha: 12MLD, Longowal: 5 MLD and Patiala (MES): 6 MLD, the work has been allotted. To treat sewage of 2 MLD of Sirhind town, diversion work of pond water is under progress.*

The Executing Committee recommends that the State of Punjab should accelerate the progress of construction of STPs so that these may be completed by 31.3.2021.

3. *In 14 towns, there is proposal to install 19 STPs, out of which 7 STPs (Dera Bassi: 2 MLD, Dera Bassi: 2 MLD, Lalru: 1 MLD, Ghanaur: 2 MLD, Sanaur: 4 MLD, Nabha: 1 MLD, Nabha MES: 1 MLD) are at tender in stage. In case of 5 STPs (Amloh: 3 MLD, Lalru Mandi: 1 1/2 MLD, Dhuri : 6 MLD, Sangrur: 11 MLD, Bassi Pathana: 0.2 MLD), land issues are to be resolved. 5 STPs (Gholu Majra: 0.35 MLD, Lalru: 0.15 MLD, Lalru: 0.35, Banur: 0.15 MLD, Zirakpur: 17 MLD) are at DNIT stage. In case of 01 STP of Cheema town, where there is proposal to install STP of capacity 2 MLD, the Department is exploring the possibility for providing nano bubble technology in the drain to treat sewerage in the town. 01 STP of capacity 3 MLD for Bhadson town, DPR is under preparation.*

It is recommended that the senior functionaries of the Department of Local Government should resolve the issue of land for the STPs so that the work of these STPs may be started timely and construction work of these STPs should be completed by 30.6.2021. The Department of Local Government/Punjab Water Supply & Sewerage Board should finalize the technology to be provided to treat the sewage of Cheema town within 15 days.

4. *3 STPs (Bareta: 3 MLD, Bhikhi: 3 MLD, Sardulgarh: 4 MLD) are based on old technology and these have been proposed to be upgraded based on new technology. Funds have been tied up and are at DPR stage. STP of capacity 46 MLD of Patiala town is being enhanced to 61 MLD and 75% progress has been achieved upto 31.7.2020.*

The Executing Committee recommends that old technology based 03 STPs should be upgraded based on new technology by 30.6.2021. The work of

60

enhancement of STP of 46 MLD of Patiala town to 61 MLD should be completed by 31.12.2020.

5. *In 30 towns, laying of sewerage network is in progress except Bhadson and Sanaur town where no sewerage network has been laid down so far. These towns may be provided with 100% sewerage network by 31.12.2020. Sewerage system in Bhadson (21.7 Kms) and Sanaur(25 Kms) town may also be laid and it should be laid simultaneously with the construction of STPs for these towns i.e. by 31.3.2021.*

6. *Wastewater generation and capacity of STP installed for 30 towns have been assessed and it has been observed that there is gap of 66.47 MLD, which is to be treated by providing STPs in different towns.*

The Executing Committee recommends that treatment of sewage to cover the gap of 66.47 MLD shall be completed by 30.06.2021 and PWSSB or any other Executing Agency shall ensure that after 31.03.2021 there shall be no gap in sewage to be treated.

7. *Punjab Pollution Control Board is monitoring the water quality of river Ghaggar on monthly basis. The monitoring data for the month December, 2019 to February, 2020 and March 2020 to July 2020 indicate that there is improvement in water quality of river Ghaggar at Bhankharpur, Chattbir, downstream of Jharmal Nadi, upstream of Dhakansu Nallah, downstream of Dhakansu Nallah, Rattanheri, before mixing Sagarpara drain, after mixing of Sagarpara drain, Khanauri, Moonak and at Sardulgarh.*

The State of Punjab and State of Haryana should take adequate steps to upgrade STPs bring faecal coliform, which is high at almost all the points, within the norms by 31.3.2021.

8. *Punjab Pollution Control Board has carried out groundwater sampling of ground water sources at 7 locations in the catchment area of river Ghaggar. Out of 2 groundwater samples, in 01 sample total alkalinity and in 2nd sample TDS has been found higher than the permissible limits. Punjab Pollution Control Board should seal these ground water sources and a display board mentioning that "**water is not fit for drinking**" should be erected at the site.*

Punjab Pollution Control Board has already been directed in 18th meeting of the Executing Committee held on 19.8.2020 to increase the number of ground water samples in proportion to the length of the river Ghaggar passing through State of Punjab and ground water samples should be collected as per the frequency already described.

61

9. *Presently, 21 STPs are in operation. In order to divert the treated effluent entering into river Ghaggar and utilize the same for irrigation, the State of Punjab has prepared irrigation schemes to utilize the treated sewage. As per the data provided by the State, irrigation schemes for 10 towns to utilize 47 MLD in command area of 1541 hectare have been commissioned. 01 irrigation scheme to utilize treated sewage of Rajpura Town (7 MLD) is under construction and 80% of work has been completed. For 4 towns namely Mandi Gobindgarh (25 MLD), Patiala(10 MLD), Dhuri (5 MLD) and Sangrur (11 MLD), irrigation projects have been sanctioned and funds are yet to be released by the State Government.*

For 03 towns, 04 STPs have been commissioned. For 14 towns, 20 STPs are under progress. For these towns, irrigation projects have been prepared to utilize the treated sewage but the funds have not been tied up so far. In case of 4 towns (Budhladha: 6.5 MLD, Zirakpur : 17 MLD, SAS Nagar : 45.4 MLD, Dera Bassi : 4 MLD), irrigation schemes are not feasible due to urbanization of land and non-availability of irrigation command area near the towns.

The Executing Committee recommends as under:

- *Punjab Pollution Control Board should verify commissioning of irrigation schemes of 10 towns to utilize 47 MLD treated sewage in command area of 1541 hectare within 1 month.*
- *Irrigation schemes for Rajpura town should be completed by 31.12.2020.*
- *The Department of Soil & Water Conservation shall pursue the matter with Department of Finance, State of Punjab to release the funds to utilize the treated sewage of 4 towns namely Mandi Gobindgarh (25 MLD), Patiala (10 MLD), Dhuri (5 MLD) and Sangrur (11 MLD) for irrigation.*
- *The State of Punjab should tie up the funds for laying of irrigation network to utilize the treated sewage of 24 STPs of 17 towns, out of which 4 STPs of 3 towns have been commissioned and work of 20 STPs of 14 towns is under progress. The irrigations schemes for these towns should also be completed simultaneously with the completion of sewage treatment plants of the towns i.e. by 31.3.2021.*
- *For 4 towns (Budhladha: 6.5 MLD, Zirakpur: 17 MLD, SAS Nagar: 45.4 MLD, Dera Bassi: 4 MLD), where the irrigation schemes are not feasible due to urbanization of land and non-availability of irrigation command area near the towns. The Department of Local Government should prepare action plan to utilize the treated sewage of these towns for construction activities, gardening, toilet flushing, washing of vehicles and nearby railway yards etc. by 31.10.2020.*

62

10. *Punjab Pollution Control Board is carrying out the monitoring of all the existing 21 STPs of the State on monthly basis. The monitoring data for the period March to June, 2020 indicate that 12 STPs of 12 towns (Zirakpur, Mohali, Lalru, Zirakpur, Mohali, Banur, PUDA, Rajpura, Bhikhi, Sardulgarh, Bareta and Budhladha) have been found non-compliant w.r.t. achievement of the standard for the parameters. Accordingly, Punjab Pollution Control Board has taken action against these STPs under the provisions of the Water Act, 1974.*

The Executing Committee recommends as under:

Punjab Pollution Control Board should send the non-compliance of these 12 STPs to the concerned operating agency/responsible authority and get the compliance be made from these agencies in a time bound manner, so that these STPs may start functioning effectively and efficiently.

In case, the non-compliances are not removed, Punjab Pollution Control Board shall take legal action against concerned operating agencies.

11. *Punjab Pollution Control Board has carried out the inspection of 31 industries during March, 2020 to July, 2020 and all these industries have been found compliant. However, none of the industry has been inspected by District Level Special Task Force of Distt. SAS Nagar, Patiala, Sangrur and Mansa during the period March to July, 2020.*

Punjab Pollution Control Board should increase the surveillance of the industries in odd hours to check the operational status of ETPs of the industries and their performance. Similarly, District Level Special Task Force of the Districts in the catchment area of river Ghaggar should visit the industries on surprise basis from time to time.

12. *There are 389 villages located in the catchment area of river Ghaggar and 87 villages have been covered under Phase-1 for installation of sewage treatment facilities in these villages. In Phase-2, 152 villages have been taken and in Phase-3, 150 villages have been covered for setting up of sewage treatment plant. Out of 87 villages covered under Phase-1, STPs in 28 villages have been installed and treatment systems in 14 villages are under construction.*

The Executing Committee recommends as under:

i) The department of Rural Development & Panchayats should take effective steps to get install sewage treatment plants in 87 villages, covered in Phase-1 by 31.12.2020.

ii) The treatment facilities for 152 villages covered under Phase-2 and 150 villages covered under Phase-3, should be installed by 31.3.2021.

13. *The Department of Health has organized the 21 Health Check up camps during the period March, 2020 to June, 2020 and in these camps, 575 patients have been checked and out of these patients, 8 patients have been found suffering with water borne diseases.*

Punjab Pollution Control Board should identify the ground water sources where 8 patients have been found suffering with water borne diseases and the ground water samples of these sources may be analyzed and in case these are found contaminated, the same may be sealed and the department of Water Supply & Sanitation may be asked to supply safe drinking water to the inhabitants of these areas.

14. *For maintaining environmental flow and watershed management in river Ghaggar, the Department of Irrigation should construct check dams water retaining structures to store the excess rain water during rainy season and the stored water may be released in a regulated manner in river Ghaggar, so that it may contribute dilution at downstream of river Ghaggar to restore aquatic life.*

15. *A Technical Committee has been constituted by the Govt. of Punjab for providing various technological options for treatment of wastewater of rural areas. This committee has been entrusted with the work of framing guidelines for management of Septage and Faecal sludge. The committee is in the process of framing regulation for management of septage.*

The department of Science Technology & Environment may be directed to ask the Committee to frame policy/guidelines for management of septage and faecal sludge by 30.9.2020 and action plan may be prepared for the management of the same by 30.11.2020 and shall start implementation of the same by 31.12.2020.

16. *Presently, in-situ bio remediation technology has been provided in the drain carrying sewage of Bhadson town, which is consisting of facultative pond followed by free water constructed wet land system. The second system of In-situ bio remediation has been installed in Bholana drain to treat the sewage of villages and other colonies. The technology is based on bio remediation followed by phyto-remediation and supplemented by Nano bubble technology.* ***The Executing Committee recommends that such in-situ bio remediation technology should be***

installed in other drains, carrying untreated sewage and not connected to STPs by 31.10.2020."

STATE OF HARYANA

4.4.6 Conclusions and recommendations

1. *27 towns are located in the catchment area of river Ghaggar and 59 STPs of capacity 514 MLD have been installed, out of which 49 STPs of capacity 373.5 MLD by Public Health Engineering Department, 9 STPs of capacity 131.5 MLD by HSVP and 1 STP of capacity 9 MLD by MES have been installed.*

   Haryana State Pollution Control Board is monitoring the performance of all the STPs on monthly basis. The analysis results of the effluent samples collected from STPs during the month of December, 2019 to June, 2020 indicate that all the STPs are meeting with prescribed limits for BOD and TSS parameters, whereas, none of the STP is complying with faecal coliform parameter and the value of faecal coliform is much higher than the permissible limits.

   The Executing Committee recommends that all the concerned departments namely PHED, HSVP and Garrision Engineer, MES shall make adequate arrangement to provide appropriate technology/ upgrade the existing STPs with mechanism to disinfect F.Coliform and ensure that these STPs should also achieve the prescribed standard for F.coli parameter by 31.12.2020.

2. *Out of 21 STPs, which are under construction/planning, 6 STPs of capacity 74 MLD have been completed. The construction work of 13 new STPs of capacity 65.5 MLD is under progress and progress varying between 5-98% has been achieved. The work of 01 STP of capacity 1.5 MLD shall be started within 15 days and whereas 01 STP of capacity 1 MLD to be installed at Khanguwal has been dropped.*

   The Executing Committee recommends that all the remaining 11 STPs of capacity 67 MLD should be completed by 31.3.2021. Special efforts should be made to accelerate the construction work of 03 STPs of capacity 31.5 MLD at 12 Cross Road Ambala, Khuda Khurd, Ambala and Shahpur Machhonda so that these STPs should be completed by 30.6.2021.

3. *10 STPs of capacity 51.5 MLD are under proposal, out of which 7 STPs of capacity 41.5 MLD belong to HSVP, 2 STPs of capacity 10 MLD belong to ULBs and 01 STP to PHED. The timelines for completion of these STPs have been mentioned between 31.12.2021 to 30.6.2025.*

The Executing Committee observed that such a huge quantity of untreated discharge of 51.5 MLD should not be allowed to be discharged, as such, there is need to complete these STPs by 30.6.2021.

4. *The Executing Committee observed that as per data provided by Haryana State Pollution Control Board, 255 points have been identified as pollution sources entering into main drains and ultimately into river Ghaggar, out of which 153 points relate to Development and Panchayat Department, 78 points to Urban Local Bodies, 5 points to HSVP, 5 points to PHED and remaining 14 points to other department.*

The Executing Committee further observed that there is possibility that these points might have been covered under STP projects but still there is need to analyze the data w.r.t the points which have been connected to STPs and the points where no action has been taken to divert the points into sewerage system further leading to STPs.

The Executing Committee recommends that Haryana State Pollution Control Board shall analyze the data of 255 disposal points joining to main drains w.r.t following points:

i. Details of the disposal points carrying treated sewage and quality of treated sewage.
ii. Details of disposal points carrying untreated sewage.
iii. Details of the points proposed to be connected to sewerage system and further to STPs.

5. *8 STPs of capacity 46.5 MLD in 7 towns have been planned to be constructed, where, presently either no discharge is there due to less population or discharge is not reaching to out fall and it is expected that 6-7 years will be taken to come with full population. These STPs are likely to be completed by 30.6.2024.* ***The Executing Committee observed that some temporary arrangements are required to be made to either divert the sewage of these areas to nearby STPs for its treatment or provide in-situ remediation in drains carrying untreated sewage.***

6. *8 STPs of capacity 77.5 MLD are required to be technologically upgraded and funds for the same have been tied up. The progress varying between 25-95% has been made w.r.t. upgradation of these STPs. The likely date of commissioning of these STPs has been mentioned as 30.12.2020 and 30.6.2021.*

The Executing Committee recommends that all the 8 STPs of capacity 77.5 MLD should be technologically upgraded by 31.12.2020.

7. *There are 20 STPs which are also required to be technologically upgraded but the funds have not been tied up so far. Out of these 20 STPs, 18 STPs are at DPR stage and in case of 2 STPs [Kalka: (4.5 MLD), Ambala city: (6 MLD)], no land is available for upgradation.*

The Executing Committee recommends that all 20 STPs should be technologically upgraded by 30.6.2021.

8. *Out of 27 towns in catchment of River Ghaggar, sewerage network has been completed in 20 towns. 430 Km of sewer line is being laid in 7 towns, out of which 318 Km sewerage has been laid, so far. In these 7 towns, progress w.r.t laying of sewerage network has been achieved to 51.5-98.8%.*

It is recommended that sewerage system in all the remaining 7 towns should be completed by 31.3.2021 or till the commissioning of STPs whichever is earlier.

9. *With regard to gap in treatment of sewage of the towns located in the catchment area of river Ghaggar, it was observed that total sewage discharge of 27 towns of river Ghaggar is 258 MLD, whereas, the present capacity of STPs in these 27 towns is 514 MLD. However, there is gap of 0.7 MLD in Ambala town only. However, it has been observed by the Executing Committee that as per the data provided by HSPCB, the untreated sewage of 107.53 MLD through 70 locations is being discharged into river Ghaggar, as such, the discharge of 107.53 MLD should also covered under gap in sewage to be treated.*

The Executing Committee recommends that Haryana State Pollution Control Board shall reanalyze the data w.r.t gap in treatment of sewage in the towns as well as 107.53 MLD sewage through 70 locations being discharged untreated into river Ghaggar within 15 days and necessary directions be issued to the Executing agency (PHED/ULB/HSVP/D&B/other department) to connect the untreated discharge of these 70 locations with sewerage system leading to STPs or install new STPs of adequate capacity by 30.6.2021.

10. *The Haryana State Pollution Control Board is monitoring the water quality of river Ghaggar at various locations. The data indicate that the value of BOD at various locations has been found varying between 2.6-110 mg/I and though there is slight change in the value of total coliform and still it is much higher than the permissible limits,* ***as such, there is need to upgrade all the existing STPs located in the catchment area of river Ghaggar to control faecal coliform and the source of pollution which are directly entering into river Ghaggar contributing high value of faecal coliform may also be identified and these sources should be connected to nearby STPs.***

11. *Haryana State Pollution Control Board is in the process of fixing the specifications for Real Time Water Quality*

67

Monitoring Stations and these RTWQMS are likely to be installed by 31.12.2020.

It is recommended that Haryana State Pollution Control Board shall take immediate action to install Real Time Water Quality Monitoring Stations (RTWQMS)by 31.12.2020 at appropriate locations.

12. *Haryana State Pollution Control Board is monitoring the ground water quality of ground water sources located in the catchment area of river Ghaggar on quarterly basis at 72 locations. As per the latest report, the groundwater quality of 40 locations has not been found complying due to high values of TDS and calcium, whereas, the groundwater quality of 32 locations is meeting with the prescribed standards for drinking water. Accordingly, all these contaminated sites have been closed and display boards mentioning "**water is not fit for drinking**" have been erected.*

It is recommended that Haryana State Pollution Control Board shall continue to monitor groundwater sources in the catchment area of river Ghaggar as per the frequency maintained by it and in case the contaminated sites are observed, the same shall be sealed by the Board and display board mentioning "water is not fit for drinking" may be erected at these sites.

13. *15 irrigation projects to utilize the treated sewage of the towns costing Rs. 184.97 crore, which are part of Rs. 500 crore micro irrigation project under NABARD scheme, have been approved.*
35 STPs located in 21 districts to irrigate CCA of 23,359 hectares of land to utilize 338.85 MLD of treated sewage have also been covered under the project of Rs. 500 crore.

As per the latest directions from the State Government, the project is to be completed within 2 years.

The Executing Committee recommended as under:

i) All the 15 irrigation projects to utilize the treated sewage of STPs located in the catchment area of river Ghaggar should be completed by 31.3.2021.

ii) Out of total 207 STPs located in the catchment area of river Ghaggar and Yamuna, for which action plan has been approved by Government of Haryana in the month of January, 2020 for Rs 1098.25 crore to utilize 1828 MLD sewage, priority may be given to the remaining 44 STPs (59-15) of Ghaggar catchment area to utilize their treated sewage for irrigation.

14. *Haryana State Pollution Control Board has inspected 6 MLD STP at Barwala, Hisar during the period March to June 2020, whose analysis results have been found higher than the permissible limits, as such, environmental compensation*

of Rs. 3.25 crore has been imposed alongwith launching of prosecution against the agency.

No inspection of industries has been carried out by District Level Special Task Force during March, 2020 to June, 2020.

The Executing Committee recommends that HSPCB shall continue to monitor the existing STPs and industries located in river Ghaggar catchment area on monthly basis and action against the violators may be taken in a time bound manner. District Level Special Task Force shall also conduct surprise inspection of industries from time to time.

15. *The Department of Rural Development & Panchayats has identified 45 villages in the catchment area of river Ghaggar, out of which work for STPs has been sanctioned for 36 villages and work of STPs in 31 villages has been started.*

It is recommended that treatment facilities in all the 45 villages falling in the catchment area of river Ghaggar should be completed by 31.3.2021.

16. *River Ghaggar is a non-perennial river and maintaining E-flow by keeping 15-20% of lowest possible discharge in lean season is not possible. However, monthly flow of all the major drains joining river Ghaggar is measured regularly on monthly basis.*

It is recommended that the Department of Irrigation shall provide check dam/water retaining structures in the catchment area of river Ghaggar to retain excess flow of water during rainy season and discharge the same in a regulated way during non-monsoon period so as to maintain eco system and aquatic life in the river.

17. *27 ULBs in Ghaggar river catchment area have notified their policy and septage and faecal sludge is disposed of at STPs through tanker system. As per the data supplied by the Department, septage/faecal sludge from 12 ULBs varying between 6-50 KI has been disposed of through tankers into STPs in the month of January-2020.*

It is recommended that Urban Local Bodies department, PHED, HSVP, D & P in consultation with Haryana State Pollution Control Board shall quantify the discharge of septage and faecal sludge to be disposed of at particular STPs keeping in view the capacity of STPs and quantity of sewage being treated at the STPs so that disposal of such sludge may not hamper the functioning of STPs.

18. *The officers of Haryana State Pollution Control Board, Urban Local Bodies, HSVP, PHED and Panchayat Department have visited the sites of phyto remediation system in Punjab area on 11.8.2020. Accordingly, it has been decided to start such in-situ bio remediation technology in drains carrying untreated sewage and not connected to STPs in the*

catchment area of river Ghaggar in the State of Haryana within 2 months.

It is recommended that executing agencies like ULB department, HSVP, PHED and Panchayat Departments shall identify the drains carrying untreated sewage and not connected to STPs within 15 days and provide appropriate in-situ bio remediation technology in the drains by 31.10.2020. Haryana State Pollution Control Board shall coordinate the matter immediately.

19. *Plan has been prepared for Watershed Management in catchment area of river Ghaggar by the Department of Agriculture but it is to be implemented by the Department of Development & Panchayat.*

It was recommended that the Department of Panchayat and Department of Agriculture shall jointly take steps to provide Watershed Management in the catchment area of river Ghaggar by 31.12.2020."

Our Observations

10. From the above, it is seen that there is hardly any significant improvement. The States of HP, Haryana, Punjab and UT Chandigarh continue to contribute water pollution which is a criminal offence. It is breach of public trust under public trust doctrine. We are left with a feeling that there is no commitment to the rule of law and no concern for the environment and health of the citizens on the part of the concerned authorities in the States of HP, Haryana, Punjab and UT Chandigarh. As already observed, inspite of enactment of Water (Prevention and Control of Pollution) Act, 1974 making discharge of untreated effluents into a water body a criminal offence, the States are still struggling with preventing untreated sewage from being discharged into the water body **at a huge cost to the environment and health and lives of citizens who have fundamental right to clean environment under the Constitution.** Water pollution is a serious threat to the health of the citizens as well as other living beings who consume the water and also to the food safety for growth of which the water is used for irrigation. After

the Hon'ble Supreme Court fixed a deadline of 31.03.2018 in *Paryavaran Suraksha Samiti (supra)* for ensuring that all requisite equipment for treatment of water pollution were in place, there can be no justification whatsoever for the State to have failed in complying with the law. If the State finds that they are unable to manage the sewage directly, there is no bar to other options being explored but there cannot be any justification not to comply with the mandate of law and protecting the health of the citizens in accordance with the Constitutional mandate. No action is being taken against the erring officers and it gives an impression that there is collapse of Environmental rule of law. Who is to pay the cost of damage to the environment and public health of large number of unidentified citizens and other living creatures? Is such cost being calculated. How officers responsible for damage by their inaction or otherwise are being dealt with. Should the State be held liable vicariously for such failure and failure to punish the guilty. This Tribunal has been passing repeated orders and as many as six reports have been submitted by a Monitoring Committee headed by a former High Court Judge and a former Chief Secretary, clearly recording failure of the State authorities but the higher authorities are also conveniently ignoring their responsibility. Advocates for the authorities only maintain silence before this Tribunal. **If the State itself fails in implementing the law, it is nothing but breakdown of the system itself. Is this Tribunal to just remain silent spectator for such gross failure or hold highest authorities accountable by directing their prosecution for their criminal failure and indirectly being party to the crime against the law of the land? How the law of the land is to be meaningfully enforced. We expect answers to these questions from the States.**

71

11. We hope that the States realise their responsibility to function according to the Constitution and take immediate remedial measures in punishing the guilty involved in failing to comply with the law and also take prompt measures instead of repeatedly taking the same plea of being engaged in tender process or DPRs. It should not be difficult at this length of time to overcome such procedural requirements and to effectively prevent discharge of the untreated effluents after 46 years of enactment of Water Act and repeated orders of the Hon'ble Supreme Court and other Courts. **For delay and continued violation, realistic compensation has to be recovered from the erring officers, apart from other action or in default, the compensation has to be quantified and recovered. The Executing Committee may make its recommendation in this regard.**

Directions

12. We accordingly direct the Chief Secretaries of the Himachal Pradesh, Punjab, Haryana and UT Chandigarh must meet (physically or online) within one month for brainstorming with reference to the recommendations of the Executing Committee for meaningful prompt action and fixing of the accountability for the erring officers. Such meeting may be convened and facilitated as per further direction in this order. Remedial action should not only include setting up of requisite equipment and interim measures but also making persons to whom the job is entrusted personally accountable in terms of their performance. After first meeting also, the four Chief Secretaries must meet atleast once in a month to take stock of the situation. First such meeting may be held on or before 30.11.2020 and meaningful action must be taken latest by

31.01.2021. In case of default, the Tribunal may have no option except to take coercive measures against the erring authorities.

13. We also direct that the Secretary, Ministry of Jal Shakti (MoJS) may also attend such meetings with a view to facilitate the deliberations and to remove bottlenecks, if any. Since the issues involve different States, the Secretary of MoJS will be the nodal agency for calling the meetings and coordinating with the Chief Secretaries. Similarly, NMCG and CPCB who are also involved in monitoring abatement of pollution of 351 river stretches may also attend such meetings.

14. As earlier mentioned, in OA 673/2018, the issue of abatement of pollution in the 351 river stretches is being dealt with by this Tribunal and last order was passed on 21.09.2020 in the light of reports of the CPCB and Central Monitoring Committee headed by the Secretary, MoJS. Ghaggar is also one such highly polluted stretch and is governed by the said order. In the said order, it was inter-alia observed:

> ***"24. We have duly considered the CPCB, CMC and OC reports as above and noted the gaps and recommendations. We accept the recommendations of the Committees already quoted above that the States should furnish quality information and comply with the directions of this Tribunal in terms of orders dated 06.12.2019 and 29.06.2020. The violation of mandate of 100% treatment of sewage may be visited with the assessment and recovery of compensation and violation of timelines for setting up of pollution control devices may also be likewise strictly enforced with the compensation regime in place. There is also need for fully utilizing and augmenting the existing infrastructure as already noted above.***
>
> ***25. The States/UTs may consider using HAM as a business model as well as OCOP concept, FSSM Policy, alternative models for treatment of sewage/faecal sludge, decentralized STPs and also strengthen the online monitoring system. We are also of the view that flood plain zones of all the rivers need to be mapped and demarcated and encroachments removed therefrom. The same be utilized for plantation, creation of bio-diversity parks and constructed wetlands or other recreational purposes, consistent with the***

environmental concern. We agree with the OC that river side mining needs to be regulated. To reduce the timelines for setting up of STPs, many States/UTs are consuming time in preparing DPRs whereas model DPRs can be prepared and used for shortening the timelines. Similarly, SOPs need to be prepared for the timeline to be taken in setting up of STPs as well as for maintenance and operation of existing STPs particularly those not meeting the norms. Number of monitoring stations also needs to be suitably increased. We are also of the view that the State RRCs must function effectively and the Chief Secretaries must hold monthly meetings as it is found from the report of the OC for the State of UP that the Chief Secretaries may not be doing so. Huge failures of the States/UTs may show poor governance as far as environment is concerned which may need to be remedied. As found by the CMC, neither delay is explained nor accountability is fixed for the failure of the concerned officers which is not a happy situation.

26. While dealing with the control of pollution of River Ganga, the Tribunal noted that following action points for monitoring:

i. Setting up of STPs, Interception and Division (I&D) of drains and preventing untreated sewage and effluents
ii. Use of treated water
iii. Use of sludge manure
iv. Status of septage management
v. Compliance in relation to industries
vi. Installation of STPs/treatment facilities in Hotels/Ashrams and Dharmshalas.
vii. Water quality monitoring of river Ganga and its tributaries.
viii. Maintenance of environmental flow in river Ganga.
ix. Disposal of Bio-medical waste.
x. Compliance of Solid Waste Management (SWM) Rules, 2016.
xi. Preparation of maps and zoning of flood plains.
xii. Mining activity under supervision of the concerned authorities.
xiii. Action against identified polluters, law violators and officers responsible for failure for vigorous monitoring.

CMC/RRCs/ OC for UP may conduct further monitoring keeping in mind the above action points."

Covid-19 and Water Pollution

15. Needless to mention that the water pollution can magnify health issues in the wake of Covid-19 pandemic. If the State authorities continue to ignore the issue, it will have alarming adverse effect on the lives of the citizens.

74

16. The Chief Secretaries may give the status of compliance as on 31.01.2021 to the Executing Committee as well as to the MoJS on or before 15.02.2021 and the Executing Committee may give its consolidated report, considering the said status reports and its own recommendations on or before 28.02.2021 by e-mail at judicial-ngt@gov.in preferably in the form of searchable PDF/OCR Support PDF and not in the form of Image PDF.

List for further consideration on 16.03.2021.

A copy of this order be forwarded to the Chief Secretaries of Himachal Pradesh, Punjab, Haryana and Chandigarh, Secretary, MoJS, CPCB and NMCG by mail for compliance.

Adarsh Kumar Goel, CP

S.K. Singh, JM

Dr. S.S. Garbyal, EM

Dr. Nagin Nanda, EM

October 28, 2020
Original Application No. 138/2016 (TNHRC)
(Case No.559/19/11/14)
DV

75

Annexure-2

H.P. STATE POLLUTION CONTROL BOARD

"HIM PARIVESH" PHASE-III, NEW SHIMLA-171 009 (H.P)

Phone: 0177 2673766, 2673274 Fax: 0177 2673018

No. HPSPCB/ OA No. 138 & 139 of 2016/ Task Force/ Vol-VII/ 2021- 24678 - 80 Dated: 8/02/21

To

Pr. Secretary (Env. Sci. & Tech.) to the GoHP-cum-Chairman (HPSPCB)
To the Govt. of Himachal Pradesh

Subject: **Compliance of the order dated 28.10.2020 of the Hon'ble National Green Tribunal in OA. No. 138-139 of 2018 in the matter of Stench Grips Mansa's Sacred Ghaggar River (Suo-Moto Case) and Yogender Kumar- reg.**

Reference: **Consideration of 6th Report of the Executing Committee submitted before Hon'ble National Green Tribunal on 07.09.2020 and directions thereof.**

Sir,

In reference to Hon'ble NGT directions dated 28.10.2020 and further letter No. CEC/2021/1186 dated 18.01.2021 received from the Technical Expert, Executing Committee (constituted by Hon'ble NGT) on the above cited subject vide which it was informed that Hon'ble NGT vide its order dated 28.10.2020 has considered the 6th report of the Executing Committee submitted before Hon'ble NGT on 07.09.2020 and as per directions of Tribunal, it was directed that the Chief Secretaries may give the status of compliance as on 31.01.2021 to the Executing Committee as well as to the MOJS on or before 15.02.2021.

Therefore, in view of the directions issued by Ministry of Jal Shakti during joint meeting with the Chief Secretaries of the concerned States/UTs on 10.12.2020 and in response to your office letter no. STE-E93)-3/2021 dated 08.01.2021, please find enclosed herewith the compliance status report pertaining to the State of Himachal, for kind information and further necessary action please.

Thanking you,

Yours faithfully

Encl.: As above

8/2/21
(Dr. Nipun Jindal)
Member Secretary
HP State Pollution Control Board

Copy to

1. **Dr. Babu Ram, The Technical Expert, Executing Committee (constituted by Hon'ble NGT),** Tower No. 5, 4th floor, Forest Complex, Sector- 68, SAS Nagar, Mohali, Chandigarh (PB for kind information please.
2. **The Central Monitoring Committee, Ministry of Jal Shakti, Govt. of India** for kind information please

(Dr. Nipun Jindal)
Member Secretary
HP State Pollution Control Board

Latest status Report of Himachal Pradesh w.r.t. 6th report of Executing Committee submitted to Hon'ble NGT in matter of OA No. 138 of 2016 and OA No. 139 of 2016

<table>
<tr><th>Sr. No.</th><th colspan="2">Conclusions and Recommendations in 6th Report.</th><th>Compliance Status</th></tr>
<tr><td rowspan="2">1</td><td rowspan="2">The Executing Committee recommends that 02 STPs each capacity 1 MLD to treat the sewage of Parwanoo town should be installed by 31.3.2021</td><td>The Executing Committee recommends that <u>01 STP of capacity 1MLD at Sector-2, Parwanoo</u> should be installed by 31.03.2021.</td><td>• Sewer pipes have been procured. As on 26-01-21, 4100m sewer line of dia 150mm, 900m sewer line of dia 200mm has been laid and 151 manholes have been constructed.
• Equalization Tank: - PCC and Raft foundation work has been completed. 1st and 2nd Lift has been completed.
• MBBR I and MBBR II: - PCC and Raft foundation work has been completed. 1st and 2nd Lift has been completed, 3rd lift is in progress.
• Sludge Sump: - PCC and Raft foundation work has been completed, 1st lift has been completed, 2nd lift is under is in progress.
• Filtrate Sump all civil work completed.</td></tr>
<tr><td>The concerned department of the State should make immediate arrangements to get the land transferred so that work of <u>STP located in village Tipra</u>, may be started. And should be installed by 31.03.2021.</td><td>• STP at Tipra: Tender work of both STPs has been awarded on 19.03.2020. The land transfer case for STP Tipra is pending at CCF, Forest Department. The Forest Department has also given permission for the site clearance/ development to the Jal Shakti Vibhag.</td></tr>
<tr><td rowspan="2">2</td><td rowspan="2">The Executing Committee recommends that STP of capacity 1.5 MLD in Kala Amb and 1 MLD in Trilokpur should be completed by 31.3.2021</td><td><u>STP of capacity 1.5 MLD in Kala Amb</u> should be completed by 31.03.2021</td><td>Work has been awarded on 7.03.2020. Pipes for the sewer line have been procured. Approx. 4.6 km sewer line has been laid.
The completion time schedule of STP Kala Amb is as below:-
<table>
<tr><td>Approval of Design</td><td>Approved</td></tr>
<tr><td>Site Development</td><td>Completed</td></tr>
<tr><td>Completion of civil works</td><td>31.01.2021 (Under Progress)</td></tr>
<tr><td>Installation of machineries</td><td>20.02.2021</td></tr>
<tr><td>Pipe tank and networking</td><td>28.02.2021</td></tr>
<tr><td>Project completion and trial run</td><td>31.03.2021</td></tr>
</table></td></tr>
<tr><td><u>STP of 1.5 MLD capacity in Trilokpur</u> should be completed by 31.03.2021.</td><td>Sewer pipes procured for sewer line. The land handed over to contractor. The hydraulic design has been approved by the competent authority. Approx. 5 km sewer line has been laid as on 26.01.2021. The Civil Construction work started on site.

The completion time schedule of STP Trilokpur is as below:-
<table>
<tr><td>Approval of Design</td><td>Approved</td></tr>
<tr><td>Site Development</td><td>Completed</td></tr>
</table></td></tr>
</table>

<table>
<tr><th>Sr. No.</th><th>Conclusions and Recommendations in 6th Report.</th><th>Compliance Status</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>Completion of civil works</td><td>31.12.2020 (Still under Progress)</td></tr>
<tr><td>Installation of machineries</td><td>31.01.2021</td></tr>
<tr><td>Pipe tank and networking</td><td>28.02.2021</td></tr>
<tr><td>Project completion and trial run</td><td>31.03.2021</td></tr>
</table>
</td></tr>
<tr><td>3</td><td>Presently, 2 small STPs each of capacity 0.07 MLD have been installed in Parwanoo area and are in working condition. One STP is meeting with prescribed norms and 2nd STP of capacity 0.07 MLD has recently been commissioned.</td><td>The two 70 KLD STPs have been installed and commissioned at Khadeen and Sector 5 Parwanoo.</td></tr>
<tr><td>4</td><td>The Executing Committee recommends that <u>CETP of capacity 5 MLD in Kala Amb area</u> should be completed by 30.06.2021.</td><td>Land for the construction of CETP has been allotted and tender has been awarded on 31st August, 2020. Process design for the CETP has also been approved by NIT Bhopal. Land levelling/ site development work has been started on 20.11.2020.
The completion time schedule of CETP Kala Amb is as below: -
<table>
<tr><td>Approval of design and drawing by competent authority (IIT Roorkee or any other IIT/NIT)</td><td>Approved</td></tr>
<tr><td>Site Development</td><td>Completed</td></tr>
<tr><td>Completion of civil work</td><td>31.01.2021 (Under progress)</td></tr>
<tr><td>Installation of Machineries</td><td>20.02.2021</td></tr>
<tr><td>Project completion and trial run</td><td>31.03.2021</td></tr>
</table>
</td></tr>
<tr><td>5</td><td>The Executing Committee recommends that <u>HPPCB shall continue to make surprise inspection of the industries</u> as per the time schedule prescribed by HPPCB/CPCB and <u>action against the defaulting industries</u> may be taken under the provisions of the Water Act, 1974.</td><td>Details of Inspections and Sampling carried out in Sukhna and Markanda Catchment from October 2020 to 31.01.2021.
<table>
<tr><th>Parwanoo</th><th>Kala Amb</th></tr>
<tr><td>No. Of Inspections- 93
No. Of Samples- 42
<u>Show Cause Notices issued- 4</u>
Environmental Compensation- Nil</td><td>No. Of Inspections- 72
No. Of Samples- 41
<u>Show Cause Notices issued- 3</u>
<u>Environmental Compensation- Rs. 668750/-</u></td></tr>
</table>
• HPPCB constituted Surveillance squad which carried out inspection of about 50 nos. of the industries falling in the catchment of Sukhna Nallah and River Markanda.</td></tr>
<tr><td>6</td><td>The Executing Committee recommends that the <u>State of Himachal Pradesh</u> shall <u>ensure sewage of all the villages, located in the catchment area of Sukhna Nallah and river Markanda, should be connected to the STPs</u></td><td>All the villages in the catchment of Sukhna Nallah at Parwanoo and Markanda at Kala Amb have been covered in the Action Plan for the sewage treatment and industrial wastewaters treatment of proposed STPs and CETPs at Parwanoo and Kala Amb respectively.</td></tr>
</table>

<table>
<tr><th>Sr. No.</th><th>Conclusions and Recommendations in 6th Report.</th><th>Compliance Status</th></tr>
<tr><td></td><td><u>and</u> CETP being installed in these areas.</td><td>
<table>
<tr><th>S. No</th><th>Name of Work / STP</th><th>Name of Villages</th></tr>
<tr><td>i)</td><td>Sewage Treatment Plants for Parwanoo Town.</td><td>Villages Nariyal, Ambota, Dhagged , Taksal, Gumma of GP Taksal will be connected with the STP and the other villages of GP Jabli, Dharampur, Gulhari, Jangeshu, GarkhalSanawar, KasauliGarkhal, Madhala and KaluJhanda have been mapped with the proposed STPs for septage management.</td></tr>
<tr><td>ii)</td><td>Providing sewerage system for Kala Amb and Moginand area. Laying of sewerage network and pre-treatment plant.</td><td>Villages Moginand, Ogli, Rampur Jattan, Kala Amb of GP Kala Amb will be connected with the CETP at Kala Amb. Other surrounding Rural Areas have achieved ODF status and double pit treatment shall be provided in these areas.</td></tr>
<tr><td>iii)</td><td>Providing sewerage system for Trilokpur and Kheri area: Laying of sewerage network and Setting up of sewerage treatment plant.</td><td>Villages Trilokpur, Kheri, Johron of GP Trilokpur will be connected with the STP. Other surrounding Rural Areas have achieved ODF status and double pit treatment shall be provided in these areas.</td></tr>
</table>
</td></tr>
<tr><td>8</td><td>The State of HP should install STP's and CETP in Kala Amb area and Parwanoo area by 31.03.2021, so that organic parameters and F.Coli are always within the prescribed norms and water quality of the drains/ river may be further improved.</td><td>Compliance is being ensured as per detail in point number 1, 2 & 4.</td></tr>
<tr><td>9</td><td>The <u>concerned department of State</u> of Himachal Pradesh should <u>prepare a detailed scheme to utilize the treated sewage for construction activities, toilet flushing, industrial usage, plantation, road cleaning, watering of green belt</u> or any other use within 02 months.</td><td>Reuse of Treated Waste Water (Action plan proposed under OA No 593)
• For reuse of Treated Waste Water (TWW), tertiary treatment of effluent is proposed to enable the bulk water users for utilization.
• Arrangement for collection of the TWW will be provided at all STPs for bulk users by JSV.
• No user charges shall be levied, however, the users have to make their own arrangements to carry the treated waste water either through tankers or pipe lines.
• The bulk water users will be identified by Industries Department/ HPSPCB.</td></tr>
<tr><td>10</td><td><u>HPPCB should monitor the ground water</u></td><td>HPSPCB is regularly monitoring the ground water quality.</td></tr>
</table>

Sr. No.	Conclusions and Recommendations in 6th Report.	Compliance Status
	quality of groundwater sources located in the catchment area of Sukhna Nallah and River Markanda, as per the frequency prescribed by CPCB. In case any ground water source is found contaminated, the same shall be sealed by HPPCB and display board be erected at the site with caption as "Water is not fit for drinking purposes"	**2 nos**Sampling locations are in catchment of **Sukhna Nallah**: i. Hand Pump near Shiwalik Café ii. Bore well at HPMC **3 nos**Sampling locations are located in catchment of **Markanda**: i. Well at Residential Area Kala Amb. ii. Well at Industrial Area Kala Amb iii. Hand Pump at Kala Amb Comparative analysis of Ground water monitoring results is appended as **Annexure-A.**
11	In order to **maintainenvironmental flow (e-flow)** in **Sukhna Nallah and Markanda** river, more check dams and water retaining structures may be provided **so as to retain and store the excess rain water flow and discharge the same in a regulated manner in the drains/nallahs**during non-Monsoon periods.	The **following steps have** been taken to maintain environmental flow in the river/ Nallah • Total **27 nos of Check Dams** have been **constructed by the Forest Departmentin Sukhna** (Priority-I) at **Parwanoo.**
12	HPPCB shall constitute teams to conduct surprise inspections of the catchment area of Sukhna Nallah and river Markanda to ensure that there is no discharge of septage and faecal sludge from septage tank in these Nallahs.	• 2 Nos of Joint Inspection at regional level (HPPCB, Gram Panchayat, Industries Department) has been carried out each in Sukhna Nallah and River Markanda on 16-07-2020 and 1-07-2020 respectively and no such incidence of discharging of septage and faecal sludge from septage tank in these Nallahswas observed. • Total 10 nos. of inspection has been carried out by Surveliance Squad constituted by HPSPCB. • No illegal discharge of septage or feacal sludge has been observed. • All proposed STPs in the catchment has been equipped with septage management. • Further it is pertinent to mention here that during routine surveillance and monitoring conducted by the Regional offices, HPSPCB, this aspect is regularly checked as well.
12B	Policy/guidelines for management of septage and faecal sludge from rural areas and other un-sewered areas may be framed within 3 months.	• Himachal Pradesh has achieved Open Defecation Free status, therefore, in rural areas toilet facilities with septic tanks for each household are available and in use. • Further, an action plan for septage management for rural areas in compliance of Hon'ble NGT order in O.A. No. 593 of 2017 has beenprepared which will incorporate the mapping of STPs for the management of the septage in the semi-urban/ peri-urban areas. • Total 166 Gram Panchayats in State have been covered for Septage management under existing STPs and proposed STPs all over State. • As regard the STPs in the catchment of Sukhna Nallah and River Markanda, the proposed STP of Parwanoo has been mapped for the septage management in nearby areas.

S. No	Name of Work	Name of Villages

<table>
<tr><th>Sr. No.</th><th>Conclusions and Recommendations in 6th Report.</th><th>Compliance Status</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>i)</td><td>Laying of Sewerage Network & Setting up of Sewage Treatment Plants for Parwanoo Town.</td><td>Villages Nariyal, Ambota, Dhagged , Taksal, Gumma of GP Taksal will be connected with the STP and the other villages of GP Jabli, Dharampur, Gulhari, Jangeshu, GarkhalSanawar, KasauliGarkhal, Madhala and KaluJhanda have been mapped with the proposed STPs for septage management.</td></tr>
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</table>
A policy/ guideline for management of septage & faecal sludge from rural areas in r/o of District Sirmaur has been formulated.
</td></tr>
<tr><td>13</td><td><u>No STP</u> along Sukhna Nallah and Markanda river has been constructed, therefore, <u>there is need to treat sewage of the towns of Kala Amb area and Parwanoo area by providing in-situ remediation technology in the drains.</u> In-situ remediation technology work undertaken at Samtel Nallah and proposed on JattanWala Nallah at 2 locations should be installed and commissioned by 31.10.2020.</td><td>River Markanda catchment in Kala Amb:
• The tender for installation of phyto-remediation in Jattanwala Nallah at 2 locations has been awarded. Jal Shakti Vibhag has started the construction work of phyto-remediation in Jattanwala nallah at 1st site.
• Weir construction on both the sites has been completed. Construction of reed bed was initiated at Site No. 1, which was stopped due to land dispute with local residents.
• Construction of reed beds has been initiated at Site No. 2 for which work is in progress.
Sukhna Nallah catchment in Parwanoo:
• The civil work & plantation of plants has been completed and facility has been made operational.
• Water sampling will be done after replacing dried out plants.</td></tr>
</table>

Sr. No.	Conclusions and Recommendations in 6th Report.	Compliance Status
		• More plants will be planted in upcoming months.
14	**HPPCB shall install Real Time Water Quality Monitoring Stations** in **JattanWala Nallah, Markanda River and Sukhna Nallah** by 31.12.2020	**2 (Two)Real Time Water Quality Monitoring Stationsare installed** at 1. **River Markanda** 2. **River Kaushalaya** at village Kamli • The systems are also connected to HPSPCB server and the Real Time data is being transmitted to State Board Server regularly. • The Parameters DO, BOD, TSS, pH, Temp. and Flow Rate are being monitored and the equipment installed are functioning properly. **Sukhna Nallah and JattanWala Nallah** are **seasonal drains**, hence **installation of RTWQMS is not feasible.**

Annexure-I

	Ground water quality results from Aug-20 to Oct-20 for Kala Amb													
			Nov-2020			Oct-20			Sep-20			Aug-20		
Sr. No.	Parameters	Limits (as per IS 10500:2012)	Well at Residential Area Kala Amb	Well at Industrial Area Kala Amb	Hand Pump at Kala Amb	Well at Residential Area Kala Amb	Well at Industrial Area Kala Amb	Hand Pump at Kala Amb	Well at Residential Area Kala Amb	Well at Industrial Area Kala Amb	Hand Pump at Kala Amb	Well at Residential Area Kala Amb	Well at Industrial Area Kala Amb	Hand Pump at Kala Amb
1	pH	6.5 to 8.5	7.15	7.09	7.09	7.16	8.14	7.29	7.22	7.23	7.36	7.01	7.13	7.09
2	TDS (mg/l)	500 (2000 permissible)	382	562	516	417	398	356	597	472	431	457	398	331
3	T. Hardness (mg/l)	200	164	152	152	184	176	184	200	128	140	170	166	228
4	Cl (mg/l)	250	12.6	17.04	12.04	49.7	42.6	15.6	24.14	..	22.72	21.3	22.7	7.1
5	Ca^{++} (mg/l)	75	..	--	--	36.8	40	35.6	..	..	..	44	48	59.2
6	Mg^{++} (mg/l)	30	..	--	--	22.4	18.5	23.4	..	..	..	14.64	11.22	19.52
7	TA (mg/l)	200	225	220	210	250	190	210	255	225	250	255	340	310
8	SO_4 (mg/l)	200	37.84	41.32	69.11	57.6	23.8	29.4	159.07	96.9	96.9	168.2	101.3	163
9	B (mg/l)	0.5	0.82	0.86	0.87	0.26	0.28	0.31	0.24	0.27	0.23	0.07	0.12	0.11
10	F (mg/l)	1	0.61	0.76	0.54	0.41	0.16	0.3	0.49	0.61	0.6	0.12	0.04	ND
11	NH_3-N (mg/l)	0.5	Nil	Nil	Nil	..	..	..	Nil	Nil	Nil	NIL	Nil	NIL
12	NO_3-N (mg/l)	45	0.54	0.57	0.49	0.55	0.23	0.71	0.33	0.29	0.34	0.076	0.059	0.096
13	Phenol (mg/l)	0.001	--	--	--	--	--	--	--	--	--	--	--	--
14	Zn (mg/l)	5	--	--	--	0.01	ND	ND	..	..	..	..	..	..
15	Cu (mg/l)	0.05	--	--	--	ND	ND	ND	..	..	..	..	..	..
16	Ni (mg/l)	0.02	--	--	--	ND	ND	ND	..	..	..	..	..	..
17	Fe (mg/l)	0.3	--	--	--	..	..	..	..	..	..	..	..	..
18	Pb (mg/l)	0.01	--	--	--	ND	ND	ND	..	..	..	..	..	.
19	Cd (mg/l)	0.003	--	--	--	ND	ND	ND	..	..	..	..	..	..

Comparative analysis of Ground water monitoring results at the catchment of Sukhna Nallah at Parwanoo

Sr. No.	Parameters	Limits (as per IS 10500:2012)	Point of Collection and their results taken during January to July 2020		Point of Collection and their results taken during August to October 2020		Point of Collection and their results taken during August to November- 2020	
			Hand Pump near Shiwalik Cafe	Bore well at HPMC	Hand Pump near Shiwalik Cafe	Bore well at HPMC	Hand Pump near Shiwalik Cafe	Bore well at HPMC
1	pH	6.5 to 8.5	7.90	6.62	9.29	7.13	9.65	8.17
2	TDS (mg/l)	500 (2000 permissible)	216	490	604.26	393.86	628.0	177.0
3	T. Hardness (mg/l)	200	172	220	94	276	38.0	156.0
4	Ca^{++} (mg/l)	75	24.02	68.5	24.01	88.87	26.0	122.0
5	Mg^{++} (mg/l)	30	14.58	12.15	8.26	14.57	12.0	34.0
6	SO_4 (mg/l)	200	37.92	41.78	74.51	36.70	30.35	26.18
7	B (mg/l)	0.5	0.01	-	0.072	0.051	0.080	0.037
8	F (mg/l)	1.0	0.018	-	0.771	0.372	0.721	0.209
9	NH_3-N (mg/l)	0.5	Nil	-	Nil	-	Nil	Nil
10	NO_3-N (mg/l)	45	Nil	-	Nil	-	-	-
11	Zn (mg/l)	5	0.059	0.10	ND	ND	-	-
12	Cu (mg/l)	0.05	ND	-	ND	ND	-	-
13	Ni (mg/l)	0.02	ND	ND	ND	ND	-	-
14	Fe (mg/l)	0.3	ND	0.19	0.055	ND	-	-
15	Pb (mg/l)	0.01	ND	ND	ND	ND	-	-
16	Cd (mg/l)	0.003	ND	-	ND	ND	-	-

Annexure-3

Compliance Report with reference to the Hon'ble NGT order dated 28.10.2020 in the matter OA No. 138/139 of 2016 titled "Stench Grips Mansa's Sacred Ghaggar River" (Suo-Motu case)

Submitted by:

The Adviser to the Administrator, U.T. Chandigarh

1. Background

Hon'ble National Green Tribunal, New Delhi in the matter original application No. 138 of 2016 and 139 of 2016 has passed an order dated 7th August, 2018 vide which it is informed that proceedings in the matter O.A. No. 138 of 2016 and O.A. No. 139 of 2016 titled Stench Grips Mansa's Sacred Ghaggar River (Suo-Motu case) were initiated before the Tribunal on a reference received from the National Human Right Commission (NHRC). The NHRC took Suo-Motu action on the basis of a news item appearing in The Tribune, dated 12.05.2014 under the caption **"Stench Grips Mansa's Sacred Ghaggar River"** to the effect that the river Ghaggar had turned into a polluted water body on account of discharge of effluents – industrial as well as municipal.

The Chief Secretaries of the States of Himachal Pradesh, Haryana, Punjab and also the Administrator of U.T., Chandigarh have constituted Special Task Force (STFs) comprising of District Magistrate, Superintendent of Police, Regional Officer of the State Pollution Control Board in concerned District and one person to be nominated by the District Judge in every District in his capacity of Head of the District Legal Services Authority. Such STF identify persons responsible for violation of law so that action can be taken. At the State Level, the STF comprise of the Chief Secretary, Secretary Environment, Secretary of Urban Development and Secretary of Local Body. The District Level Special Task Force submit a monthly action taken report to the State Level Task Force and State Level Special Task Force furnish 3 monthly report or the action taken to the Central Pollution Control Board.

An Executing Committee has been constituted by Hon'ble NGT under the Chairmanship of Justice Pritam Pal, Former Judge, Punjab and Haryana High Court. Other members of the said committee are:

a) Ms. Urvashi Gulati, IAS, former Chief Secretary, Haryana.
b) Dr. Babu Ram, Technical Expert, Monitoring Committee.
c) Sh. Vimal Kumar Hatwal, Joint Director, R.O., MoEF & CC.
d) Sh. J.C Babu, Additional Director, CPCB.

2. About River Ghaggar and Its Tributaries

Ghaggar River, Ghaggar also spelled Ghagghar, river, northern India. The Ghaggar rises in the Siwalik (Shiwalik) Range, in northwestern Himachal Pradesh state and flows about 200 miles (320 km) southwest through Haryana state, where it receives the Saraswati River. It

eventually dries up in the Great Indian (Thar) Desert. Just southwest of Sirsa it feeds two irrigation canals that extend into Rajasthan state. Its seasonal flow is dependent on monsoonal (seasonal) rainfall. The main tributaries of the Ghaggar are the Kaushalya river, Markanda, Sarsuti, Tangri and Chautang. The river flows at a distance of 7.0 K.M. from the nearest point in the U.T. of Chandigarh.

Ghaggar River and other drains is given in **Figure 1 & Figure 2.**

Figure 1

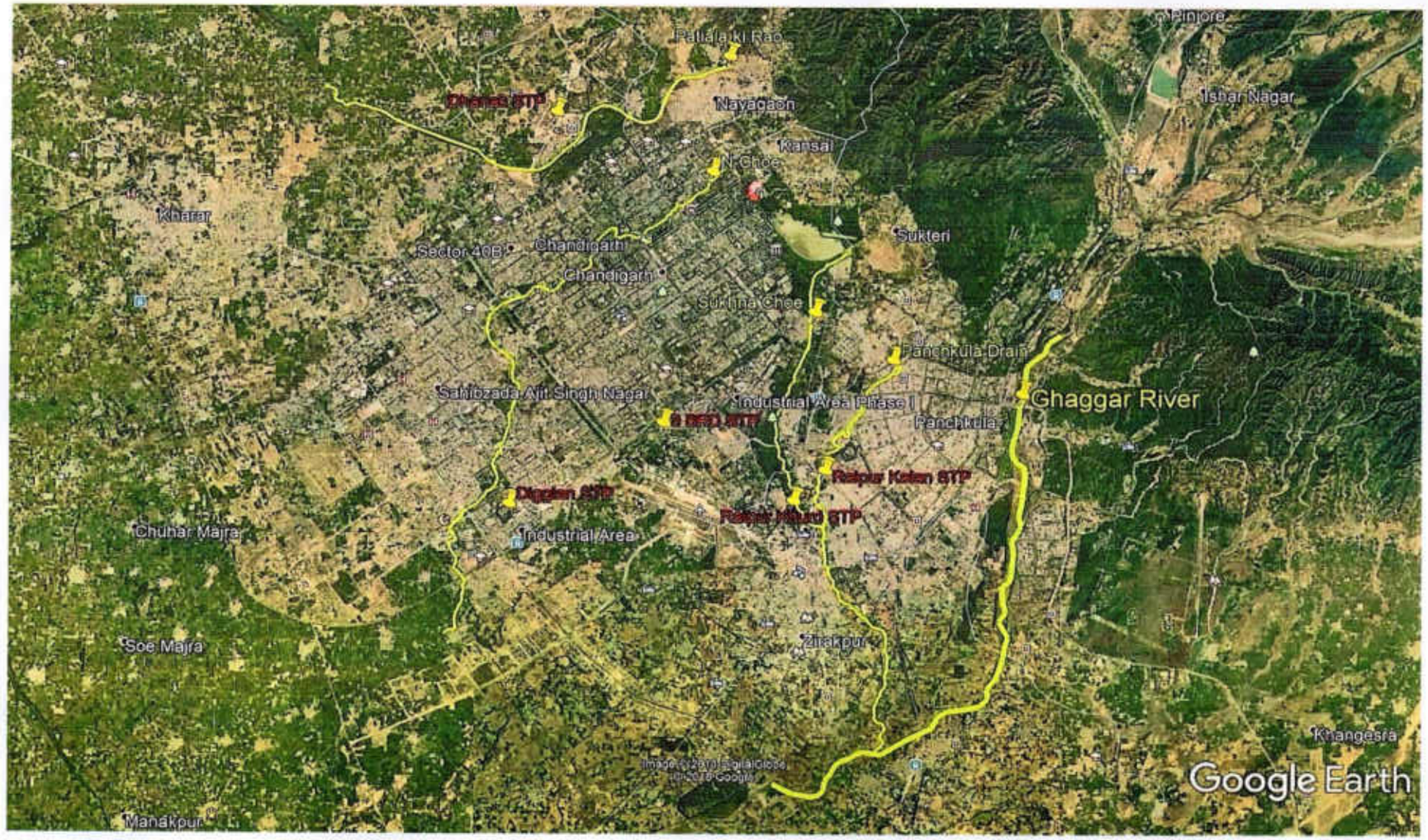
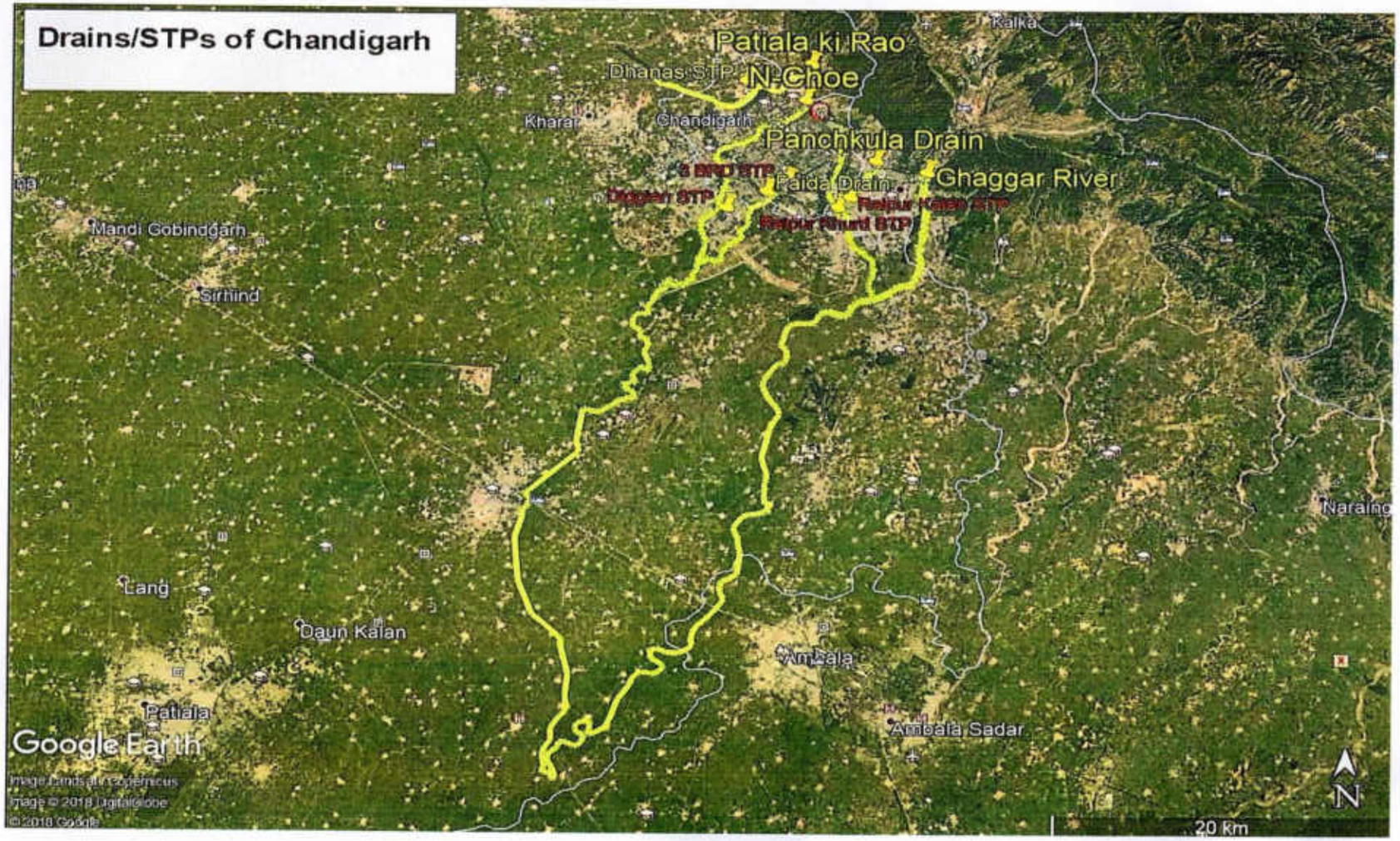

Pinjore
Patiala ki Rao
Dhanas STP
Nayagaon
Ishar Nagar
Kansai
N Choe
Kharar
Sukteri
Sector 40B
Chandigarh
Chandigarh
Sukhna Choe
Panchkula Drain
Sahibzada Ajit Singh Nagar
Industrial Area Phase I
Ghaggar River
Panchkula
Raipur Kalan STP
Dhakoli STP
Raipur Khurd STP
Chuhar Majra
Industrial Area
Soe Majra
Zirakpur
Khangesra
Manakpur
Google Earth

Figure 2


Drains/STPs of Chandigarh
Patiala ki Rao
Dhanas STP
N. Choe
Kharar
Chandigarh
Panchkula Drain
Ghaggar River
Paida Drain
Mandi Gobindgarh
Sirhind
Lang
Daun Kalan
Patiala
Ambala
Ambala Sadar
Kalka
Google Earth
20 km
N

3. Water quality goals as per the existing provisions or guidelines/specifications of CPCB.

As per provisions water quality should meet with the standards prescribed in scheduled VI of Environment (Protection) Act, 1986 for discharge of effluents in inland surface water. As Sukhna Choe and N-Choe are joining River Ghaggar hence, before meeting with river Ghaggar both of the choes should meet with the prescribed standards as mentioned in Schedule VI of Environment (Protection) Act, 1986.

4. Sources of Pollution of River Ghaggar and Its tributaries within the jurisdiction of the respective State/UT.

In the catchment area of river Ghaggar, the waste water is generated mainly by the two sources: domestic and industrial.

4.1 Domestic

Being a planned city, Chandigarh is completely covered with sewerage network. Details w.r.t. water consumption and discharge are as given below:

Municipal Population	10.54 Lacs (as per 2011 census)
Volume of Domestic & Industrial Waste Water Generated	54 MGD (243 MLD)
Treatment Capacity	55.1 MGD (248.25 MLD) (More than 100 % treatment capacity)
No. of STPs	7
Capacity of Each STP	***Operational STPs:*** **3 BRD STP** :11 MGD (49.5 MLD) **Raipur Kalan STP** :5 MGD (22.5 MLD) **Diggian STP** :30 MGD (135 MLD) **Raipur Khurd STP** :1.25 MGD(5.63 MLD) **Dhanas STP** :1.6 MGD (7.5 MLD) **Maloya STP** :5 MGD (22.5 MLD) ***STP under trial run:*** **Raipur Kalan STP : 1.25 MGD (5.625 MLD)**
Mode of Disposal	Natural Choe for all except Diggian. Diggian STP effluent goes to Irrigation Channel

River Ghaggar is passing at around 7 Km distance from Chandigarh and there are two main sources of discharge from Chandigarh which contribute to River Ghaggar.

1) Sukhna Choe
2) N-Choe.

In these choes two types of waste water are being discharged.

1) Treated waste water from the STPs.
2) Direct discharge of untreated waste water

4.2 Industrial

In Chandigarh, **no unit is allowed to run without consent and without ETP** (if unit is generating waste water). After treatment in their captive ETP, treated waste water is released into sewer line which further goes to Terminal Sewage Treatment Plant and gets further treatment. Monitoring of both drains (i.e. Sukhna Choe and N-Choe) which mixes into River Ghaggar, shows that **no industrial effluent is being discharged without treatment**.

Being a Planned city Chandigarh has notified Industrial Area and most of the industries are either in Industrial Area Phase-I or Industrial Area Phase-II except Hotel/Restaurant/Hospitals etc which are in sectors.

Chandigarh Pollution Control Committee grants consent to operate to only those industries which are having proper effluent treatment plant or air pollution control device (whichever is applicable). Hence, all the industries operational in Chandigarh are having Effluent Treatment Plants or Air Pollution Control Devices.

Treated effluent by industries is being released into the public sewer system which further goes to Terminal Sewage Treatment Plant and gets further treatment.

5. Actions taken for ensuring compliance to the river ghaggar action plan

- Regular meetings and field inspections are conducted by the District Level Special Task Force and State level Task Force, constituted vide order no. ED/2018/316 dated 07.09.2018 in this matter.
- **Before the starting of the action plan, there were 11 discharge outlets into the Sukhna choe, where waste water was being discharged into it without any treatment. At present, all the outlets from where untreated water was entering in the Sukhna-Choe have been plugged except one point i.e. near Raipur Khurd, which is going to be plugged Feb 7, 2021 .**

- **Before the starting of the action plan, there were 8 discharge outlets into the N-choe, where waste water was being discharged into it without any treatment. At present, all the outlets have been plugged.**
- **Earlier there was a gap between the wastewater generation and the treatment capacity. As the new STP at Raipur kalan has started its operation, Chandigarh is now having more than 100 % treatment capacity.**

6. Present status

6.1 Status of STPs & Re-use of treated wastewater

STPs

Sewage treatment in Chandigarh is well planned. Treated waste water from STPs is discharged into three drains viz. Sukhna Choe, N- Choe & Patiala ki Rao. Sukhna Choe & N-Choe joins River Ghaggar which is flowing around 7 Km far from Chandigarh. The quality of treated water from STPs is regularly monitored by Chandigarh Pollution Control Committee on monthly basis w.r.t. various parameters.

At present, 7 STPs are operational in Chandigarh. Details w.r.t. total wastewater generation and treatment capacity of the STPs are as given below:

Volume of Domestic & Industrial Waste Water Generated	54 MGD Approx. (243 MLD)
Treatment Capacity	55.1 MGD (248.25 MLD)
Capacity of Each Operational STP	**3 BRD STP**- 11 MGD (49.5 MLD) **Raipur Kalan STP** -5 MGD (22.5 MLD) **Diggian STP**-30 MGD (135 MLD) **Raipur Khurd STP** -1.25 MGD (5.63 MLD) **Dhanas STP** -1.6 MGD (7.5 MLD) **Maloya STP** -5 MGD (22.5 MLD) ***STP under trial run:*** **Raipur Kalan STP : 1.25 MGD** (5.625 MLD)

Re-Use of treated wastewater

As far as re-use of treated water is concerned, it is being supplied to various parks, green belts and houses in Chandigarh. Diggian STP and 3 BRD STP are pumping tertiary treated water to various locations in the city.

Out of 54 MGD of sewage generated, 10 MGD (approx.) tertiary treated sewage is being supplied various parks, green belts and houses in Chandigarh.

Current status and desired levels.

- Total volume of wastewater generated in the city is 54 MGD whereas treatment capacity of the operational STPs is 55.1 MGD. **This indicates more than 100 % treatment capacity.**
- 01 STP at Raipur kalan is under trial run.
- Out of 07 operational STPs, three STPs (Raipur kalan, Raipur khurd and Diggian) fail to achieve the desired BOD level and four STPs (3 BRD, Raipur kalan, Raipur khurd and Diggian) fail to achieve the desired level of F. Coli. 02 STPs at Maloya and Dhanas are meeting with the desired level of BOD and F.coli.

Status of new STP and upgradation of existing STPs

- Process of construction of 0.4 MGD STP Village Kishangarh has been started and is likely to be completed by June 30, 2021.
- All the STPs will comply with the standard norms only after the upgradation of existing STPs. Chandigarh Smart City Limited is in process to upgrade the operational STPs. The work of upgradation /Rehabilitation of 5 STPs has been started to meet the new prescribed parameters fixed by CPCC. The date of commencement and date of completion is as under :-

S.No	Description	Technology	Date of commencement	Date of completion	Remarks
1	STP Diggian, Mohali	A2O	1.09.2020	31.08.2022	On line Monitoring system is part of the upgradiation
2	STP Raipur Khurd	SBR	1.09.2020	28.02.2022	
3	STP Raipur Kalan	SBR	1.09.2020	28.02.2022	
4	STP 3BRD	SBR	23.09.2020	22.09.2021	
5	STP Dhanas	SBR	23.09.2020	22.09.2021	

6.2 Status of closing of outlets into Sukhna Choe and N-Choe further leading to river Ghaggar

1) **N- choe:** All the outlets from where untreated water was entering in the N-Choe have been plugged. Now, no untreated water is flowing in N-Choe in Chandigarh.

2) **Sukhna choe:** All the outlets from where untreated water was entering in the Sukhna-Choe have been plugged except one point i.e. near Raipur Khurd. The work of plugging the same is in progress and will be completed by February 7, 2021.

6.3 Status of installation of in situ bio remediation in Sukhna choe and N-choe

The work of installation of in situ bio remediation in both the drains will be completed by Feb 28, 2021.

6.4 Status of installation of real time water quality monitoring stations (RTWQMS) in river Ghaggar

RTWQMS at N-choe has been installed and is under trial run. The tender for installation of RTWQMS at Sukhna choe has been opened and under allotment. The work will be completed by Feb 28, 2021.

6.5 Existing Status w.r.t. various parameters in the catchment of river Ghaggar and Its Tributaries:- STPs, Ground water quality, quality of drains and River Ghaggar.

6.5.1 STPs

There are six STPs operational in U.T. Chandigarh which are being operated and maintained by Municipal Corporation, Chandigarh and Engineering Department, Chandigarh Administration as per details given below. Monitoring was not conducted in the month of March due to lockdown.

S.N	Location of each STP	STP installed capacity (in MLD)	Technology (UASB/ASP/OP/SBR/MBR/FAB etc.)	Consent status	Compliance status (January, 2021)
1	Diggian	135 MLD	MBBR	Consent granted	Non-Complying
2	3 BRD	49.5 MLD	SBR	Consent granted	Complying
3	Raipur Kalan	22.5 MLD	UASB	Consent granted	Non-Complying
4	Raipur Khurd	5.63 MLD	ASP	Consent granted	Non-Complying
5	Dhanas	7.5 MLD	SBR	Consent granted	Complying
6	Maloya	22.5 MLD	SBR	Consent granted	Complying

Chandigarh Pollution Control Committee monitors the performance of STPs on monthly basis. Data of year 2020 is given in Table 1 to 6.

6.5.2 Ground Water Quality:

As per direction of Executive Committee monitoring of Ground Water Quality will be done on quarterly basis.

The Data of ground water quality monitored by CPCC in year 2020 is given in Table 7.

6.5.3 Quality of Drains:

Chandigarh Pollution Control Committee monitors the quality of waste water of Sukhna Choe and N-Choe at the exit point of Chandigarh. Data of which is as given below.

Sukhna Choe : Table 8

N-Choe : Table 9

6.5.4 Water quality of River Ghaggar :

The water quality of River Ghaggar (After meeting of Sukhna choe) at Mubarakpur, Punjab is given in Table -10.

Table -1

STP DIGGIAN OUTLET - 2020

Sr.No	Parameters	Unit	Permissible Limit	Jan.	Feb.	April	May	June	July	Aug	Sept.	Oct.	Nov.	Dec.
1	Temp	°C	--	18	18.1	27	27	29	28.5	28	29	25	24	20.2
2	pH	-	5.5 to 9.0	7.6	7.3	7.2	7.2	6.9	7.2	7.2	7.3	7.2	7.3	7.3
3	DO	mg/l	-	5.9	4.7	4.4	4.6	5.7	5.9	4.4	4.9	4.2	1.7	1.5
4	COD	mg/l	250	93	112	151	41	37	41	50	42	73	79	120
5	BOD	mg/l	30	29	62	55	14	12	16	29	18	24	27	47
6	TSS	mg/l	100	28	48	28	6	14	12	29	10	20	41	60
7	NH_3-N	mg/l	50	15	31	18	18	17	12	26	16	26	31	27
8	PO_4-P	mg/l	5.0	4.99	2.51	2.43	2.56	3.15	2.49	2.29	2.29	2.62	1.83	2.64
9	Total Coliform	MPN/100 ml	-	2.78×10^6	3.45×10^6	--	2.4×10^6	<1	1.41×10^6	3.48×10^6	2.2×10^6	7.6×10^4	5.42×10^5	1.2×10^6
10	Faecal Coliform	MPN/100 ml	-	7.0×10^5	2.21×10^6	--	3.3×10^5	<1	9.0×10^4	1.3×10^6	1.4×10^5	1.8×10^4	1.3×10^5	1.4×10^5

Note: The above mentioned Standards/Permissible Limit are meant for discharge in Inland Surface Water. Finally treated water mixes with river ghaggar. Hence, same norms will be applicable.

Table -2

STP 3BRD OUTLET - 2020

Sr.No.	Parameters	Unit	Permissible Limit	Jan.	Feb.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	Temp	°C	--	18	18.2	26	27	29	29	28.2	28	25	24	20
2	pH	-	5.5 to 9.0	7.6	7.1	7.0	8.0	6.8	6.8	7.4	7.2	7.4	7.1	7.9
3	DO	mg/l	-	4.6	2.7	5.8	--	6.9	10.8	5.1	6.6	6.5	2.9	5.4
4	COD	mg/l	250	194	53	25	19	16	13	14	8	12	32	19
5	BOD	mg/l	30	80	27	9.6	9.8	9.0	5.0	6.4	3.1	4.8	8.7	6.5
6	TSS	mg/l	100	51	69	10	19	10	3	13	9	4	5	4
7	NH_3-N	mg/l	50	2.15	2	1.60	1.20	0.37	0.68	2.12	0.73	0.38	1.89	0.78
8	PO_4-P	mg/l	5	2.03	1.89	1.35	1.18	0.58	2.34	0.61	2.04	1.71	1.08	1.62
9	Total Coliform	MPN/100ml	-	2.4×10^6	5.42×10^6	--	2.4×10^3	2.4×10^3	7.9×10^4	3.45×10^4	1.3×10^5	1.2×10^5	3.45×10^5	7.6×10^4
10	Faecal Coliform	MPN/100ml	-	7.9×10^5	1.09×10^6	--	230	4.9×10^2	1.7×10^4	1.72×10^4	5.4×10^4	4.0×10^4	4.9×10^4	4.0×10^3

Table-3

STP Raipur Kalan-2020

Sr.No.	Parameters	Unit	Permissible Limit	Jan.	Feb.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	Temp	°C	--	18	23	27	27	27	29.5	29	29	27	23.5	16.5
2	pH	-	5.5 to 9.0	7.0	7.2	7.3	7.1	6.9	7.0	7.2	7.2	7.0	7.0	7.3
3	DO	mg/l	-	NIL	NIL	NIL	NIL	NIL	9.4*	2.5	0.83	NIL	NIL	0.9
4	COD	mg/l	250	190	145	164	132	90	77	108	102	140	121	335
5	BOD	mg/l	30	104	60	84	69	59	38	64	46	87	63	172
6	TSS	mg/l	100	25	40	47	45	23	46	55	28	47	27	177
7	NH_3-N	mg/l	50	8	11	16	33	28	10	10	6.4	4.4	5.9	5.0
8	PO_4-P	mg/l	5.0	4.00	4.54	3.03	2.65	3.53	3.47	3.20	2.99	1.37	1.81	2.10
9	Total Coliform	MPN/100ml	--	7.0×10^6	4.0×10^4	--	5.4×10^5	1.09×10^6	1.3×10^5	1.72×10^7	7.6×10^5	1.4×10^6	2.78×10^6	2.21×10^7
10	Faecal Coliform	MPN/100ml	--	1.1×10^6	1.7×10^4	--	2.4×10^5	4.6×10^5	4×10^3	2.1×10^6	1.8×10^5	2.2×10^5	2.2×10^6	1.3×10^7

Note: The above mentioned Standards/Permissible Limit are meant for discharge in Inland Surface Water. Finally treated water mixes with river ghaggar. Hence, same norms will be applicable

*** High DO values may be because of algal growth.**

Table -4

STP Raipur Khurd-2020

Sr.No.	Parameters	Unit	Permissible Limit	Jan.	Feb.	April	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.
1	Temp	°C	--	16.5	23	26	27	27	28.6	28	29	27	24.5	16.5
2	pH	-	5.5 to 9.0	6.4	7.0	7.3	7.2	6.9	7.3	7.7	7.7	7.6	7.7	7.3
3	DO	mg/l	-	NIL	NIL	2.4	2.0	0.7	0.5	2.0	3.4	3.2	1.8	0.3
4	COD	mg/l	250	309	383	157	168	161	107	80	72	120	205	226
5	BOD	mg/l	30	123	119	87	101	101	86	48	26	39	65	84
6	TSS	mg/l	100	83	160	66	58	102	63	66	53	75	105	137
7	NH_3-N	mg/l	50	32	33	24	35	13	23	9	11	14	15	12
8	PO_4-P	mg/l	5.0	4.84	6.47	5.84	2.17	3.05	0.99	0.37	0.59	1.97	1.86	1.96
9	Total Coliform	MPN/100ml	--	9.4×10^6	4.9×10^6	--	3.5×10^5	7.9×10^6	--	7.9×10^5	2.7×10^6	7.6×10^6	2.78×10^6	1.41×10^7
10	Faecal Coliform	MPN/100ml	--	1.7×10^6	1.7×10^6	--	2.4×10^5	4.9×10^6	--	1.7×10^5	6.9×10^5	1.8×10^6	1.41×10^6	4.9×10^6

Note: The above mentioned Standards/Permissible Limit are meant for discharge in Inland Surface Water. Finally treated water mixes with river ghaggar. Hence, same norms will be applicable.

Table -5

STP Dhanas-2020

Sr.No.	Parameters	Unit	Permissible Limit	Jan.	Feb.	April	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.
1	Temp	°C	--	17.4	20.5	27.0	28.0	29.0	28.5	31.3	30.5	30.5	24	20
2	pH	-	5.5 to 9.0	7.6	7.7	7.3	7.4	7.3	7.2	7.2	7.7	8.1	7.6	7.2
3	DO	mg/l	-	4.9	2.2	3.4	0.8	3.6	5.8	4.9	3.9	8.6	4.3	4.4
4	COD	mg/l	250	198	328	140	108	18	23	13	10	8	28	24
5	BOD	mg/l	30	82	87	40	38	10	10	8	3	2	12	8
6	TSS	mg/l	100	47	183	44	33	6	9	3	9	5	11	8
7	NH_3-N	mg/l	50	26	35	23	30	21	5	1.09	0.83	0.63	0.83	1.58
8	PO_4-P	mg/l	5.00	2.28	2.14	0.37	3.10	2.40	1.33	2.30	2.93	2.04	0.83	2.93
9	Total Coliform	MPN/100ml	--	7.9×10^6	--	--	3.45×10^6	7.9×10^4	33	23	280	7	<2	33
10	Faecal Coliform	MPN/100ml	--	1.7×10^6	--	--	2.21×10^6	7×10^3	13	13	110	2	<2	13

Note: The above mentioned Standards/Permissible Limit are meant for discharge in Inland Surface Water. Finally treated water mixes with river ghaggar. Hence, same norms will be applicable

100

Table -6

STP Maloya-2020

Sr.No.	Parameters	Unit	Permissible Limit	Jan.	Feb.	April	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.
1	Temp	°C	--	18	20.6	26	28.5	31	29	30.1	30.5	30.5	24	20.5
2	pH	-	5.5 to 9.0	7.4	7.4	7.1	7.3	7.2	7.1	7.3	7.3	7.2	7.2	7.1
3	DO	mg/l	-	5.3	3.6	3.4	1.7	3.9	3.2	2.5	2.0	2.4	3.07	2.3
4	COD	mg/l	250	36	22	10	12	10	12	8	9	16	15	25
5	BOD	mg/l	30	6.9	7.4	<1	2.1	2.9	1.3	1.2	1.96	3.3	2.6	4.9
6	TSS	mg/l	100	17	12	3	7	10	4	5	10	6	10	6
7	NH_3-N	mg/l	50	0.09	1.10	1.1	1.7	0.83	1.98	4.5	3.08	0.96	0.46	1.77
8	PO_4-P	mg/l	5.0	2.03	1.35	1.08	0.29	0.06	0.65	1.35	0.79	0.48	0.35	0.12
9	Total Coliform	MPN/100ml	--	7.9×10^5	--	--	5.42×10^5	<1	2.78×10^5	ND	120	14	<2	<1
10	Faecal Coliform	MPN/100ml	--	3.3×10^5	--	--	2.40×10^5	<1	4.6×10^4	ND	27	9.2	<2	<1

Note: The above mentioned Standards/Permissible Limit are meant for discharge in Inland Surface Water. Finally treated water mixes with river ghaggar. Hence, same norms will be applicable

101

Table -7 Ground Water Quality -2020

S.N.	Parameters	Desirable Limit	Units	Dadu Majra				SEC-15/Near Dumping ground				SEC-22/Sec 24				VILL PALSORA			
				Feb	Apr	Jul	Oct	Feb	Apr	Jul	Oct	Feb	Apr	Jul	Oct	Feb	Apr	Jul	Oct
1	Temp	--	^{0}C	20.3	26.0	28.5	24	18.5	27	28.5	25	22	28	28	NOT IN OPERATION	20	27	28.5	24
2	pH	5.5 to 9.0	µs/cm	6.9	6.6	6.8	6.7	6.8	6.7	6.8	6.7	7.0	6.6	6.9		6.9	6.8	6.9	6.7
3	Conductivity	--	µs/cm	864	948	1020	1079	723	710	767	723	733	1106	747		1113	1075	991	984
4	BOD	--	mg/l	1.7	1.5	1.3	1.9	2.9	1.1	2.3	0.8	2	1.8	0.80		1.7	1.7	1.6	2.8
5	NO_3-N	10	mg/l	--	5.9	--	9.2		3.2	--	3.2	--	4.1	--		--	3.5	--	1.7
6	Total Coliform	--	MPN/100ml	--	--	--	91	--	--	--	87	--	--	--		--	--	--	41
7	Faecal Coliform	--	MPN/100ml	--	--	--	10	--	--	--	8	--	--	--		--	--	--	4
8	Turbidity	--	NTU	2.9	3.1	2.9	3.2	5.2	4.8	4	5	4.3	4.9	3.8		5.9	5.7	5.7	6.1
9	P-Alkalinity	--	mg/l	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil		Nil	Nil	6	Nil
10	Total alkalinity	200	mg/l	328	302	348	378	274	270	314	280	288	268	232		406	388	372	356
11	Chloride	250	mg/l	51	62	65	60	23	20	27	24	27	26	20		77	63	54	47
12	COD	30	mg/l	16	10	13	13	18	12	12	10	14	9	11		17	12	13	14
13	TKN	--	mg/l	--	--	--	BDL	--	39	--	BDL	--	BDL	--		--	BDL	--	BDL
14	NH_3-N	--	mg/l	0.2	0.24	0.15	0.29	0.20	0.24	0.31	0.3	BDL	0.33	0.11		0.17	0.46	0.55	0.66
15	TH as $CaCO_3$	300	mg/l	282	276	310	302	224	240	240	234	268	290	234		300	220	220	252
16	Ca as $CaCO_3$	75	mg/l	156	264	200	179	126	178	174	141	246	234	170		184	210	130	142
17	Mg as $CaCO_3$	30	mg/l	126	--	110	123	98	62	66	93	22	56	64		116	--	90	110
18	Sulphate	200	mg/l	54	56	59	66	43	50	44	40	51	60	50		57	62	56	59
19	Sodium	--	mg/l	--	65	--	85	--	45	--	57	--	23	--		--	125	--	116
20	TDS	500	mg/l	484	554	542	590	1244	382	366	350	376	438	372		568	636	494	492
21	TFS	--	mg/l	384	464	500	452	304	320	248	278	322	298	276		500	598	430	406
22	TSS	--	mg/l	9	5	5	2	3	11	4	4	2	3	2		5	7	2	3.0
23	Phosphate	--	mg/l	0.06	0.05	0.04	0.02	0.04	0.05	0.05	0.01	0.06	0.05	0.05		0.07	0.08	0.09	0.06
24	Boron(B)	--	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL		BDL	BDL	BDL	BDL
25	Potassium	--	MPN/100ml	--	2.3	--	1.5	--	BDL	--	2.1	--	1.7	--		--	BDL	--	6.9
26	Fluoride	--	MPN/100ml	0.9	0.66	0.86	0.88	0.45	0.32	0.28	0.33	BDL	0.51	0.55		0.50	0.21	0.46	0.49
27	Colour	--	Hazen	<5	<5	5	5	5	5	<5	<5	<5	<5	<5		5	5	5	5

102

TABLE-7 Ground Water Quality -2020

S.N	Parameters	Desirable Limit	Units	DHANAS				Sec -35				Sec -20			
				Feb	Apr	Jul	Oct	Feb	Apr	July	Oct	Feb	April	July	Oct
1	Temp	--	^{0}C	21.2	25	29	24	18	25	28	24	18	NOT IN OPERATION	28	24.5
2	pH	5.5 to 9.0	--	7.2	6.6	7.0	7	6.7	6.3	6.7	7	7.0		7.3	6.9
3	Conductivity	--	µs/cm	634	640	649	762	1530	715	952	933	742		735	737
4	BOD	--	mg/l	1.5	0.55	1.7	0.8	1.5	1.3	0.72	2.5	2.3		0.96	2.0
5	NO_3-N	10	mg/l	--	5.4	--	2.0	--	10.5	--	4.9	--		--	6.2
6	Total Coliform	--	MPN/100ml	--	--	--	39	--	--	--	11.0	--		--	21
7	Faecal Coliform	--	MPN/100ml	--	--	--	<2	--	--	--	<2	--		--	<2
8	Turbidity	--	mg/l	3.8	2.7	1.9	4.9	2.1	2.3	2.7	3.8	4.9		2.5	3.9
9	P-Alkalinity		mg/l	NIL	NIL	16	NIL	NIL	NIL	NIL	NIL	NIL		NIL	NIL
10	Total alkalinity	200	mg/l	244	244	294	320	406	346	286	394	292		254	288
11	Chloride	250	mg/l	35	28	27	35	103	57	28	24	27		23	24
12	COD	30	mg/l	8	8	12	10	12	7	10	13	16		12	13
13	TKN	--	mg/l	--	BDL	--		BDL	BDL	--	BDL	--		--	BDL
14	NH_3-N	--	mg/l	BDL	0.15	BDL	0.60	BDL	0.26	0.19	0.11	0.20		0.14	0.2
15	TH as $CaCO_3$	300	mg/l	242	242	230	260	354	362	298	336	246		232	239
16	Ca as $CaCO_3$	75	mg/l	136	134	136	188	320	324	170	249	134		130	121
17	Mg as $CaCO_3$	30	mg/l	106	108	94	72	34	38	128	87	112		102	118
18	Sulphate	200	mg/l	14	17	14	24	51	57	46	39	49		55	56
19	Sodium	--	mg/l	--	27	--		53	58	--	44	--		--	72
20	TDS	500	mg/l	388	356	352	358	876	654	472	472	348		358	360
21	TFS	--	mg/l	304	292	216		806	522	360	398	316		294	314
22	TSS	--	mg/l	2	8	4	7	3	2	2	3	3		2	3.0
23	Phosphate	--	mg/l	0.1	0.06	0.05	0.02	0.06	0.03	0.02	0.04	0.06		0.07	0.05
24	Boron(B)	--	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL		BDL	BDL
25	Potassium	--	mg/l	--	1.9	--		2	9.7	--	1.7	--		BDL	BDL
26	Fluoride	--	mg/l	0.52	0.35	0.48	0.16	0.35	0.26	0.41	0.34	0.88		0.90	0.99
27	Colour	--	Hazen	<5	<5	<5		10	<5	<5	<5	<5		<5	<5

Table – 8 Sukhna-Choe (Exit Point) - 2020

Sr.No.	Parameters	Unit	Permissible Limit	Jan.	Feb.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	Temp	°C	--	17.5	23.2	28.0	27.5	26.5	28	28.1	29	26.5	23.5	16.5
2	DO	mg/l	--	NIL	NIL	NIL	0.5	NIL	NIL	1.0	NIL	NIL	NIL	NIL
3	pH	-	5.5 to 9.0	7.4	7.5	7.2	7.2	7.3	7.1	7.4	7.4	7.4	7.4	7.4
4	Conductivity	µs/cm	--	990	932	944	910	853	872	781	901	1025	1055	1099
5	BOD	mg/l	30	193	202	187	192	155	117	113	125	125	177	186
6	NO_3-N	mg/l	10	2.50	4.70	BDL	3.50	3.20	3.00	3.20	4.10	0.76	3.00	3.70
7	Total Coliform	MPN/100 ml	--	1.41×10^7	5.42×10^6	--	3.5×10^5	2.21×10^6	3.48×10^6	2.21×10^7	1.2×10^6	5.4×10^6	7.0×10^6	1.41×10^7
8	Faecal Coliform	MPN/100 ml	--	2.2×10^6	3.3×10^5	--	2.4×10^5	3.4×10^5	3.4×10^5	4.9×10^6	4.0×10^5	1.4×10^6	4.6×10^6	7.0×10^6
9	Turbidity	NTU	--	130	138	120	147	166	178	197	153	143	178	184
10	P-Alkalinity	mg/l	--	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL
11	Total alkalinity as $CaCO_3$	mg/l	--	390	372	376	370	408	374	272	422	408	398	412
12	Chloride	mg/l	--	60	48	42	46	42	55	43	55	49	55	67
13	COD	mg/l	250	326	400	328	340	264	216	193	198	208	414	499
14	TKN	mg/l	--	40	33	39	--	--	--	--	26	43	--	--
15	NH_3-N	mg/l	50	34	45	37	35	37	28	36	22	35	37	41
16	TH as $CaCO_3$	mg/l	--	220	194	202	210	188	214	190	236	220	240	286
17	Ca as $CaCO_3$	mg/l	--	184	150	114	110	122	130	110	118	135	171	227
18	Mg as $CaCO_3$	mg/l	--	36	44	88	100	66	84	80	118	85	69	59
19	Sulphate	mg/l	--	41	47	43	50	42	44	39	47	33	27	40
20	Sodium	mg/l	--	79	69	57	78	57	80	46	82	169	95	70
21	TDS	mg/l	--	466	482	484	522	384	214	330	464	464	526	516
22	TFS	mg/l	--	288	444	426	488	354	207	294	434	428	426	420
23	TSS	mg/l	100	116	174	69	255	183	185	166	188	132	232	236
24	Phosphate	mg/l	5.0	4.14	3.70	4.18	2.85	3.18	3.21	2.30	3.99	3.04	4.58	4.92
25	Boron(B)	mg/l	--	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
26	Potassium	mg/l	--	18	15	6.0	16	15	14	17	15	BDL	34	44
27	Fluoride	mg/l	2.0	0.18	0.33	0.06	BDL	0.10	0.24	0.16	0.11	0.12	0.10	0.10
28	colour	Hazen	--	30	30	20	30	30	30	30	30	30	30	30

Table – 9 N-Choe (Exit Point) - 2020

Sr.No.	Parameters	Unit	Permissible Limit	Jan.	Feb.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	Temp	°C	--	18.2	19.1	28	28	29	28	28.2	28.5	25.5	24.5	20.2
2	DO	mg/l	--	Nil	Nil	Nil	Nil	Nil	Nil	0.6	Nil	Nil	Nil	<1
3	pH	-	5.5 to 9.0	7.3	7.5	7.0	7.0	7.0	6.8	7.3	7.4	7.3	7.3	7.5
4	Conductivity	µs/cm	--	586	637	608	642	667	589	587	612	636	556	587
5	BOD	mg/l	30	99	155	210	110	38	98	51	43	44	33	46
6	NO_3-N	mg/l	10	4.20	3.70	0.80	1.70	1.50	2.00	2.00	3.00	2.00	3.30	2.10
7	Total Coliform	MPN/100 ml	--	2.21×10^6	3.45×10^7	--	3.5×10^6	9.4×10^5	1.75×10^7	3.45×10^6	5.4×10^6	4.0×10^5	1.3×10^6	3.8×10^5
8	Faecal Coliform	MPN/100 ml	--	1.09×10^6	7.9×10^6	--	1.1×10^6	2.2×10^5	3.2×10^6	1.41×10^6	9.3×10^5	1.2×10^5	2.2×10^5	9.3×10^4
9	Turbidity	NTU	--	85	93	107	115	54	83	60	48	36	29	34
10	P-Alkalinity	mg/l	--	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL
11	Total alkalinity	mg/l	--	208	284	248	228	268	206	218	270	230	206	228
12	Chloride	mg/l	--	36	38	28	31	35	35	34	41	36	30	38
13	COD	mg/l	250	203	292	428	184	108	174	94	71	91	63	91
14	TKN	mg/l	--	19	29	--	--	--	16	10	11	15	9	15
15	NH_3-N	mg/l	50	14	23	30	37	23	16	3.6	3.7	7.3	3.4	3.7
16	TH as $CaCO_3$	mg/l	--	184	224	170	190	200	190	190	205	166	182	194
17	Ca as $CaCO_3$	mg/l	--	120	162	90	130	116	128	130	115	103	134	143
18	Mg as $CaCO_3$	mg/l	--	64	62	80	60	84	62	60	90	63	48	51
19	Sulphate	mg/l	--	47	54	50	52	54	43	48	52	60	43	44
20	Sodium	mg/l	--	45	51	37	33	56	32	33	40	21	101	33
21	TDS	mg/l	--	286	374	380	336	362	268	250	322	298	294	324
22	TFS	mg/l	--	202	282	344	238	170	182	228	258	238	276	282
23	TSS	mg/l	100	74	78	70	45	38	118	41	60	33	25	37
24	Phosphate	mg/l	5.0	2.90	3.38	3.02	2.46	2.25	2.15	1.32	1.95	1.92	1.06	1.88
25	Boron(B)	mg/l	--	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
26	Potassium	mg/l	--	12	14	16	10	15	16	13	10	14	12	8
27	Fluoride	mg/l	2.0	0.18	0.22	0.22	0.08	0.07	0.18	0.20	0.28	0.20	0.20	0.22
28	colour	Hazen	--	20	20	20	20	20	20	20	20	20	20	20

Table -10

Quality of River Ghaggar - 2020

S. N.	Parameters	Unit	Jan.	Feb.	April	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.
1	Temp	°C	17.8	21.8	26.0	27	27	28.5	28.0	28.5	27	24	16
2	pH	--	8.0	7.7	7.4	7.6	7.4	7.3	7.9	7.9	7.7	7.7	8.1
3	Conductivity	µs/cm	580	641	536	542	579	593	449	488	542	557	615
4	DO	mg/l	7.1	5.1	6.2	5.5	2.2	3.6	6.7	6.9	4.8	6.0	5.1
5	COD	mg/l	55	50	111	76	138	101	30	24	37	35	33
6	BOD	mg/l	23	15	26	24	46	24	2.5	3.1	16	16	11
7	NH_3-N	mg/l	1.66	4.60	1.33	4.80	15	19	4.80	3.07	4.67	5.03	4.06
8	Phosphate	mg/l	0.35	1.03	0.26	0.40	1.56	1.80	0.49	0.45	0.60	0.81	0.47
9	TSS	mg/l	166	1029	62	485	809	3545	687	533	597	1185	203
10	Boron(B)	mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
11	Total Coliform	MPN/100ml	1.09×10^6	1.75×10^6	--	2.2×10^4	3.46×10^6	2.2×10^5	7×10^5	4.5×10^6	1.8×10^6	3.4×10^6	1.75×10^6
12	Faecal Coliform	MPN/100ml	8×10^4	7.0×10^5	--	2.0×10^3	7.0×10^5	5×10^4	4×10^4	1.1×10^6	4.5×10^5	2.2×10^6	4.6×10^5

7. **Compliance report in reference to the observations w.r.t the UT Chandigarh in the first joint meeting of the Chief Secretaries of Himachal Pradesh, Punjab, Haryana and Adviser to Administrator of UT Chandigarh under the Chairmanship of Secretary, Ministry of Jal Shakti held on 10.12.2020 in the river ghaggar matter.**

In compliance of the Hon'ble NGT order dated 28.10.2020, first joint meeting in the NGT matter O.A. No. 138/ 2016 (T_{NHRC}) was held through video conferencing on 10.12.2020 under Chairmanship of the Secretary, Ministry of Jal Shakti. As per the directions, a comprehensive action must be taken w.r.t the observations that emerged during the meeting. Compliance report is as under:

S.n.	Observations w.r.t the UT Chandigarh	Compliance as on 31.01.2021
1.	CPCC should do rigorous monitoring and establish online monitoring system (SCADA/Sensors, etc.) for ensuring capacity utilization as well as compliance to stipulated norms.	CPCC is monitoring all the operational STPs in Chandigarh regularly on monthly basis. However, SCADA system/online monitoring system will be established only after the upgradation work of the STPs.
2.	The online monitoring system of the STP/CETP plants should be made robust in order to maintain data about incoming sewage/effluents, outgoing treated water and quality of treatment. This would help to assess the functionality of the plants at a given time.	
3.	UT administration should have reliable and handy data of sewerage infrastructure, before any new STP/CETP project is approved.	Under Smart city project, all the sewerage network of the city has been studied and accordingly, upgradation of the existing STPs and new STP have been proposed.
4.	It should be ensured that the target dates submitted for the various activities for abatement of pollution in river Ghaggar should be strictly adhered.	Target dates of various ongoing projects is as given below: 1. **Construction of new STP at Kishangarh:** June 30, 2021. 2. **Closing of outlets into Sukhna Choe:** All the outlets from where untreated water was entering in the Sukhna-Choe have been plugged except one point i.e. near Raipur Khurd. The work of plugging of the same is in progress and will be completed by February 7, 2021. 3. **Installation of in situ bio remediation in Sukhna choe and N-choe:** Feb 28, 2021.

<table>
<tr>
<td>5.</td>
<td>For all ongoing projects, date of completion must be essentially mentioned in the next report to be submitted to the EC by the UT of Chandigarh;</td>
<td>
4. Status of installation of real time water quality monitoring stations (RTWQMS) in river Ghaggar: RTWQMS at N-choe has been installed and is under trial run. The tender for installation of RTWQMS at Sukhna choe has been opened and under allotment. The work will be completed by Feb 28, 2021.
5. Upgradation of Existing STPs:
<table>
<tr><th>S.No</th><th>Description</th><th>Date of completion</th><th>Remarks</th></tr>
<tr><td>1</td><td>STP Diggian, Mohali</td><td>31.08.2022</td><td rowspan="5">On line Monitoring system is part of the upgradiation</td></tr>
<tr><td>2</td><td>STP Raipur Khurd</td><td>28.02.2022</td></tr>
<tr><td>3</td><td>STP Raipur Kalan</td><td>28.02.2022</td></tr>
<tr><td>4</td><td>STP 3BRD</td><td>22.09.2021</td></tr>
<tr><td>5</td><td>STP Dhanas</td><td>22.09.2021</td></tr>
</table>
</td>
</tr>
<tr>
<td>6.</td>
<td>UT of Chandigarh should ensure that the plants are operational regularly. A single agency at the State level will certainly help in better planning, implementation and monitoring. The authorities may consider adopting and implementing Hybrid Annuity Model and One City One Operator models for successful and long term sustained performance of the plants.</td>
<td>All the STPs are being operated by the Municipal Corporation, Chandigarh.</td>
</tr>
<tr>
<td>7.</td>
<td>Accountability may be fixed and action may be initiated against the persons/departments responsible for default/inaction.</td>
<td>Accountability will be fixed as per the directions.</td>
</tr>
<tr>
<td>8.</td>
<td>Next status of compliance should mention the date of completion of all works/projects that are under progress.</td>
<td>Already mentioned at point no. 4.</td>
</tr>
</table>

Annexure - 4

Rahul Tewari IAS
Secretary
ਸਕੱਤਰ

Tele. No. :
ਟੈਲੀਫੋਨ ਨੰ.:

D.O. No. DECC/2021/19
ਅੰਕ ਸ.ਪੱ.ਨੰ.

Government of Punjab
ਪੰਜਾਬ ਸਰਕਾਰ

Department of **Science Technology & Environment** ਵਿਭਾਗ

Chandigarh, the Date - 05/02/2021
ਚੰਡੀਗੜ੍ਹ

Subject: **Compliance of Directions passed by NGT vide order dated 28.10.20 in O.A. No. 138/2016 – Stench Grips of Mansa's Sacred Ghaggar River.**

Dear Sir;

I would like to draw your attention to Hon'ble NGT order dated 28.10.20 in O.A.No. 138/2016 in the matter of Stench Grips of Mansa's Sacred Ghaggar River.

2. The status of compliance of the recommendations of Executing Committee as on 31.01.2021, in compliance of said NGT order is attached herewith.

With regards;

Yours Sincerely,

(Rahul Tewari)

Mr. Justice Pritam Pal (Retd),
Chairman, Executing Committee,
Forest Complex, Sector-68,
S.A.S. Nagar (Mohali)

Annexure-4

Status of Compliance of Recommendations of Executing Committee / NGT Directions vide Order dated 28.10.2020 in O.A No.138/2016(as on 31st January, 2021)

Sr. No	Conclusions & Recommendations of Executive Committee	Concerned Department	Status of Compliance as on 31st January, 2021
1.	Punjab Pollution Control Board should take legalaction under the provisions of Water Act, 1974against the operating agencies of the STPsnamely Sardulgarh, Bareta, Bhikhi, Mohali, Rajpura, Patiala, Bhudhlada and Zirakpurwhich were found non-compliant during monitoring by PPCB from March, 2020 to July, 2020. Non-compliance in these STPs observed by Punjab Pollution Control Board may be conveyed to the concerned operating agencies of STPs and these agencies may be directed to comply with the observations in time bound manner and operate the STPs efficiently so as to meet with the prescribed standards.	Punjab Pollution Control Board (PPCB)	(i) Action taken By PPCB during the month of March to July, 2020 are as under: - Environmental Compensation of Rs. 4,60,000/- & Rs. 9,20,111/- imposed to the operating agencies of Sardulgarh and Bareta, respectively. However, same is yet be deposited by respective MCs. - Complaint filed against Nagar Panchyat,Bhikhi at Hon'ble Court of CJM, Mansa under Water Act. - Advisory issued to STPs at Mohali, Rajpura, Patiala &Zirakpur. - Action under process against STP Bhudlada&Zirakpur. (ii) The updated status of these 8 STPs from August, 2020-January, 2021 is annexed at **Annexure-I.** (iii) The STPs of Baretta, Bhikhi&Sardulgarh based on WSP technology, found consistently non-compliant. The Department has planned the upgradation of these STPs. DPR for upgradation of these STPs is under approval and these STPs likely to be upgraded by 31.12.2023.

110

<table>
<tr><th>Sr. No</th><th>Conclusions & Recommendations of Executive Committee</th><th>Concerned Department</th><th>Status of Compliance as on 31st January, 2021</th></tr>
<tr><td>2.</td><td>The State of Punjab should accelerate the progress of under construction 11 STPs so that these may be completed by 31.3.2021.</td><td>Punjab Water Supply & Sewerage Board (PWSSB)</td><td>(i) The status of under construction STPs is as under:
<table>
<tr><th>Name of STP</th><th>% completion of work</th><th>Timeline as per Deptt.</th></tr>
<tr><td>Boha (2 MLD)</td><td>70%</td><td>30.06.21</td></tr>
<tr><td>Patiala (15 MLD)</td><td>80%</td><td>30.04.21</td></tr>
<tr><td>Sirhind (5MLD)</td><td>20%</td><td>30.09.21</td></tr>
<tr><td>Sangrur (4 MLD)</td><td>45%</td><td>30.11.21</td></tr>
<tr><td>Dhuri (5 MLD), BassiPathana (3 MLD), Sirhind-2 No. (6 MLD)</td><td>10-30%</td><td>31.12.21</td></tr>
<tr><td>Banurlssey Khan (0.5 MLD)</td><td>20%</td><td>31.03.21</td></tr>
<tr><td>Nabha (12 MLD)</td><td>Design to be submitted by agency</td><td>31.12.21</td></tr>
<tr><td>Longowal (5 MLD)</td><td>-do-</td><td>31.01.22</td></tr>
<tr><td>Sanour(4 MLD)-</td><td>Work allotted of Badi nadi and chotinadi at Patiala where sanour waste water will be treated</td><td>30.09.22</td></tr>
</table></td></tr>
<tr><td>3.</td><td>The senior functionaries of Department of Local Government should resolve the issue of land for the STPs namely Amloh (3 mld), Lalru Mandi (1.5 mld), Dhuri (6 mld), Sangrur (11 mld) and BassiPathana (0.2 mld) so that the work of these STPs may be started timely and construction work of these STPs should be</td><td>Dept. of Local Govt. (DLG)</td><td>(i) Land identified for Amloh and Lalru Mandi
(ii) Land for Dhuri and BassiPathana identified and possession is being taken.</td></tr>
</table>

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Sr. No	Conclusions & Recommendations of Executive Committee	Concerned Department	Status of Compliance as on 31st January, 2021
	completed by 30.6.2021. The Department of Local Government/Punjab Water Supply & Sewerage Board should finalize the technology to be provided to treat the sewage of Cheema town within 15 days		(iii) Efforts are being made to acquire land in Sangrur. Nano Bubble Technology being explored for the treatment of sewage at Cheema.
4.	The old technology based 03 STPs should be upgraded based on new technology by 30.6.2021. The work of enhancement of STP of 46 MLD of Patiala town to 61 MLD should be completed by 31.12.2020.	DLG/PWSSB	DPR for Technology upgradation of 3 old technology based STPs namely Baretta (3MLD), Bhikhi (3MLD), &Sardulgarh (4MLD) is under approval. These STPs are likely to be upgraded by 31.12.23. 80% of work completed for capacity enhancement of STP Patiala. The said STP is likely to be completed by 31.03.21.
5.	The treatment of sewage to cover the gap of 66.47 MLD shall be completed by 30.06.2021 and PWSSB or any other Executing Agency shall ensure that after 31.03.2021 there shall be no gap in sewage to be treated.	PWSSB	(i) 30 new STPs are being set up to cover the gap of 73.47 MLD with details as under: - 17STPs (88.70 MLD) are under Construction - 12 STPs (31.40 MLD) are at Tender Stage - 1STPs (3MLD) is at DPR Stage (ii) Timelines for Completion of STPs: - 31.03.21: 2 STP (15.5mld) - 31.03.22: 11 STPs (47.20mld) - 31.03.23: 15 STPs (55.9 mld) - 31.12.23: 2 STPs (4.5 mld)
6.	Punjab Pollution Control Board should verify commissioning of irrigation schemes of 10 towns	PPCB and Department	PPCB verified that irrigation schemes at 10 towns i.e. Banur, Bareta, Bhikhi, Samana, Sardulgarh, Sunam,

112

Sr. No	Conclusions & Recommendations of Executive Committee	Concerned Department	Status of Compliance as on 31st January, 2021
	(Banur, Bareta, Bhikhi, Samana, Sardulgarh, Sunam, Lehragagga, Moonak, Patran and Khanauri) to utilize 47 MLD treated sewage in command area of 1541 hectare within 1 month. Irrigation schemes for Rajpura town should be completed by 31.12.2020.	of Soil &Water Conservation (DSWC)	Lehragagga, Moonak, Patran and Khanauri to utilize the treated sewage for irrigation in 1541 hectarescommand area has been commissioned and operating successfully. Irrigation Project for STP Rajpura (7 mld) has been commissioned.
7.	The State of Punjab should tie up the funds for laying of irrigation network to utilize the treated sewage of 24 STPs of 17 towns, out of which 4 STPs (Mandi Gobindgarh (25 MLD), Patiala (10 MLD), Dhuri (5 MLD) and Sangrur (11 MLD)) of 3 towns have been commissioned and work for 20 STPs of 14 towns is under progress. The irrigation schemes for these towns should be completed simultaneously with the completion of STPs of the Towns i.e. by 31.03.21.	DSWC	(i) Funds released for irrigation project of Mandi Gobindgarh. (ii) Funds sanctioned for 3 irrigation projects of Patiala, Dhuri& Sangrurunder RIDF-25. (iii) The proposal for laying irrigation scheme for 20 STPs in 14 towns amounting to Rs 28.84 croressubmitted to the State Govt. under State Plan Scheme on 18.09.2020. The proposal is under consideration.
8.	For 4 towns (Budhladha: 6.5 MLD, Zirakpur: 17 MLD, SAS Nagar: 45.4 MLD, DeraBassi: 4 MLD), where the irrigation schemes are not feasible due to urbanization of land and non-availability of irrigation command area near the towns. The Department of Local Government should prepare action plan to utilize the treated sewage of these towns for construction activities, gardening, toilet flushing, washing of vehicles and nearby railway yards etc. by 31.10.2020.	DLG	The Department reported that various techniques are being explored to reuse treated wastewater in other areas under Municipal Committees.

Sr. No	Conclusions & Recommendations of Executive Committee	Concerned Department	Status of Compliance as on 31st January, 2021
9.	Punjab Pollution Control Board should increase the surveillance of the industries in odd hours to check the operational status of ETPs of the industries and their performance. Similarly, District Level Special Task Force of the Districts in the catchment area of River Ghaggar should visit the industries on surprise basis from time to time.	PPCB	57 industries were visited from August, 2020 to January, 2021, out of which 5 industries were found non-compliant. Show Cause Notices issued to 4 industries to take remedial measures and action against one industry is under process.
10.	The Department of Rural Development & Panchayats should take effective steps to get install Sewage Treatment Plants in 87 villages, covered in Phase-1 by 31.12.2020. The treatment facilities for 152 villages covered under Phase-2 and 150 villages covered under Phase-3, should be installed by 31.3.2021.	Department of Rural Development & Panchayats (DRDP)	Treatment facilities provided in 42 villages and work in progress in 37 villages.
11.	Punjab Pollution Control Board should identify the ground water sources where 8 patients have been found suffering with water borne diseases and the ground water samples of these sources may be analyzed and in case these are found contaminated, the same may be sealed and the department of Water Supply & Sanitation may be asked to supply safe drinking water to the inhabitants of these areas.	PPCB	(i) One Hand pump and one dugwell sealed in Village Lachuru Kalan, Dist. Patiala and village Issapur, Distt. SAS Nagar, respectively. (ii) 26 samples of ground water collected in the month of September & October 2020 out of which 3 were found not meetingwith the permissible limits laid down in IS 10500-2012.
12.	Department of Science Technology & Environment (DSTE) may be directed to ask the Committee to frame policy/guidelines for Management of Septage and Faecal Sludge by 30.9.2020 and action plan may be prepared for the management of the same by	DSTE/PPCB	(i) Draft policy/guidelines for Management of Septage and Faecal Sludge has been prepared. (ii) The comments invited from the stakeholder Departments such as Department of Rural Development & Panchayats,

Sr. No	Conclusions & Recommendations of Executive Committee	Concerned Department	Status of Compliance as on 31st January, 2021
	30.11.2020 and shall start implementation of the same by 31.12.2020.		Department of Local Govt., Department of Water Resources and Department of Water Supply & Sanitation on Draft policy/guidelines.
13.	The in-situ bio remediation technology should be installed in other drains, carrying untreated sewage and not connected to STPs by 31.10.2020.	DLG/PWSSB	(i) In-situ remediation technology already installed at Bhadson Drain, Distt. Patiala by PWSSB and on Bulana Drain, Distt Kaprthala by PPCB as pilot projects. (ii) The performance of these technologies is under evaluation and would be replicated in rest of the drains depending upon its success.

Annexure-I

Month	STPs of								Action Taken by PPCB
	Sardulgarh	Baretta	Bhikhi	Mohali	Rajpura	Patiala	Budhlada	Zirakpur	
August,2020	NC*	NC	NC	NC	C	C	C	C	Advisory issued to the Department.
September,2020	C**	NC	NC	C	C	C	C	C	Action Under Process
October,2020	NC	NC	NC	C	C	C	NC	C	-do-
November,2020	NC	NC	NC	C	C	C	NC	NC	do-
December,2020	NC	NC	NC	C	C	C	NC	C	do-
January, 2021	NC	NC	C	NC	C	C	NC	NC	do-

NC*: Non-Compliant
C**: Compliant

Annexure-5

Status of state of Haryana for submission to Executive Committee for preparation of 7th report of the Executing Committee to be submitted before the Hon'ble National Green Tribunal in OA No.138-139 of 2016 titled as Stench Grips Mansa's Sacred River Ghaggar.

State of Haryana

1. Performance of existing Sewage treatment plants

Sr. No.	Name of the Town	Capacity of STP	Performance w. r. to Parameters BOD, TSS, and F. Coli																											
			July, 2020				August, 2020				September, 2020				October, 2020				November. 2020				December, 2020				January, 2021			
			BOD	TSS	F. Coli	Status	BOD	TSS	F. Coli	Status	BOD	TSS	F. Coli	Status	BOD	TSS	F. Coli	Status	BOD	TSS	F. Coli	Status	BOD	TSS	F. Coli	Status	BOD	TSS	F. Coli	Status
1	Naya Gaon , Unit.I , Ambala City	3.25 MLD					8	23	11000	Complying	8	15	7000	Complying	6	8	2100	Complying	8	25	1700	Complying	6.5	31	1100	Complying	5.8	12	700	Complying
2	Naya Gaon , Unit.II Ambala City	3.25 MLD					12	24	13000	Complying	14	19	9000	Complying	8	26	2100	Complying	9	21	1300	Complying	7.5	6	490	Complying	6.5	9	900	Complying
3	Sec.7 , Urban Estate , Ambala City Ambala	2 MLD	15	12	270000	*Non-Complying (BOD -10)*					13	11	21000	*Non-Complying (BOD -10)*	5.5	19	310	Complying	11	20	200	*Non-Complying (BOD -10)*	6	19	1700	Complying				
4	Baldev Nagar , Unit.I , Ambala City	5 MLD					14	11	11000	Complying	10	17	8000	Complying	10	33	2100	Complying	10	11	900	Complying								
5	Baldev Nagar , Unit.II ,Ambala City	3.25 MLD					15	12	26000	Complying	12	16	7000	Complying	5.8	11	2200	Complying	11	31	4000	Complying	8	13	630	Complying				
6	Moti Nagar, Unit.I , Ambala City	5 MLD					8	15	21000	Complying	8	12	6000	Complying	6	13	2300	Complying	7.5	24	2600	Complying	7	10	210	Complying	7.5	19	290	Complying
7	Moti Nagar , Unit.II , Ambala City by PHED Ambala	5 MLD					9	9	26000	Complying	12	21	11000	Complying	4.8	6	3200	Complying	8	7	2100	Complying	11	26	2100	Complying				
8	Modal Town,	6 MLD					11	12	32000	Complying	11	9	6000	Complying	5.8	10	2700	Compl	6	10	1700	Complying	6	8	1400	Complyin	7	18	1770	Complying

117

Sr. No.	Name of the Town	Capacity of STP	Performance w. r. to Parameters BOD, TSS, and F. Coli																											
			July, 2020				August, 2020				September, 2020				October, 2020				November. 2020				December, 2020				January, 2021			
			BOD	TSS	F. Coli	Status	BOD	TSS	F. Coli	Status	BOD	TSS	F. Coli	Status	BOD	TSS	F. Coli	Status	BOD	TSS	F. Coli	Status	BOD	TSS	F. Coli	Status	BOD	TSS	F. Coli	Status
	Ambala City																	ying								g				
9	Nasirpur Ambala City	3.25 MLD					12	13	170000	Complying	13	14	14000	Complying	5.5	15	1700	Compl ying	7	9	1700	Complying	6	18	900	Complying				Complying
10	Sadopur , Ambala	0.25 MLD					7	16	17000	Complying	9	12	7000	Complying	7	9	1700	Compl ying	10	18	1700	Complying								
11	Devi Nagar , Ambala City	3.25 MLD					10	16	220000	Complying	13	8	11000	Complying	5.2	7	2600	Compl ying	13	22	34500	Complying	6	12	1100	Complying				
12	Nariangarh , Ambala	3 MLD									10	14	26000	Complying	11	9	4600	Compl ying	15	28	345000	Complying	12	19	2000	Complying				
13	Thanesar, Kurukshetra	25 MLD	11	20	940000	*Non-Complying (BOD -10)*	14	12	1090000	*Non-Complying (BOD -10)*	14	19	27000		7	11	1300	*Non - Compl ying (BOD-10)*	10	18	-	Complying	6	18	90000	Complying	10	19	2100	Complying
14	Sector-6, Urban Estate, Thanesar, Kurukshetra	15 MLD	-	-	-	-	-	-	-	-	4.5	6	31000	Complying	5.8	5	1600000	Compl ying	7.5	7	2600	Complying	4.8	6	40	Complying	7	9	170	Complying
15	Model Town , Pehowa Kurukshetra	8 MLD	9	31	630000	Complying	8	23	790000	Complying	16	10	27000	Complying	7.5	7	700	Compl ying	8.5	7	4100	Complying	7	12	70	Complying	8.5	21	490	Complying
16	Ladwa Road , Shahbad Kurukshetra	11.5 MLD	12	26	1E+06	*Non-Complying (BOD -10)*	11	21	49000	*Non-Complying (BOD -10)*	13	42	26000	*Non-Complying (BOD -10)*	8.5	9	400	*Non - Compl ying (BOD-10)*	8	19	2700	Complying	6.8	16	60	Complying	12	33	330	*Non-Complying (BOD-10)*
17	Panchkula	18	10	23.8	260	Comp	17	44	840	Comp	11	49	1100	Comp	6	16	80	Co	7	23	1100	Com	9	48	542	Com	7.5	21	348	Complyi

Sr. No.	Name of the Town	Capacity of STP	Performance w. r. to Parameters BOD, TSS, and F. Coli																									
			July, 2020				August, 2020				September, 2020				October, 2020				November. 2020				December, 2020				January, 2021			
			BOD	TSS	F. Coli	Status	BOD	TSS	F. Coli	Status	BOD	TSS	F. Coli	Status	BOD	TSS	F. Coli	Status	BOD	TSS	F. Coli	Status	BOD	TSS	F. Coli	Status	BOD	TSS	F. Coli	Status
		MLD			000	lying			00	lying			0	lying			00	mplying				plying			00	plying			0	ng
18	Panchkula.	39 MLD	11	37	170000	Complying	13	23	32000	Complying	12	24	9000	Complying	8	11	11000	Complying	5	10	1700	Complying	5	12	140	Complying	7.2	6	110	Complying
19	Sector- 28, Panchkula	15 MLD	8	11	170000	Complying	11	25	63000	Complying	8	33	9000	Complying	7.5	12	9000	Complying	7	19	4200	Complying	4.8	8	170	Complying	6.4	8	790	Complying
20	Kalka Panchkula	4.5 MLD	12	28	270000	Complying	9	20	210000	Complying	7	14	5000	Complying	16	18	7000	Complying	11	16	1400	Complying	15	42	542000	Complying	20	43	1100	Complying
21	Kalka Panchkula	0.25 MLD	12	18	210000	*Non-Complying (BOD -10)*	15	21	170000	*Non-Complying (BOD -10)*	10	16.4	14000	Complying	13	15	5000	*Non-Complying (BOD-10)*	8	28	34000	Complying	6.5	13	260	Complying	6.8	8	900	Complying
22	Nalagarh Road, Manakpur, Pinjore Panchkula	5 MLD	13	21	320000	*Non-Complying (BOD -10)*	22	38	220000	*Non-Complying (BOD -10)*	14	27	17000	Complying	8	12	14000	Complying	6	10	2600	Complying	16	35	348000	*Non-Complying (BOD-10)*	7	16	1700	Complying
23	Garrison Engineer , Chandimandir Panchkula	9 MLD	9	8	140000	Complying	8	14	21000	Complying	8	16	8000	Complying	11	8	9000	Complying	5.5	14	3100	Complying	5.5	10	20	Complying	5.4	6	1400	Complying
24	PHED Jind	15 MLD	26	30	24000	Complying	28	48	18000	Complying	25	42	12000	Complying	22	38	15000	Complying	20	32	12000	Complying	8	15	2780	Complying				
25	HUDA Jind	10 MLD	9	12	64000	Complying	24	24	42000	Complying	8	14	1200	Complying	9	14	1100	Complying	7	10	2600	Complying	5.5	21	3300	Complying	9	14	15000	Complying
26	Patiala Road , Narwana	3.5 MLD	20	36	72000	Complying	22	42	65000	Complying	24	35	82000	Complying	22	38	76000	Complying	4	30	62000	Complying	9	22	8400	Complying	23	32	56000	Complying

119

Sr. No.	Name of the Town	Capacity of STP	Performance w. r. to Parameters BOD, TSS, and F. Coli																											
			July, 2020				August, 2020				September, 2020				October, 2020				November. 2020				December, 2020				January, 2021			
			BOD	TSS	F. Coli	Status	BOD	TSS	F. Coli	Status	BOD	TSS	F. Coli	Status	BOD	TSS	F. Coli	Status	BOD	TSS	F. Coli	Status	BOD	TSS	F. Coli	Status	BOD	TSS	F. Coli	Status
27	STP Narwana Jind	3.75 MLD	18	30	11000	Complying	20	34	18000	Complying	28	40	40000	Complying	26	38	42000	Complying	26	36	35000	Complying	8	28	2100	Complying	25	42	42000	Complying
28	PHED , Dablain Road, Narwana,	02 MLD	18	26	52000	Complying	20	32	48000	Complying	26	34	32000	Complying	24	32	35000	Complying	20	38	21000	Complying	78	52	10900	*Non-Complying*	20	28	25000	Complying
29	Uchana Jind	2 MLD	24	42	9800	Complying	18	38	11000	Complying	27	40	12000	Complying	24	42	9000	Complying	24	34	542000	Complying					22	38	6200	Complying
30	Uchana	1.5 MLD	22	42	72000	Complying	26	38	64000	Complying	24	32	58000	Complying	26	50	21000	Complying	24	42	18000	Complying	110	122	348000	Complying	26	48	15000	Complying
31	Jind	5 MLD	18	28	26000	Complying	20	26	36000	Complying	18	24	42000	Complying	24	28	36000	Complying	24	34	17000	Complying	15	33	4900	Complying	26	28	21000	Complying
32	Jind	7 MLD	-	-	-	-	-	-	-	-	8	12	9000	Complying	7	10	210	Complying	5	8	3500	Complying	9	17	270	Complying	6	12	120	Complying
33	Safidon , Jind	9 MLD	7	9	9600	Complying	8	10	180000	Complying	6	8	10000	Complying	5	8	250	Complying	6	9	2700	Complying								
34	Cheeka , Kaithal	10 MLD	20	22	28000	*Non-Complying (BOD -10)*	24	28	13000	*Non-Complying (BOD -10)*	8	18	7200	Complying	8	14	6800	Complying	11	12	3600	*Non-Complying (BOD -10)*					9	15	7200	Complying
35	Jind Road Kaithal	10 MLD	7	14	32000	Complying	7	12	2500	Complying	7	12	2500	Complying					7	12	1700	Complying					8	10	500	Complying
36	Manas Road, Kaithal	10 MLD	5	8	22000		24	22	32000	*Non-Complying (BOD -10)*	26	40	12000	*Non-Complying (BOD -10)*	24	36	9600	*Non-Complying (BOD-10)*	9	18	7200	Complying					7	14	17000	Complying
37	Manas Road,Kaitha	10 MLD	22	28	26000	*Non-Comp*	6	10	3200	Complying	5	10	2800	Complying	6	8	3200	Compl	5	10	2100	Complying					9	10	2500	Complying

120

Sr. No.	Name of the Town	Capacity of STP	Performance w. r. to Parameters BOD, TSS, and F. Coli																											
			July, 2020				August, 2020				September, 2020				October, 2020				November. 2020				December, 2020				January, 2021			
			BOD	TSS	F. Coli	Status	BOD	TSS	F. Coli	Status	BOD	TSS	F. Coli	Status	BOD	TSS	F. Coli	Status	BOD	TSS	F. Coli	Status	BOD	TSS	F. Coli	Status	BOD	TSS	F. Coli	Status
	I					lying (BOD -10)												ying												
38	Kaithal	7.5 MLD	6	12	12000	Complying	8	10	2800	Complying	6	10	2200	Complying	6	12	1800	Complying	8	10	1500	Complying					7	9	1100	Complying
39	Kalayat , Kaithal	5 MLD	20	28	72000	Non-Complying (BOD -10)	24	30	36000	Non-Complying (BOD -10)	8	16	4200	Complying	8	18	3800	Complying	13	16	4200	Non-Complying (BOD -10)					17	24	5000	Non-Complying (BOD-10)
40	Pundri Kaithal	3.5 MLD	22	30	72000	Complying	26	24	62000	Complying	24	28	15000	Complying	12	18	18000	Complying	9	22	15000	Complying					21	34	5000	Complying
41	Azad Nagar, Rajgarh Road Hisar	15 MLD	9	12	28000	Complying	7	8	2200	Complying	7	13	9000	Complying	9	13	1200	Complying	8	15	1800	Complying	8	16	2500	Complying	7	10	1700	Complying
42	Rishi Nagar , Hisar	40 MLD	10	17	25000	Complying	6	8	3200	Complying	6	12	4200	Complying	8	11	80	Complying	9	14	86	Complying	8	12	1500	Complying	8	12	4500	Complying
43	Narnaund, Hisar	4 MLD	10	18	27000	Complying					13	26	23000	Non-Complying (BOD -10)	8	13	84	Complying	9	19	2600	Complying	8	15	3200	Complying				
44	Dabara Tosham Road , Hisar	15 MLD	8	22	17000	Complying	9	8	7200	Complying	9	13	15000	Complying	9	14	2100	Complying	8	11	2900	Complying	8	13	3200	Complying	6	8	5000	Complying
45	Kaimri Road, Hisar	4 MLD	9	16	26000	Complying					8	16	13000	Complying	5	11	2400	Complying	6	15	2100	Complying	7	14	2900	Complying	9	14	3800	Complying
46	Shamsabad patti , Kalania Road, Sirsa	15 MLD	22	28	32000	Complying	20	22	28000	Complying	18	25	15000	Complying	22	26	12000	Complying	24	28	9600	Complying	19	52	190000	Complying				
47	Vill. Nattar 1 , Sirsa	5 MLD	18	22	72000	Complying	20	28	78000	Complying	24	32	64000	Complying	22	36	48000	Complying	26	38	35000	Complying	22	59	32000	Complying	24	32	17000	Complying

Sr. No.	Name of the Town	Capacity of STP	Performance w. r. to Parameters BOD, TSS, and F. Coli																											
			July, 2020				August, 2020				September, 2020				October, 2020				November. 2020				December, 2020				January, 2021			
			BOD	TSS	F. Coli	Status	BOD	TSS	F. Coli	Status	BOD	TSS	F. Coli	Status	BOD	TSS	F. Coli	Status	BOD	TSS	F. Coli	Status	BOD	TSS	F. Coli	Status	BOD	TSS	F. Coli	Status
48	Vill. Nattar 2 , Sirsa	5 MLD	16	24	32000	Complying	18	20	35000	Complying	26	40	48000	Complying	20	38	32000	Complying	22	132		Complying	23	55	41000	Complying	23	36	21000	Complying
49	Ellenabad Sirsa	7.5 MLD	24	26	1500	*Non-Complying (BOD -10)*	24	28	32000	*Non-Complying (BOD -10)*	24	50	28000	*Non-Complying (BOD -10)*	22	48	1800	*Non-Complying (BOD-10)*	26	42	4800	*Non-Complying (BOD -10)*	24	59	12000	*Non-Complying (BOD-10)*				
50	Daddu Road, Kalanwali, Sirsa	9.5 MLD	8	9	1200	Complying	10	16	2300	Complying	6	10	7000	Complying	6	14	1500	Complying	8	9	320	Complying	8	10	280	Complying	9	12	620	Complying
51	Rania Sirsa	6 MLD	6	10	2500	Complying	6	8	2500	Complying					5	8	480	Complying	7	9	770	Complying					6	8	800	Complying
52	Dabwali, Sirsa	16.5 MLD	10	-	-	Complying	9	14	3500	Complying	7	8	8000	Complying	7	14	1200	Complying	6	10	420	Complying	8	11	480	Complying	8	12	500	Complying
53	Kelnia, Distt. Sirsa	20 MLD	5	8	6400	Complying	8	9	320000	Complying	7	9	56	Complying					6	9	420	Complying	8	10	700	Complying	8	10	380	Complying
54	Vill. Bhodia Khera dt. Bhattu Road dt. Fatehabad	10 MLD	24	28	48000	*Non-Complying (BOD -10)*	26	34	42000	*Non-Complying (BOD -10)*	24	38	25000	*Non-Complying (BOD -10)*	26	34	28000	*Non-Complying (BOD-10)*	24	28	32000	*Non-Complying (BOD -10)*	22	56	42000	*Non-Complying (BOD-10)*	23	34	45000	*Non-Complying (BOD-10)*
55	Vill.Amani, Tohana, Distt. Fatehabad	10 MLD	20	28	12000	Complying	24	32	9600	Complying	27	37	13000	Complying	50	172	72000	*Non-Complying*	26	34	17000	Complying	20	54	12000	Complying	24	32	22000	Complying
56	Ratia , Fatehabad	6.5 MLD	18	28	45000	*Non-Comp*	16	26	36000	*Non-Comp*	16	41	42000	*Non-Comp*	10	26	3500	Compl	22	28	28000	*Non-Com*	23	50	36000	*Non-Com*	25	34	32000	*Non-Complyi*

Sr. No.	Name of the Town	Capacity of STP	Performance w. r. to Parameters BOD, TSS, and F. Coli																											
			July, 2020				August, 2020				September, 2020				October, 2020				November. 2020				December, 2020				January, 2021			
			BOD	TSS	F. Coli	Status	BOD	TSS	F. Coli	Status	BOD	TSS	F. Coli	Status	BOD	TSS	F. Coli	Status	BOD	TSS	F. Coli	Status	BOD	TSS	F. Coli	Status	BOD	TSS	F. Coli	Status
						lying (BOD -10)				*lying (BOD -10)*				*lying (BOD -10)*			0	ying				*plying (BOD -10)*				*plying (BOD-10)*				*ng (BOD-10)*
57	Majra, Fatehabad	10 MLD	5	8	5400	Complying	6	8	1800	Complying	4	8	1200	Complying	5	10	86	Complying	5	8	90	Complying					5	9	86	Complying
58	Kharati Khera Road, Fatehabad	5 MLD	7	10	2800	Complying	8	12	3200	Complying	8	10	2800	Complying	6	16	720	Complying	5	10	1100	Complying	8	14	900	Complying	6	8	800	Complying
59	Jhakhal Mandi, Fatehabad	3 MLD	7	10	1200	Complying	8	10	28000	Complying	9	12	6000	Complying	6	9	15000	Complying	7	9	86	Complying	8	13	92	Complying	8	10	90	Complying

2. **Status of STPs under construction**

Work of 13 new STPs is in progress in the catchment of river Ghaggar with treatment capacity of 74.25 MLD. Work of 8 STPs of 75.25 MLD capacity is completed. The latest status of under construction STPs is given as under:-

Comparative status of under construction STPs from June, 2020 to Jan, 2021.

Sr. No.	Name of the Town	Department.	Capacity (in MLD)	Timelines date	% Work Done	
					Earlier Status as on 30.06.2020	Status as on 31.01.2021
In progress						
1	12 Cross Road, Ambala	ULBD	12	30.06.2021	15%	28%
2	Khatoli	ULBD	0.75	31.03.2021	60%	95%
3	Sukhdarshanapur	ULBD	0.75	31.03.2021	75%	92%
4	Billa	ULBD	0.75	30.06.2021	50%	80%
5	Village Dabra	ULBD	8	31.01.2021	82%	97%
6	Ambala	HSVP	5	31.03.2021	85%	93%
7	Khuda Khurd, Ambala	ULBD	12	30.06.2021	5%	28%
8	Bhuna	PHED	8	31.03.2021	76%	90%
9	Babyal	ULBD	10	30.06.2021	16%	52%
10	Shahpur Machhonda	ULBD	7.5	31.12.2021	6%	11%
11	Saketri-STP	ULBD	1.5	30.06.2021	Likely to be started within 15 days	10%
12	Sirsa	HSVP	7.5	31.12.2021	Was in planning stage	60%
	Total		**73.75**			
Work completed						
1	Nangal & Allipur	ULBD	0.5	30.12.2020	95%	Completed
2	Khagesara & Toka	ULBD	0.5	31.03.2021	95%	Completed
3	Kot	ULBD	0.75	31.12.2020	98%	Completed
4	Barara	PHED	4	30.11.2019	100%	100%
5	Jind	PHED	7	30.11.2019	100%	100%
6	Sec-6, Urban Estate, Thanesar	HSVP	15	31.03.2020	100%	100%
7	Kurukshetra	PHED	25	31.05.2019	100%	100%
8	Sirsa (Kelinia)	PHED	20	30.10.2019	100%	100%
9	Fatehabad(Jakhal Mandi)	PHED	3	31.12.2019	100%	100%
	Total		**75.25**			

Note- STP of 1 MLD proposed to be constructed at Khanguwal has been dropped.

124

3. **Status of STPs under planning and funds tied up**

Sr. No.	Name of the Town	STP Capacity (MLD)	Target date of completion / commissioning	Earlier Status as on 30.06.2020	Proposal Status as on 31.01.2021
NIL					

4. **STPs under planning but funds yet to be tied up**

Sr. No.	Name of the District	Name of the town/City	Deptt.	Capacity (MLD)	Timelines	Status as on 31.01.2021
1.	Ambala	Sector-32, Ambala Cantt.	HSVP	5	31.12.2027	Almost no discharge in this area due to very less habitation. This situation is unlikely to change for the next 6-7 years. Work is likely to be started in Year 2025. Sewage is not sufficient to reach the outfall. Sewer lines are got cleaned when need arises and sewage is lifted to the existing 2 MLD STP of HSVP in Ambala.
2.	Ambala	Naraingarh	HSVP	1	31.12.2024	Almost no discharge yet in this area due to very low habitation. Situation is unlikely to change for the next 4-5 years. Work is likely to be started in the year 2023. Sewage is not sufficient to reach the outfall. Sewer line are got cleaned when need arisen and sewage is lifted to the existing STP of PHED in Naraingarh.
3.	Panchkula	Pinjore	HSVP	8	31.12.2027	No discharge yet in this area due to no habitation. This situation is unlikely to change for the next 6-7 years. Work is likely to be started in Year 2025.
4.	Jind	Jind	HSVP	5	31.12.2027	This STP is not required at least for next 7-8 years, as the existing 10 MLD STP is sufficient to cater the sewage discharge of the HSVP area.
5.	Hisar	Hansi	HSVP	5	31.12.2027	Almost no discharge in this area due to very low habitation. Situation is unlikely to change during the next 4-5 years. Work is likely to be started in Year 2023. Present discharge, though very little, is being treated in existing STP of PHED. Sewage is not sufficient to reach the outfall.
6.	Hisar	Hisar	HSVP	10	31.12.2024	Almost no discharge from this area due to very low habitation. Situation is unlikely to change for the next 4-5 years. Work is likely to be started in Year 2023. Sewage is not sufficient to reach the outfall. Sewer lines are got cleaned when need arises and sewage is lifted to the existing 15 MLD STP of HSVP in Hisar.

125

Sr. No.	Name of the District	Name of the town/City	Deptt.	Capacity (MLD)	Timelines	Status as on 31.01.2021
7.	Hisar	Hisar	HSVP	5	31.12.2026	No discharge yet in this area due to no habitation. This situation is unlikely to change for the next 6-7 years. Work is likely to be started in Year 2025.
		Total		**39**		

5. STPs which require technologically upgradation and funds tied up

Sr. No.	Name of the Town	Present capacity of STP (MLD)	Capacity to be upgraded technologically	Target date for completion/ commissioning	Earlier Status as on 30.6.2020	Status as on 31.01.2021
1	Jind	15	MBBR MBBR+TT	30.04.2021	80%	85%
2	Kaithal	10	MBBR MBBR+TT	Completed	95%	Completed and under trial run
3	Pundri	3.5	MBBR MBBR+TT	Completed	85%	Completed and under trial run
4	Ellanabad	7.5	MBBR MBBR+TT	28.02.2021	65%	90%
5	Fatehabad	10	MBBR MBBR+TT	31.07.2021	25%	60%
6	Ratia	6.5	MBBR MBBR+TT	30.06.2021	25%	55%
7	Tohana	10	MBBR MBBR+TT	30.09.2021	30%	55%
8	Sirsa	15	MBBR MBBR+TT	28-02-2021	60%	90%
9	Uchana	2	MBBR MBBR+TT	31.03.2022	Under planning stage	Work just started
	Total	**79.5**				

6. STPs which require technologically upgradation and funds yet to be tied up.

Sr. No.	Name of town	Location	Technology	Capacity	Remarks
1	Ambala city	Nayagaon	MBBR	3	DPR approved/ Under tendering process. Tenders are not being received even after calling 2 to 6 times.
2	Ambala city	Nayagaon	MBBR	3.25	
3	Ambala city	Moti Nagar	MBBR	5	
4	Ambala city	Moti Nagar	MBBR	5	
5	Ambala city	Devinagar	MBBR	3	
6	Ambala city	Nassirpur	MBBR	3.25	
7	Ambala city	Baldev Nagar	MBBR	5	
8	Ambala city	Baldev Nagar	MBBR	3.25	
9	Naraingarh	Near Radha Swami Satsang Bhawan Naraingarh	MBBR	3	
10	Jind	Narwana road Jind	MBBR	5	
11	Narwana	Jind Patiala	MBBR	3.5	

12.6

Sr. No.	Name of town	Location	Technology	Capacity	Remarks
		road			
12	Narwana	Behind FCI Godown, Dharodi road	MBBR	3.75	
13	Narwana	Narwana road Jind	MBBR	2	
14	Uchana	Bangra road Uchana	MBBR	1.5	
15	Pehowa	Ambala road near saraswati road	MBBR	8	
16	Sirsa	Nattar	MBBR	5	
17	Sirsa	Narttar	MBBR	5	
18	Kalka	Kalka town	MBBR	4.5	DPR approved/ land not available for upgradation. However, efforts are being made to upgrade STP in the existing land using appropriate technologies. Estimate technically cleared and under administrative approval.
19	Ambala city	Model town	MBBR	6	
	Total			**78**	

7. Details of the towns for laying of sewerage system in the catchment area of river Ghaggar.

There are total 27 towns in catchment of River Ghaggar and Sewerage network in approved areas completed in 21 towns.

Sr. No.	Name of town	Deptt.	Target date	Length to be laid in meters	Earlier Status as on 30.06.2020	Status as on 31.01.2021
1	Pinjore	PHED	31.03.2021	18500	11000	17800
2	Ambala City	ULBD	31.03.2021	27825	23500	25200
	Ambala Sadar	ULBD	30.06.2021	256000	160000	192400
3	Kaithal	ULBD	31.03.2021	50166	47715	48900
4	Jakhal Mandi*	PHED	31.03.2022	46861	0	9800
5	Hisar	ULBD	31.03.2021	55178	41717	45120
6	Mandi Dabwali	PHED	31.08.2021 (Efforts being done to complete earlier)	15000	8000	14000
Work Completed						
7	Naraingarh	PHED	31.12.2019	4570	4500	Completed
8	Kalawali	PHED	07.04.2020	2500	2500	2500
9	Kalka	PHED	Sewer lines already laid			
10	Panchkula	PHED				
11	Shahbad	PHED	30.09.2019	6000	6000	6000

/27

Sr. No.	Name of town	Deptt.	Target date	Length to be laid in meters	Earlier Status as on 30.06.2020	Status as on 31.01.2021
12	Kurukshetra	PHED	31.10.2019	6884	6884	6884
13	Pehowa	PHED	100%			
14	Cheeka	PHED	31.05.2019	3700	3700	3700
15	Pundri	PHED	31.05.2019	1700	1700	1700
16	Kalayat	PHED	Sewer lines already laid			
17	Jind	PHED	30.08.2019	9860	9860	9860
18	Narwana	PHED	31.01.2020	3000	3000	3000
19	Safidon	PHED	31.07.2019	4611	4611	4611
20	Uchana	PHED	30.09.2019	2000	2000	2000
21	Fatehabad	PHED	31.05.2019	1200	1200	1200
22	Tohana	PHED	31.05.2020	2050	2050	2050
23	Narnaund	PHED	31.03.2019	600	600	600
24	Ellenabad	PHED	31.05.2019	2375	2375	2375
25	Rania	PHED	31.12.2019	2050	2050	2050
26	Sirsa	PHED	30.04.2020	10400	10400	10400
27	Ratia	PHED	31.03.2020	16850	16850	16850
	Total			**549880**	**372212**	**419656**

* Jakhal Mandi town was not included in the original plan submitted to NGT. It was included later on. Work delayed due to COVID-19.

8. Details of the towns for where sewerage system yet to be laid in the catchment area of river Ghaggar.

Work of laying of sewer lines is in progress in pending 6 towns where 469 Km of sewer line is to be laid out of which 353 Km sewerage line has been laid, so far.

Sr. No.	Name of town	Length of sewer to be laid (In meters)	Latest Progress, if any as on 31.01.2021	Percentage of work done
1	Pinjore	18500	17800	96.22%
2	Ambala City	27825	25200	90.57%
	Ambala Sadar	256000	192400	75.16%
3	Kaithal	50166	48900	97.48%
4	Jakhal Mandi	46861	9800	20.91%
5	Hisar	55178	45120	81.77%
6	Mandi Dabwali	15000	14000	93.33%
	Total	**469530**	**353220**	

9. Comparison of water quality of River Ghaggar in terms of average values of BOD, D.O and T.Coli, (March to June, 2020 and July, 2020 to January, 2021).

Sr. No	A/R No. & date	BOD mg/l	DO mg/l	Total Coliform
Panchkula				
1	Ghaggar River at Haryana Himachal Border (Ghaggar River at Morni)			
	March to June, 2020	2.72	75.66	175250
	July, 2020 to January, 2021	4.48	7.13	49590
2	Ghaggar River, Near Burjkotia, Panchkula (Station Code- 1885)			
	March to June, 2020	4.2	7.55	143500
	July, 2020 to January, 2021	9.67	6.7	76271.4
3	Ghaggar river before meeting discharge of STP Sec-28 at Kakrali, Punjab.			
	March to June, 2020	3.75	7.33	196250
	July, 2020 to January, 2021	6.43	7.18	56756.66
4	Ghaggar river after meeting discharge of STP Sec-28 at Kakrali, Punjab.			

Sr. No	A/R No. & date	BOD mg/l	DO mg/l	Total Coliform
	March to June, 2020	3.5	6.5	230500
	July, 2020 to January, 2021	13.55	6.06	72436.6
5	U/s of Ghaggar River before meeting Sukhna Choe			
	March to June, 2020	27	7.2	175000
	July, 2020 to January, 2021	8.28	7.1	49508
6	D/S of Ghaggar River after meeting Sukhna Choe			
	March to June, 2020	28	6.9	212000
	July, 2020 to January, 2021	12.2	5.86	76128
7	Ghaggar River before meeting Derabassi Drain near Vill- Bakkarpur (Punjab) (Upstream)			
	March to June, 2020	20	4	172000
	July, 2020 to January, 2021	5.8	6.1	140
8	Ghaggar River after meeting Derabassi near Vill- Bakkarpur (Punjab).			
	March to June, 2020	110	5	278000
	July, 2020 to January, 2021	9	4.7	390
9	Ghaggar River before meeting Basauli Choe at Vill- Tepla (Punjab)			
	March to June, 2020	11	6.4	172000
	July, 2020 to January, 2021	5.7	6.65	35110
10	Ghaggar River after meeting Basauli Choe at Vill- Tepla (Punjab)			
	March to June, 2020	29	3.2	212000
	July, 2020 to January, 2021	12	6.5	390
11	Ghaggar river before meeting Jharmal Choe at Vill- Tiwana (Punjab)			
	March to June, 2020	17	6.9	175000
	July, 2020 to January, 2021	5.8	6.8	170
12	Ghaggar River after mixing Jharmal Choe, At- Vill- Tiwana, (Punjab)			
	March to June, 2020	43	2.5	221000
	July, 2020 to January, 2021	7.5	5.4	480
13	Ghaggar River before mixing Ghail drain at Samaspur (Ambala)			
	March to June, 2020	7.12	5.7	--
	July, 2020 to January, 2021	10.2	6.8	7010
14	Ghaggar River after mixing Ghail Drain at Samaspur (Ambala)			
	March to June, 2020	6.25	5.2	--
	July, 2020 to January, 2021	13.33	6.65	37272.5
15	Ghaggar River before mixing Pachis Draha drain at Vill- Sarala Khurd (Patiala).			
	March to June, 2020	9	7.2	175000
	July, 2020 to January, 2021	6.2	5.4	170
16	Ghaggar River after mixing Pachis Draha drain at Sarala khurd (Patiala).			
	March to June, 2020	54	6.8	253000
	July, 2020 to January, 2021	16	5.2	480
Jind				
17	Ghaggar River before meeting river Markanda at Village Chiali. (Longitude $76^0$25.974' and Latitude $30^0$07.695')			
	March to June, 2020	39.4	4.12	264200
	July, 2020 to January, 2021	41.28	4.85	317000
18	Ghaggar River after mixing Markanda River at village Dhandota. (Longitude $76^0$22.571' and Latitude $30^0$05.410')			
	March to June, 2020	51.4	4.46	229400
	July, 2020 to January, 2021	35.71	4.92	261714.2
19	Ghaggar River before mixing, Patiala Nadi at Vill. Bhatia. (Longitude $76^0$14.696' and Latitude $30^0$04.717')			
	March to June, 2020	45.6	4.82	270400
	July, 2020 to January, 2021	37.85	4.95	283428.5
20	Ghaggar River after mixing of Patiala Nadi at Village Ratanheri. (Longitude $76^0$14.542' and Latitude $30^0$04.645')			
	March to June, 2020	47.4	4.62	306000
	July, 2020 to January, 2021	33.57	5.25	358857.1

Sr. No	A/R No. & date	BOD mg/l	DO mg/l	Total Coliform
21	Ghaggar River before mixing Sagar Para Drain at Village Rasoli. (Longitude 76^{0}10.173' and Latitude 29^{0}54.305')			
	March to June, 2020	44.4	3.8	199400
	July, 2020 to January, 2021	38.85	4.65	290000
22	Ghaggar River after mixing of Sagar Para Drain at Village Rasoli. (Longitude 76^{0}10.135' and Latitude 29^{0}53.548')			
	March to June, 2020	48.8	3.94	333600
	July, 2020 to January, 2021	35.57	5.01	259571.4
23	River Ghaggar before mixing Kaithal drain at Khanauri. (Longitude 75^{0}00.061' and Latitude 29^{0}50.754')			
	March to June, 2020	27.5	6.1	250500
	July, 2020 to January, 2021	41.14	5.67	333000
24	River Ghaggar before mixing point of Khanauri drain			
	March to June, 2020	47.6	2.6	238800
	July, 2020 to January, 2021	40.86	4.88	269714.2
25	River Ghaggar after mixing Kaithal Darin into River Ghaggar. (Longitude 76^{0}06.663' and Latitude 29^{0}50.723')			
	March to June, 2020	45.2	585.16	297400
	July, 2020 to January, 2021	41.86	5.7	323857.1
26	River Ghaggar before meeting discharge of Moonak Town. (Longitude 75^{0}53.763' and Latitude 29^{0}48.503')			
	March to June, 2020	42.4	5.04	206400
	July, 2020 to January, 2021	37.14	5.85	271428.57
27	River Ghaggar after meeting discharge of Moonak Town with River Ghaggar. (Longitude 75^{0}53.702' and Latitude 29^{0}48.515')			
	March to June, 2020	39	5.36	281600
	July, 2020 to January, 2021	39.8	5.97	265000
28	River Ghaghar before meeting Jhambuwali Choe at Village Chandu. (Longitude 75^{0}00.100' and Latitude 29^{0}49.736')			
	March to June, 2020	34	5.64	175600
	July, 2020 to January, 2021	37.29	6.05	195571.4
29	River Ghaghar after meeting Jhambuwali Choe at Village Chandu. (Longitude 75^{0}59.989' and Latitude 29^{0}49.717')			
	March to June, 2020	41.4	4.58	201750
	July, 2020 to January, 2021	36.2	5.42	196857.14
Hisar				
30	River Ghaggar before meeting discharge of Ratia.			
	March to June, 2020	37.1	5	186500
	July, 2020 to January, 2021	40	5.24	298571.42
31	River Ghaggar after meeting of discharge of Ratia.			
	March to June, 2020	40.6	5.38	258400
	July, 2020 to January, 2021	33.2	5.61	230000
32	River Ghaggar before meeting discharge of Sardulgarh town			
	March to June, 2020	45.7	5.9	304750
	July, 2020 to January, 2021	49.3	4.98	405000
33	River Ghaggar after meeting discharge of Sardulgarh town			
	March to June, 2020	44.7	5.7	352500
	July, 2020 to January, 2021	36.6	5.46	311666.6
34	Ghaggar before ottu weir (before mixing with Satluj canal water			
	March to June, 2020	29.3	5.8	300000
	July, 2020 to January, 2021	36.5	16.3	260000
35	River Ghaggar before discharged of 7.5 MLD STP PHED, Ellenabad Sirsa			
	March to June, 2020	50.25	5.4	248000
	July, 2020 to January, 2021	40.57	5.82	268571.4
36	River Ghaggar after discharged of 7.5 MLD STP PHED, Ellenabad Sirsa			
	March to June, 2020	45.2	3.98	320000

Sr. No	A/R No. & date	BOD mg/l	DO mg/l	Total Coliform
	July, 2020 to January, 2021	32.7	5.14	170000

10. Installation of Real Time Water Quality Monitoring Station.

The action is under process and in principal permission of Agency/Department/Organization who is owner has been granted for the location.

11. Ground Water Quality in the catchment area of river Ghaggar

Ground water quality report is enclosed as under:-

131

Latest Status of Ground Water sample for the period of July 2020 to Jan, 2021

Sr. No.	Analysis Report No.	Date of collection	pH (6.5 to 8.5 limit)	BOD	COD	TDS (500 - (2000 limit)	Total Suspended Solids	Total Hardness (200-600)	Chloride (250 limits)	Sulphate (200-400)	Calcium (75 limits) (200)	Magnesium (30) (100)	Nickel (0.02)	Chromium (0.05 limits)	Zinc (5-15)	Iron (0.3 limits)	Total caoliform	Fecal Coliform	Nitrate-N (45 limits)	Total Alkalinity (200 limits)	P-Alkalinity	Phosphate	Sodium	Potassium	Remarks
Panchkula																									
1	**Tubewell E-2, Sec-25, Panchkula**																								
	3420 dt. 30.07.2020	21.07.2020	7.62	BDL	BDL		BDL	214	16	-	60	15.552							BDL			-	54	0.6	Complying
	4131 dt. 28.10.2020	14.10.2020	7.95	BDL (DL=1)	BDL (DL=5)	306	BDL (DL=5)	218	22		61.6	15.552					110	Nil	0.31						Complying
2	**Tubewell E-6, Sec-26, Panchkula**																								
	3416 dt. 30.07.2020	21.07.2020	7.2	BDL	BDL		BDL	236	18	-	64.8	17.982							0.07				46	0.6	Complying
	4127 dt. 28.10.2020	14.10.2020	8	BDL (DL=1)	BDL (DL=5)	310	BDL (DL=5)	276	26		78.4	19.44					170	nil	0.28				112	1.6	Complying
4	**Tubewell E-10, Sec-27, Panchkula**																								
	3415 dt. 30.07.2020	21.07.2020	7.38	BDL	BDL		BDL	230	26	-	66.4	15.552							0.04			-	62	1.2	Complying
	4126 dt. 28.10.2020	14.10.2020	7.96	BDL (DL=1)	BDL (DL=5)	308	BDL (DL=5)	226	16		64.8	15.552					120	Nil	0.13				98	1	Complying
5	**Tubewell E-13, Sec-28, Panchkula**																								
	3414 dt. 30.07.2020	21.07.2020	7.86	BDL	BDL		BDL	266	20	-	77.6	17.496							0.1				42	0.4	Complying
	4125 dt. 28.10.20	14.10.2020	8.03	BDL (DL	BDL	302	BDL (DL=5)	240	18		68.8	16.524					170	Nil	0.21				62	0.8	Complying

Sr. No.	Analysis Report No.	Date of collection	pH (6.5 to 8.5 limit)	BOD	COD	TDS (500 - (2000 limit)	Total Suspended Solids	Total Hardness (200 -600)	Chloride (250 limits)	Sulphate (200-400)	Calcium (75 limits) (200)	Magnesium (30) (100)	Nickel (0.02)	Chromium (0.05 limits)	Zinc (5-15)	Iron (0.3 limits)	Total caoliform	Fecal Coliform	Nitrate-N (45 limits)	Total Alkalinity (200 limits)	P-Alkalinity	Phosphate	Sodium	Potassium	Remarks
	20			=1)	(DL =5)																				
6	**Tubewell T-2, Sec-21, Panchkula**																								
	3419 dt. 30.07.2020	21.07.2020	7.76	BDL	BDL		BDL	238	20	-	68	16.524							0.07			-	64	0.8	Complying
	4130 dt. 28.10.2020	14.10.2020	7.54	BDL (DL =1)	BDL (DL =5)	272	BDL (DL=5)	238	20		67.2	17.01					150	nil	0.21						Complying
7	**Tubewell KV-1, Sec-20, Panchkula**																								
	3418 dt. 30.07.2020	21.07.2020	7.33	BDL	BDL		BDL	146	24	-	41.6	10.206							0.04			-	76	1.4	Complying
	4129 dt. 28.10.2020	14.10.2020	7.6	BDL (DL =1)	BDL (DL =5)	270	BDL (DL=5)	182	24		52	12.6					210	Nil	0.26						Complying
8	**Tubewell S-9-, Sec-4, Panchkula**																								
	3417 dt. 30.07.2020	21.07.2020	7.3	BDL	BDL		BDL	236	26	-	64	18.468							0.06			-	52	0.8	Complying
	4128 dt. 28.10.2020	14.10.2020	7.48	BDL (DL =1)	BDL (DL =5)	272	BDL (DL=5)	244	22		68.8	17.4					140	Nil	0.1				122	1.8	Complying
Ambala																									
9	**Hand Pump at Ghail Drain, Ambala**																								
	4208 dt. 10.11.2020	27.10.2020	7.1	BDL (DL =1)	BDL (DL =5)		BDL (DL=5)	274	182	8.58	76.8	19.926	N.D		0.023	0.4	170	N.D	1.85				166	4.8	Non-Complying (Iron)
10	**Tubewell at Vill. Dadwa Haryana Punjab Border, Ambala**																								
	4209 dt. 10.11.20	27.10.2020	7.13	BDL (DL	BDL		BDL (DL=5)	270	194	8.56	76	19.44	N.D		0.1	0.488	140	N.D	1.52				176	6.6	Non-Complying

Sr. No.	Analysis Report No.	Date of collection	pH (6.5 to 8.5 limit)	BOD	COD	TDS (500 - (2000 limit)	Total Suspended Solids	Total Hardness (200-600)	Chloride (250 limits)	Sulphate (200-400)	Calcium (75 limits) (200)	Magnesium (30) (100)	Nickel (0.02)	Chromium (0.05 limits)	Zinc (5-15)	Iron (0.3 limits)	Total caoliform	Fecal Coliform	Nitrate-N (45 limits)	Total Alkalinity (200 limits)	P-Alkality	Phosphate	Sodium	Potassium	Remarks
	20			=1)	(DL =5)																				(Iron)
11	**Tubewell at Kalu Majra, Ambala**																								
	4210 dt. 10.11.2020	27.10.2020	7.19	BDL (DL =1)	BDL (DL =5)		BDL (DL=5)	288	198	18.14	80.8	20.898	N.D		0.13	0.577	210	N.D	1.9				156	10.2	Non-Complying (Iron)
12	**Tubewell at Vill. Dadiana, Ambala**																								
	4211 dt. 10.11.2020	27.10.2020	7.17	BDL (DL =1)	BDL (DL =5)		BDL (DL=5)	276	192	16.88	78.4	19.44	N.D		0.036	0.445	200	N.D	1.84				186	14.2	Non-Complying (Iron)
13	**Tubewell at Vill. Manakpur, Ambala**																								
	4212 dt. 10.11.2020	27.10.2020	7.12	BDL (DL =1)	BDL (DL =5)		BDL (DL=5)	344	194	9.18	96.8	24.786	N.D		0.059	0.402	260	N.D	1.47				176	16.6	Non-Complying (Iron)
14	**Tubewell at Vill. Lohgarh, Ambala**																								
	4213 dt. 10.11.2020	27.10.2020	7.29	BDL (DL =1)	BDL (DL =5)		BDL (DL=5)	304	196	8.64	84.8	22.356	N.D		0.084	0.502	220	N.D	0.94				172	15.6	Non-Complying (Iron)
15	**Tubewell at Vill. Dangderi, Ambala**																								
	4214 dt. 10.11.2020	27.10.2020	7.18	BDL (DL =1)	BDL (DL =5)		BDL (DL=5)	288	192	8.08	80	20.898	N.D		0.081	0.235	170	N.D	2.48				162	14.2	Complying
Kurukshetra																									
16	**Ground Water sample near the Banj of Rakshi Drain Collected from Borewell of Sh. Manpal Singh S/o Sh. Gurmeet Singh village Waraichpur, Tehsil Ladwa, Kurukshetra**																								
	4164 dt. 02.11.2020	22.10.2020	7.51	BDL (DL =1)	BDL (DL =5)	392	BDL (DL=5)	166	28		47.2	11.664							0.18				62	0.8	Complying

Sr. No.	Analysis Report No.	Date of collection	pH (6.5 to 8.5 limit)	BOD	COD	TDS (500 - (2000 limit)	Total Suspended Solids	Total Hardness (200 -600)	Chloride (250 limits)	Sulphate (200-400)	Calcium (75 limits) (200)	Magnesium (30) (100)	Nickel (0.02)	Chromium (0.05 limits)	Zinc (5-15)	Iron (0.3 limits)	Total caoliform	Fecal Coliform	Nitrate-N (45 limits)	Total Alkalinity (200 limits)	P-Alkalinity	Phosphate	Sodium	Potassium	Remarks
Jind																									
17	**Outlet of Hand pump installed by PHED near Rani Talab, Taxi Stand, Jind**																								
	185 dt. 10.08.2020	31.07.2020	7.8	ND	ND		14	320	278	22	240	80				0.04				20	8.7				Non-Complying (Chloride & Calcium)
	372 dt. 18.12.2020	11.12.2020	8	ND	ND	478	16	240	212	14	180	60	ND	ND	ND	0.04				15	6.9			ND	Complying
18	**Underground Submersible pump near 15 MLD, Hansi road, Jind**																								
	186 dt. 10.08.2020	31.07.2020	8.1	ND	ND	1585	24	430	298	36	320	110				0.08									Non-Complying (Chloride & Calcium)
	371 dt. 18.12.2020	11.12.2020	7.6	ND	ND	524	18	450	256	28	370	90	ND	ND	ND	0.06				20	9.3	ND			Non-Complying (Chloride & Calcium)
Kaithal																									
19	**4836 Tubewali no. 1, Near upstream Ghaggar River at Village Chiali Near Ghaggar River, Kaithal**																								
	191 dt. 14.08.2020	05.08.2020	8.10	ND	ND	1265	16	310	118	4	250	60	ND		ND	ND				15	7.2	ND		ND	Non-Complying (Calcium)
	386 dt. 22.12.2020	16.12.2020	7.90	ND	ND	548	22	220	64	3	180	40	ND		ND	ND				20	9.3	ND		ND	Complying
20	**4837 Tubewali no. 2, Near Gurudwara, Village Bhatia Near Ghaggar River, Kaithal**																								
	192 dt. 14.08.2020	05.08.2020	8.10	ND	ND	1438	20	320	148	4	260	60	ND	ND	ND	ND				20	8.9	ND		ND	Non-Complying (Calcium)
	387 dt.	16.12.2	8.00	ND	ND	722	14	260	104	5	210	50	ND	ND	ND	ND				15	6.9	ND		ND	Non-

Sr. No.	Analysis Report No.	Date of collection	pH (6.5 to 8.5 limit)	BOD	COD	TDS (500 - (2000 limit)	Total Suspended Solids	Total Hardness (200 -600)	Chloride (250 limits)	Sulphate (200-400)	Calcium (75 limits) (200)	Magnesium (30) (100)	Nickel (0.02)	Chromium (0.05 limits)	Zinc (5-15)	Iron (0.3 limits)	Total caoliform	Fecal Coliform	Nitrate-N (45 limits)	Total Alkalinity (200 limits)	P-Alkalinity	Phosphate	Sodium	Potassium	Remarks
	22.12.2020	020																							Complying (Calcium)
21	Tubewell No. 1 Discharge of Ghaggar Greek into river GR at Villgae Bhaita Kaithal																								
	193 dt. 14.08.2020	05.08.2020	8.4	ND	ND	2210	18	410	178	6	320	90	ND	ND	ND	ND				30	14.6	ND		ND	Non-Complying (TDS, Calcium)
	388 dt. 22.12.2020	16.12.2020	8.2	ND	ND	1784	20	390	164	6	310	80	ND	ND	ND	ND				25	12.3	ND		ND	Non-Complying (Calcium)
22	PHED Tubewell in Village Dandota, Kaithal																								
	194 dt.14.08.2020	05.08.2020	8.1	ND	ND	1416	14	370	132	6	285	85	ND	ND	ND	ND				20	9.2	ND		ND	Non-Complying (Calcium)
	373 dt. 18.12.2020	11.12.2020	8	ND	ND	958	12	320	98	4	265	55	ND	ND	ND	ND				15	8.7	ND		ND	Non-Complying (Calcium)
23	PHED Tubewell in Village Shugalpur, Kaithal																								
	195dt. 14.08.2020	05.08.2020	8.5	ND	ND	615	12	310	58	2	250	60	ND	ND	ND	ND				25	11.4	ND		ND	Non-Complying (Calcium)
	374 dt. 18.12.2020	11.12.2020	8.1	ND	ND	572	10	260	64	2	210	50	ND	ND	ND	ND				15	7.1	ND		ND	Non-Complying (Calcium)
24	PHED Tubewell in Village Baupur, Kaithal																								
	196 dt. 14.08.2020	05.08.2020	8.4	ND	ND	2675	22	400	192	4	290	110	ND	ND	ND	ND				20	7.2	ND		ND	Non-Complying (Calcium)
	375 dt. 18.12.2020	11.12.2020	7.9	ND	ND	1784	22	290	144	4	210	80	ND	ND	ND	ND				15	5.6	ND		ND	Non-Complying (Calcium)
25	PHED Tubewell in Village Kasouli, Kaithal																								
	197 dt.14.08.2020	05.08.2020	8.5	ND	ND	2125	14	370	156	7	270	100	ND	ND	ND	ND				25	12.1	ND		ND	Non-Complying (Calcium)

Sr. No.	Analysis Report No.	Date of collection	pH (6.5 to 8.5 limit)	BOD	COD	TDS (500 - (2000 limit)	Total Suspended Solids	Total Hardness (200 -600)	Chloride (250 limits)	Sulphate (200-400)	Calcium (75 limits) (200)	Magnesium (30) (100)	Nickel (0.02)	Chromium (0.05 limits)	Zinc (5-15)	Iron (0.3 limits)	Total caoliform	Fecal Coliform	Nitrate-N (45 limits)	Total Alkalinity (200 limits)	P-Alkalinity	Phosphate	Sodium	Potassium	Remarks
	376 dt. 18.12.2020	11.12.2020	7.8	ND	ND	1302	14	170	112	4	120	50	ND	ND	ND	ND				20	8	ND		ND	Non-Complying (Calcium)
26	**PHED Tubewell in Village Paprala, Kaithal**																								
	198 dt.14.08.2020	05.08.2020	8.6	ND	ND	715	10	330	70	2	270	60	ND	ND	ND	ND				15	7.8	ND		ND	Non-Complying (pH and Calcium)
	377 dt. 18.12.2020	11.12.2020	7.9	ND	ND	779	14	250	46	2	190	60	ND	ND	ND	ND				15	8.3	ND		ND	Non-Complying (Calcium)
27	**Hand Pump of Village Devban (Near River Bridge) District Kaithal**																								
	199 dt.14.08.2020	05.08.2020	7.3	ND	ND	1007	18	230	116	4	160	70	ND	ND	ND	ND				15	7.2	ND		ND	Complying
	378 dt. 18.12.2020	11.12.2020	7.5	ND	ND	884	22	210	94	2	170	40	ND	ND	ND	ND				20	9.2	ND		ND	Non-Complying (Calcium)
28	**Hand Pump, Village Kithana, (Near Shiv Medical), District Kaithal**																								
	200 dt. 14.08.2020	05.08.2020	8.5	ND	ND	3284	16	360	94	6	310	50	ND	ND	ND	ND				20	8.6	ND		ND	Non-Complying (Calcium)
	379 dt. 18.12.2020	11.12.2020	8	ND	ND	1569	24	320	84	5	270	50	ND	ND	ND	ND				20	9.3	ND		ND	Non-Complying (Calcium)
29	**Underground water Hand Pump of Village Titran (Near Vishav Karma Auto Center) District Kaithal**																								
	201 dt.14.08.2020	05.08.2020	8.7	ND	ND	2912	14	320	170	8	240	80	ND	ND	ND	ND				20	7.9	ND		ND	Non-Complying (TDS and Calcium)
	379 dt. 18.12.2020	11.12.2020	8	ND	ND	1860	20	290	132	5	260	30	ND	ND	ND	ND				25	12.3	ND		ND	Non-Complying (Calcium)
30	**Narwana to Dandhardi Road, Tehsil Kalayat. Dist. Kaithal**																								

Sr. No.	Analysis Report No.	Date of collection	pH (6.5 to 8.5 limit)	BOD	COD	TDS (500 - (2000 limit)	Total Suspended Solids	Total Hardness (200 -600)	Chloride (250 limits)	Sulphate (200-400)	Calcium (75 limits) (200)	Magnesium (30) (100)	Nickel (0.02)	Chromium (0.05 limits)	Zinc (5-15)	Iron (0.3 limits)	Total caoliform	Fecal Coliform	Nitrate-N (45 limits)	Total Alkalinity (200 limits)	P-Alkalinity	Phosphate	Sodium	Potassium	Remarks
	202 dt. 14.08.2020	05.08.2020	7.9	ND	ND	1678	14	340	104	5	270	70	ND	ND	ND	ND				20	6.9	ND		ND	Non-Complying (Calcium)
	383 dt. 18.12.2020	11.12.2020	7.6	ND	ND	1109	10	270	112	2	210	60	ND	ND	ND	ND				10	3.4	ND		ND	Non-Complying (Calcium)
31	**Ground Water village Kharka, Gujn Chowk, Cheeka, Kaithal**																								
	203 dt.14.08.2020	05.08.2020	8.4	ND	ND	1700	16	310	142	2	250	60	ND	ND	ND	ND				15	6.3	ND		ND	Non-Complying (Calcium)
	389 dt. 22.12.2020	16.12.2020	8.3	ND	ND	1502	18	360	118	4	280	80	ND	ND	ND	ND				10	4.9	ND		ND	Non-Complying (Calcium)
32	**Tubewell PHED, Village Kasaan, Kaithal**																								
	204 dt. 14.08.2020	05.08.2020	8.3	ND	ND	605	10	290	82	10	220	70	ND	ND	ND	ND				20	8.2	ND		ND	Non-Complying (Calcium)
	381 dt. 18.12.2020	11.12.2020	7.8	ND	ND	727	8	330	70	8	240	90	ND	ND	ND					20	9.4	ND		ND	Non-Complying (Calcium)
33	**Tubewell PHED, Jind Road, kaithal**																								
	205 dt.14.08.2020	05.08.2020	8.6	ND	ND	628	15	250	142	12	190	60	ND	ND	ND	0.09				15	7.3	ND		ND	Non-Complying (pH)
	382 dt. 18.12.2020	11.12.2020	8	ND	ND	727	8	330	70	8	240	90	ND	ND	ND	ND				20	9.4	ND		ND	Non-Complying (Calcium)
Hisar																									
34	**Underground Water Hand Pump Bridge, Tokas, Patan road, Tokas**																								
	156 dt. 22.07.20	14.07.20	7.6	ND	ND	448	12	190	78	4	160	30	ND		ND	ND				5	2.1	ND		ND	Complying
	309 dt. 21.10.2020	14.10.2020	7.5	ND	ND	422	10	170	64	4	110	60	ND		ND	ND				5	ND	ND		ND	Complying

Sr. No.	Analysis Report No.	Date of collection	pH (6.5 to 8.5 limit)	BOD	COD	TDS (500 - (2000 limit)	Total Suspended Solids	Total Hardness (200 -600)	Chloride (250 limits)	Sulphate (200-400)	Calcium (75 limits) (200)	Magnesium (30) (100)	Nickel (0.02)	Chromium (0.05 limits)	Zinc (5-15)	Iron (0.3 limits)	Total caoliform	Fecal Coliform	Nitrate-N (45 limits)	Total Alkalinity (200 limits)	P-Alkalinity	Phosphate	Sodium	Potassium	Remarks
35	**Underground Water Hand Pump Arya-Nagar to Balsamand Road, Poultry farm**																								
	155 dt. 22.07.20	14.07.20	8.1	ND	ND	328	18	210	52	2	180	30	ND		ND	ND				10	4.8	ND		ND	Complying
	308 dt. 21.10.2020	14.10.2020	8	ND	ND	306	14	180	46	2	140	40	ND		ND	ND				10	4.2	ND			Complying
36	**Underground Water Hand Pump Rawalwas Khurd to patan Road, Patan Bridge**																								
	154 dt. 22.07.20	14.07.20	7.9	ND	ND	775	20	280	74	6	230	50	ND		ND	ND				15	6.4	ND		ND	Non-Complying (Calcium)
	307 dt. 21.10.2020	14.10.2020	7.7	ND	ND	714	16	250	68	4	210	40	ND		ND	ND				15	5.7	ND		ND	Non-Complying (Calcium)
37	**Underground Water Hand Pump Arya Nagar to shapur Bridge**																								
	153 dt. 22.07.20	14.07.20	7.8	ND	ND	915	14	340	78	6	290	50	ND		ND	ND				15	6.7	ND		ND	Non-Complying (Calcium)
	306 dt. 21.10.2020	14.10.2020	7.7	ND	ND	805	12	310	62	6	260	50	ND		ND	ND				15	7.2	ND		ND	Non-Complying (Calcium)
38	**Underground Water Hand Pump park vill shapur old Well-Hisar Drain**																								
	152 dt. 22.07.20	14.07.20	8.1	ND	ND	998	12	390	118	8	320	70	ND		ND	ND				15	6.9	ND		ND	Non-Complying (Calcium)
	306 dt. 21.10.2020	14.10.2020	7.8	ND	ND	778	16	340	102	6	280	60	ND		ND	ND				20	8.9	ND		ND	Non-Complying (Calcium)
Sirsa																									
39	**Near point source, Village Kelania, Sirsa**																								
	84 dt. 15.07.2020	07.07.2020	7.8	ND	ND	489	22	320	82	3	280	40	ND	ND	ND	ND				10	3.4	ND		ND	Non-Complying (Calcium)

Sr. No.	Analysis Report No.	Date of collection	pH (6.5 to 8.5 limit)	BOD	COD	TDS (500 - (2000 limit)	Total Suspended Solids	Total Hardness (200-600)	Chloride (250 limits)	Sulphate (200-400)	Calcium (75 limits) (200)	Magnesium (30) (100)	Nickel (0.02)	Chromium (0.05 limits)	Zinc (5-15)	Iron (0.3 limits)	Total caoliform	Fecal Coliform	Nitrate-N (45 limits)	Total Alkalinity (200 limits)	P-Alkalinity	Phosphate	Sodium	Potassium	Remarks
	286 dt. 21.10.2020	14.10.2020	7.6	ND	ND	438	18	290	74	4	240	50	ND	ND	ND	ND				5	1.9	ND		ND	Non-Complying (Calcium)
40	**Near Bridge, Sirsa - Dabwali Road, Sirsa, 1025 GH-1**																								
	82 dt. 15.07.2020	07.07.2020	7.2	ND	ND	1005	18	350	90	4	270	80	ND	ND	ND	ND				15	6.8	ND		ND	Non-Complying (Calcium)
	284 dt. 21.10.2020	14.10.2020	7.4	ND	ND	864	15	290	82	4	230	60	ND	ND	ND	ND				15	7.1	ND		ND	Non-Complying (Calcium)
41	**Tubewell near Dhani Jaikaran Singh adjacent to Rania Link Drain, Sirsa**																								
	81 dt. 15.07.2020	07.07.2020	8	ND	ND	538	14	310	84	4	260	50	ND	ND	ND	ND				10	4.2	ND		ND	Non-Complying (Calcium)
	283 dt. 21.10.2020	14.10.2020	8	ND	ND	505	12	270	78	3	220	50	ND	ND	ND	ND				10	3.8	ND		ND	Non-Complying (Calcium)
42	**Tubewell at Village Farwai Khurd, Sirsa**																								
	88 dt. 15.07.2020	07.07.2020	8.3	ND	ND	472	18	220	54	18	170	50	ND	ND	ND	ND				10	3.9	ND		ND	Complying
	290 dt. 21.10.2020	14.10.2020	8	ND	ND	464	20	200	46	12	160	40	ND	ND	ND	ND				10	2.3	ND		ND	Complying
43	**Tubewell of Numberdar Rupchand, Near Village Farwai Khurd, Sirsa**																								
	80 dt. 15.07.2020	07.07.2020	8.1	ND	ND	590	16	210	44	2	160	50	ND	ND	ND	ND				15	6.5	ND		ND	Complying
	282 dt. 21.10.2020	14.10.2020	7.8	ND	ND	565	18	190	38	2	130	60	ND	ND	ND	ND				10	4.9	ND		ND	Complying
44	**Tubewell near Village Mallewala, Sirsa**																								
	85 dt. 15.07.20	07.07.2020	7.9	ND	ND	473	8	140	52	8	110	30	ND	ND	ND	ND				5	2.1	ND		ND	Complying

Sr. No.	Analysis Report No.	Date of collection	pH (6.5 to 8.5 limit)	BOD	COD	TDS (500 - (2000 limit)	Total Suspended Solids	Total Hardness (200-600)	Chloride (250 limits)	Sulphate (200-400)	Calcium (75 limits) (200)	Magnesium (30) (100)	Nickel (0.02)	Chromium (0.05 limits)	Zinc (5-15)	Iron (0.3 limits)	Total caoliform	Fecal Coliform	Nitrate-N (45 limits)	Total Alkalinity (200 limits)	P-Alkalinity	Phosphate	Sodium	Potassium	Remarks
	20																								
	287 dt. 21.10.2020	14.10.2020	7.8	ND	ND	459	10	120	46	6	90	30	ND	ND	ND	ND				5	2.6	ND		ND	
45	**Tubewell of Loharia, Vill. Farwai Kalan, Sirsa**																								
	99 dt. 15.07.2020	07.07.2020	7.9	ND	ND	625	18	290	88	7	240	50	ND	ND	ND	0.05				5	3.2	ND		ND	Non-Complying (Calcium)
	301 dt. 21.10.2020	14.10.2020	7.8	ND	ND	594	14	270	76	5	230	40	ND	ND	ND	ND				5	2.1	ND		ND	Non-Complying (Calcium)
46	**Tubewell of Gram Panchayat, Vill. Farwai Kalan, Sirsa**																								
	100 dt. 15.07.2020	07.07.2020	7.9	ND	ND	484	14	260	68	16	220	40	ND	ND	ND	0.03				15	5.9	ND		ND	Non-Complying (Calcium)
	302 dt. 21.10.2020	14.10.2020	7.8	ND	ND	458	10	240	52	12	190	50	ND	ND	ND	0.01				15	6.4	ND		ND	
47	**Tubewell of Laxman Das Vill. Dhani Burjkaramgarh (Sanghar), Sirsa**																								
	101 dt. 15.07.2020	07.07.2020	8.3	ND	ND	745	10	310	112	20	260	50	ND	ND	ND	0.07				25	12.3	ND		ND	Non-Complying (Calcium)
	303 dt. 21.10.2020	14.10.2020	8.1	ND	ND	696	12	270	104	18	230	40	ND	ND	ND	0.03				20	9.2	ND		ND	Non-Complying (Calcium)
48	**Tubewell of Murlidhar, Vill.- Dhani Burjkaramgarh (Sanghar), Sirsa**																								
	102 dt. 15.07.2020	07.07.2020	8.1	ND	ND	592	20	300	126	22	230	70	ND	ND	ND	0.07				20	7.9	ND		ND	Non-Complying (Calcium)
	304 dt. 21.10.2020	14.10.2020	7.9	ND	ND	574	18	300	112	16	240	60	ND	ND	ND	0.05				15	6.8	ND		ND	Non-Complying (Calcium)
49	**Tubewell of Omprakash, Vill.- Dhani Burjkaramgarh (Sanghar), Sirsa**																								

Sr. No.	Analysis Report No.	Date of collection	pH (6.5 to 8.5 limit)	BOD	COD	TDS (500 - (2000 limit)	Total Suspended Solids	Total Hardness (200-600)	Chloride (250 limits)	Sulphate (200-400)	Calcium (75 limits) (200)	Magnesium (30) (100)	Nickel (0.02)	Chromium (0.05 limits)	Zinc (5-15)	Iron (0.3 limits)	Total caoliform	Fecal Coliform	Nitrate-N (45 limits)	Total Alkalinity (200 limits)	P-Alkalinity	Phosphate	Sodium	Potassium	Remarks
	86 dt. 15.07.2020	07.07.2020	7.7	ND	ND	491	13	150	70	14	100	50	ND	ND	ND	ND				5	1.8	ND		ND	Complying
	288 dt. 21.10.2020	14.10.2020	7.7	ND	ND	478	12	130	62	10	90	40	ND	ND	ND	ND				5	ND	ND		ND	Complying
50	**Tubewell of Advocate Vikram Singh, Vill Kelania, Sirsa**																								
	87 dt. 15.07.2020	07.07.2020	8.1	ND	ND	476	10	180	48	9	150	30	ND	ND	ND	ND				10	4.2	ND		ND	Complying
	289 dt. 21.10.2020	14.10.2020	7.9	ND	ND	454	8	150	36	6	110	40	ND	ND	ND	ND				5	1.7	ND		ND	Complying
51	**Tubewell of Aath Burgiwala Balvinder Singh, Village Kelnia, Sirsa**																								
	89 dt. 15.07.2020	07.07.2020	8.5	ND	ND	1260	14	350	88	16	260	90	ND	ND	ND	0.01				15	7.2	ND		ND	Non-Complying (Calcium)
	291 dt. 21.10.2020	14.10.2020	8.1	ND	ND	905	16	310	74	12	230	80	ND	ND	ND	ND				10	2.1	ND		ND	Non-Complying (Calcium)
52	**Tubewell of Buta Singh S/o Banta Singh, Vill Jnorarnali, Sirsa**																								
	90 dt. 15.07.2020	07.07.2020	8.4	ND	ND	475	12	210	52	12	180	30	ND	ND	ND	0.01				20	7.8	ND		ND	Complying
	292 dt. 21.10.2020	14.10.2020	8.1	ND	ND	468	14	210	44	9	160	50	ND	ND	ND	ND				15	6.5	ND		ND	
53	**Tubewell of Lakha Singh, Vill Nanakpur, Sirsa**																								
	92 dt. 15.07.2020	07.07.2020	8.1	ND	ND	481	20	260	96	8	180	80	ND	ND	ND	0.01				15	7.1	ND		ND	Complying
	294, 21.10.2020	14.10.2020	8	ND	ND	466	18	240	90	9	150	90	ND	ND	ND	ND				10	3.8	ND		ND	Complying
54	**Tubewell at Gill Farm House, Vill-Bhambur, Sirsa**																								

Sr. No.	Analysis Report No.	Date of collection	pH (6.5 to 8.5 limit)	BOD	COD	TDS (500 - (2000 limit)	Total Suspended Solids	Total Hardness (200-600)	Chloride (250 limits)	Sulphate (200-400)	Calcium (75 limits) (200)	Magnesium (30) (100)	Nickel (0.02)	Chromium (0.05 limits)	Zinc (5-15)	Iron (0.3 limits)	Total caoliform	Fecal Coliform	Nitrate-N (45 limits)	Total Alkalinity (200 limits)	P-Alkalinity	Phosphate	Sodium	Potassium	Remarks
	91 dt. 15.07.2020	07.07.2020	8.1	ND	ND	481	16	310	98	12	250	60	ND	ND	ND	0.02				20	8.9	ND		ND	Non-Complying (Calcium)
	293 dt. 21.10.2020	14.10.2020	7.9	ND	ND	448	14	280	86	10	230	50	ND	ND	ND	0.01				15	7.4	ND		ND	Non-Complying (Calcium)
55	**Tubewell of Hame Singh on road from Ottu head to Gidranwali, Sirsa**																								
	93 dt. 15.07.2020	07.07.2020	8.2	ND	ND	492	10	210	72	18	160	50	ND	ND	ND	ND				5	1.7	ND		ND	Complying
	295 dt. 21.10.2020	14.10.2020	8.1	ND	ND	484	8	200	64	12	160	40	ND	ND	ND	ND				5	ND	ND		ND	Complying
56	**Tubewell of Surender Singh S/o Bheem Singh, Vill-Ottu, Sirsa**																								
	94 dt. 15.07.2020	07.07.2020	8.2	ND	ND	477	14	180	90	26	150	30	ND	ND	ND	0.04				5	1.4	ND		ND	Complying
	296 dt. 21.10.2020	14.10.2020	8	ND	ND	436	10	160	84	20	120	40	ND	ND	ND	0.02				5	2.1	ND		ND	Complying
57	**Tubewell of Purn Singh S/o Makan Singh, Vill Ottu, Sirsa**																								
	95 dt. 15.07.2020	07.07.2020	7.9	ND	ND	484	22	200	40	12	140	60	ND	ND	ND	0.06				10	4.3	ND		ND	Complying
	297 dt. 21.10.2020	14.10.2020	7.7	ND	ND	470	20	210	32	10	160	50	ND	ND	ND	0.04				10	4.7	ND		ND	Complying
58	**Tubewell of Sohan Ram Vill.- Dhani Partap Singh, Sirsa**																								
	96 dt. 15.07.2020	07.07.2020	8.1	ND	ND	505	10	260	114	12	210	50	ND	ND	ND	ND				20	8.1	ND		ND	Non-Complying (Calcium)
	298 dt. 21.10.2020	14.10.2020	7.9	ND	ND	488	10	230	98	7	190	40	ND	ND	ND	ND				15	6.5	ND		ND	Complying
59	**Tubewell of Minder Numberdar, Vill.- Dhani Partap Singh, Sirsa**																								

Sr. No.	Analysis Report No.	Date of collection	pH (6.5 to 8.5 limit)	BOD	COD	TDS (500 - (2000 limit)	Total Suspended Solids	Total Hardness (200 -600)	Chloride (250 limits)	Sulphate (200-400)	Calcium (75 limits) (200)	Magnesium (30) (100)	Nickel (0.02)	Chromium (0.05 limits)	Zinc (5-15)	Iron (0.3 limits)	Total caoliform	Fecal Coliform	Nitrate-N (45 limits)	Total Alkalinity (200 limits)	P-Alkalinity	Phosphate	Sodium	Potassium	Remarks
	97 dt. 15.07.2020	07.07.2020	7.6	ND	ND	562	16	240	84	10	190	50	ND	ND	ND	0.04				15	6.9	ND		ND	Complying
	299 dt. 21.10.2020	14.10.2020	7.7	ND	ND	542	14	220	78	8	180	40	ND	ND	ND	ND				10	3.8	ND		ND	Complying
60	**Tubewell of PHED Water Works at Vill.- Dhani Partap Singh, Sirsa**																								
	98 dt. 15.07.2020	07.07.2020	7.7	ND	ND	474	8	160	80	16	130	30	ND	ND	ND	ND				15	6.2	ND		ND	Complying
	300 dt. 21.10.2020	14.10.2020	7.6	ND	ND	448	8	140	68	8	110	30	ND	ND	ND	ND				10	4.9	ND		ND	Complying
61	**Tubewell installed at Ottu Lake, Sirsa**																								
	83 dt. 15.07.2020	07.07.2020	8.1	ND	ND	906	12	230	85	2	180	50	ND	ND	ND	ND				10	5.1	ND		ND	Complying
	285 dt. 21.10.2020	14.10.2020	8	ND	ND	798	16	210	52	2	170	40	ND	ND	ND	ND				10	4.6	ND		ND	Complying
Fatehabad																									
62	**Tubewell of water works, Village Kawalgarh, Fatehabad**																								
	126 dt. 15.07.2020	08.07.2020	8.2	ND	ND	638	18	190	68	16	160	30	ND	ND	ND	0.05				15	6.7	ND		ND	Complying
	253 dt. 14.10.2020	07.10.2020	7.8	ND	ND	605	24	180	64	8	130	50	ND	ND	ND	ND				10	4.6	ND		ND	Complying
63	**Tubewell of Smt. Sushma Rani, Sarpanch, Khairpur, Fatehabad**																								
	125 dt. 15.07.2020	08.07.2020	8.4	ND	ND	1942	13	380	88	16	310	70	ND	ND	ND	0.09				15	7.2	ND		ND	Non-Complying (Calcium)
	254 dt. 14.10.20	07.10.2020	7.6	ND	ND	504	10	210	66	4	170	40	ND	ND	ND	ND				5	ND	ND		ND	Complying

Sr. No.	Analysis Report No.	Date of collection	pH (6.5 to 8.5 limit)	BOD	COD	TDS (500 - (2000 limit)	Total Suspended Solids	Total Hardness (200 -600)	Chloride (250 limits)	Sulphate (200-400)	Calcium (75 limits) (200)	Magnesium (30) (100)	Nickel (0.02)	Chromium (0.05 limits)	Zinc (5-15)	Iron (0.3 limits)	Total caoliform	Fecal Coliform	Nitrate-N (45 limits)	Total Alkalinity (200 limits)	P-Alkalinity	Phosphate	Sodium	Potassium	Remarks
	20																								
64	**Tubewell of Vill. Talwara, Chandpur Road, Near Ghaggar, Fatehabad**																								
	127 dt. 15.07.2020	08.07.2020	8.4	ND	ND	1232	16	280	58	10	220	60	ND	ND	ND	0.03				20	8.6	ND		ND	Non-Complying (Calcium)
	255 dt. 14.10.2020	07.10.2020	7.8	ND	ND	512	12	260	48	5	220	40	ND	ND	ND	ND				15	6.2	ND		ND	Non-Complying (Calcium)
65	**Tubewell at Talwara to Jakhal Road, Village Talwara, Fatehabad**																								
	122 dt. 15.07.2020	08.07.2020	8	ND	ND	1205	6	270	76	19	220	50	ND	ND	ND	0.03				15	6.7	ND		ND	Non-Complying (Calcium)
	265, 14.10.2020	07.10.2020	7.6	ND	ND	548	8	270	58	10	210	60	ND	ND	ND	ND				15	6.9	ND		ND	Non-Complying (Calcium)
66	**Tubewell at Talwara, Fatehabad**																								
	123 dt. 15.07.2020	08.07.2020	8.1	ND	ND	1188	12	310	112	14	280	30	ND	ND	ND	0.02				20	9	ND		ND	Non-Complying (Calcium)
	257 dt. 14.10.2020	07.10.2020	7.6	ND	ND	608	12	340	104	6	250	90	ND	ND	ND	ND				20	8.9	ND		ND	Non-Complying (Calcium)
67	**Tubewell of Village Jakhal, Fatehabad**																								
	124 dt. 15.07.2020	08.07.2020	7.9	ND	ND	1395	22	350	92	10	290	60	ND	ND	ND	0.1				10	5.4	ND		ND	Non-Complying (Calcium)
	258 dt. 14.10.2020	07.10.2020	8.2	ND	ND	525	18	370	80	7	310	60	ND	ND	ND	ND				10	4.2	ND		ND	Non-Complying (Calcium)
68	**Tubewell Narail Road, Jakhal, Fatehabad**																								
	119 dt. 15.07.2020	08.07.2020	8	ND	ND	1498	18	390	114	14	310	80	ND	ND	ND	0.04				20	8.4	ND		ND	Non-Complying (Calcium)

145

Sr. No.	Analysis Report No.	Date of collection	pH (6.5 to 8.5 limit)	BOD	COD	TDS (500 - (2000 limit)	Total Suspended Solids	Total Hardness (200-600)	Chloride (250 limits)	Sulphate (200-400)	Calcium (75 limits) (200)	Magnesium (30) (100)	Nickel (0.02)	Chromium (0.05 limits)	Zinc (5-15)	Iron (0.3 limits)	Total caoliform	Fecal Coliform	Nitrate-N (45 limits)	Total Alkalinity (200 limits)	P-Alkality	Phosphate	Sodium	Potassium	Remarks
	260 dt. 14.10.2020	07.10.2020	7.9	ND	ND	493	22	280	78	6	240	40	ND	ND	ND	ND				5.1	ND	ND		ND	Non-Complying (Calcium)
69	**Tubewell near Narail Road River Ghaggar, Jakhal, Fatehabad**																								
	1210 dt. 15.07.2020	08.07.2020	8.2	ND	ND	1242	16	380	80	14	330	50	ND	ND	ND	0.06				20	8.6	ND		ND	Non-Complying (Calcium)
	262 dt. 14.10.2020	07.10.2020	7.6	ND	ND	548	16	370	56	8	320	50	ND	ND	ND	ND				20	7.9	ND		ND	Non-Complying (Calcium)
70	**Tubewell Near Ghaggar Narail Road, Jakhal, Fatehaba**																								
	121 dt. 15.07.2020	08.07.2020	8.1	ND	ND	1234	14	360	76	16	290	70	ND	ND	ND	0.09				25	13.5	ND		ND`	Non-Complying (Calcium)
	261 dt. 14.10.2020	07.10.2020	7.3	ND	ND	508	8	290	24	10	260	30	ND	ND	ND	ND				15	6.7	ND		ND`	Non-Complying (Calcium)
71	**Tubewell of Talwari, Fatehabad**																								
	116 dt. 15.07.2020	08.07.2020	8.3	ND	ND	1421	12	390	86	12	310	80	ND	ND	ND	0.06				20	8.2	ND		ND	Non-Complying (Calcium)
	263 dt. 14.10.2020	07.10.2020	7.4	ND	ND	578	8	310	54	7	240	70	ND	ND	ND	ND				10	ND	ND		ND	Non-Complying (Calcium)
72	**Tubewell of Makhan Singh Talwari, Fatehabad**																								
	117 dt. 15.07.2020	08.07.2020	8.1	ND	ND	1138	8	330	60	9	270	60	ND	ND	ND	0.07				30	14.9	ND		ND	Non-Complying (Calcium)
	259 dt. 14.10.2020	07.10.2020	7.3	ND	ND	528	10	160	42	4	120	40	ND	ND	ND	ND				15	8.2	ND		ND	Complying
73	**Tubewell Sadhanwas Talwari Road, Fatehabad**																								
	118 dt. 15.07.2020	08.07.2020	8.6	ND	ND	1524	24	340	124	16	270	70	ND	ND	ND	ND				30	13.6	ND		ND	Non-Complying (pH & Calcium)

Sr. No.	Analysis Report No.	Date of collection	pH (6.5 to 8.5 limit)	BOD	COD	TDS (500 - (2000 limit)	Total Suspended Solids	Total Hardness (200-600)	Chloride (250 limits)	Sulphate (200-400)	Calcium (75 limits) (200)	Magnesium (30) (100)	Nickel (0.02)	Chromium (0.05 limits)	Zinc (5-15)	Iron (0.3 limits)	Total caoliform	Fecal Coliform	Nitrate-N (45 limits)	Total Alkalinity (200 limits)	P-Alkalinity	Phosphate	Sodium	Potassium	Remarks
	264 dt. 14.10.2020	07.10.2020	7.5	ND	ND	589	16	270	96	6	220	50	ND	ND	ND	ND				20	9.1	ND		ND	Non-Complying (Calcium)
74	**Tubewell Dhani Nali Road, Sadhanwas, Fatehabad**																								
	113 dt. 15.07.2020	08.07.2020	7.9	ND	ND	789	14	215	42	4	180	35	ND	ND	ND	0.06				15	6.8	ND		ND	Complying
	265 dt. 14.10.2020	07.10.2020	7.6	ND	ND	545	9	160	42	5	120	40	ND	ND	ND	ND				15	8.2	ND		ND	Complying
75	**Tubewell 1 Ratia Road, Chandpura, Fatehabad**																								
	114 dt. 15.07.2020	08.07.2020	8.1	ND	ND	615	22	260	72	20	200	60	ND	ND	ND	0.09				20	6.1	ND		ND	Complying
	266 dt. 14.10.2020	07.10.2020	7.6	ND	ND	590	22	220	72	16	150	70	ND			ND				20	8.7	ND		ND	Complying
76	**Tubewell 2 Ratia Road, Chandpura, Fatehabad**																								
	115 dt. 15.07.2020	08.07.2020	8.3	ND	ND	905	18	270	98	16	230	40	ND	ND	ND	0.07				10	4.3	ND		ND	Non-Complying (Calcium)
	267 dt. 14.10.2020	07.10.2020	7.4	ND	ND	548	12	240	82	6	190	50	ND	ND	ND	ND				15	7.6	ND		ND	Complying
77	**Tubewell Chandpura to Ratia Road, Fatehabad**																								
	110 dt. 15.07.2020	08.07.2020	8.2	ND	ND	784	8	190	116	8	140	50	ND	ND	ND	0.05				20	7.2	ND		ND	Complying
	268 dt. 14.10.2020	07.10.2020	7.7	ND	ND	510	8	190	86	5	120	70	ND	ND	ND	ND				10	5	ND		ND	Complying
78	**Tubewell Babanpur to Ratia Road, Ratia, Fatehabad**																								
	111 dt. 15.07.2020	08.07.2020	8.3	ND	ND	987	12	310	122	16	245	65	ND	ND	ND	0.09				20	7.8	ND		ND	Non-Complying (Calcium)

Sr. No.	Analysis Report No.	Date of collection	pH (6.5 to 8.5 limit)	BOD	COD	TDS (500 - (2000 limit)	Total Suspended Solids	Total Hardness (200 -600)	Chloride (250 limits)	Sulphate (200-400)	Calcium (75 limits) (200)	Magnesium (30) (100)	Nickel (0.02)	Chromium (0.05 limits)	Zinc (5-15)	Iron (0.3 limits)	Total caoliform	Fecal Coliform	Nitrate-N (45 limits)	Total Alkalinity (200 limits)	P-Alkalinity	Phosphate	Sodium	Potassium	Remarks
	269 dt. 14.10.2020	07.10.2020	7.5	ND	ND	620	20	180	34	4	130	50	ND	ND	ND	ND				10	3.4	ND		ND	Complying
79	**Johne Service Station, Ratia, fatehabad**																								
	112 dt. 15.07.2020	08.07.2020	8.9	ND	ND	812	16	210	76	18	165	45	ND	ND	ND	0.04				25	12.3	ND		ND	Non-Complying (pH)
	270 dt. 14.10.2020	07.10.2020	7.6	ND	ND	592	12	260	44	5	190	70	ND	ND	ND	ND				20	9.6	ND		ND	Complying

12. Status of Irrigation schemes for STPs

A) Towns/STPs where Irrigation Projects Commissioned as on 30.6.2020

Sr. no.	Town	Name of STP	Capacity (MLD)	Command Area (ha)
1	Pehowa	STP Pehowa, Kurukshetra	1.47	76
2	Ladwa	STP Ladwa, Kurukshetra	1.22	63
3	Shahbad	STP Shahbad, Kurukshetra	3.00	151

B) Towns/STPs where Irrigation Projects Under Progress

Sr. No.	Town	Name of STP	Capacity (MLD)	Completion date	Command Area (ha)	Earlier status as on 30.06.2020	Status as on 31.01.2021
NIL							

C) Towns/ STPs where Irrigation Projects Sanctioned

Sr. No.	Town	Name of STP	Capacity (MLD)	Completion Date	Command Area (ha)	Earlier status as on 30.06.2020	Current Status as on 31.01.2021
*Consolidate project sanctioned. Individual projects yet to be prepared and sanctioned.							

*A consolidated project estimate costing Rs. 1098.25 Cr. has been prepared for utilization of 1828 MLD (747 Cs) treated waste water out of 2795.20 MLD from 207 STPs (Ghaggar and Yamuna) of various departments for irrigation of 1.62 lac hectare. The project estimate stands discussed in the Standing Technical Committee of the departments on 26.08.2019 and approved. The approval accorded by Govt on 04.01.2020. The project is likely to be completed in 5 years time which after further depends upon the availability of funds. Further action in the matter to prepare DPR of individual projects, its approval, preparation of Estimates, tenders etc. will be taken afterwards. As far as quantity of treated sewage water is concerned which can be spared for irrigation with the quality parameters as finalized by Agriculture deptt., the same will be provided by the department which owns the STP, so as to enable Irrigation and Water Resources Department to formulate specific scheme for that much quantity.

D) Towns/ STPs where funds not tied up for Irrigation Projects

Out of above mentioned 207 STPs, 35 STPs have been selected for installing micro irrigation also. Out of these 20 STPs are under Yamuna Action Plan and the remaining 15 are under Ghaggar Action Plan. The action plan for 15 STPs under Ghaggar action plan is as under:-

Sr. No.	Name of the Town	Name of STP	Capacity (MLD)	Timelines
1	Ambala	Barara (PHED)-SBR Tech.	6	June, 22
2	Ambala	Naraingarh- (PHED)-SBR Tech.	5	June, 22
3	Panchkula	Kalka PHED	4.75	June, 22
4	Panchkula	Nalagarh road, Manakpur Pinjore-PHED	5	June, 22
5	Kaithal	Guhla Cheeka-PHED SBR Tech.	10	Dec, 21

Sr. No.	Name of the Town	Name of STP	Capacity (MLD)	Timelines
6	Kaithal	Jind road, Kaithal PHED- Ktl Drain-SBR	10	Dec, 21
7	Fatehabad	Tohana (Amani) MBBR Tech.	10	June, 21
8	Fatehabad	Jakhal SBR Tech.	3	June, 21
9	Fatehabad	Ratia MBBR Tech.	6.5	June, 21
10	Fatehabad	Majra PHED- MBBR Tech.	10	June, 21
11	Sirsa	Sirsa City	15 MLD+20 MLD-35 MLD undue trial	Dec, 22
12	Hisar	Lalpura Road Hansi	7.5	31.08.2021
13	Hisar	Narnaud	4	31.08.2021
14	Jind	Jind	15	20.09.2021
15	Jind	Jind	5	20.09.2021

E) Towns/STPs where Irrigation Projects not feasible

Sr. no.	Name of the Town	Name of STP	Capacity (MLD)	Earlier status as on 29.2.2020	Status as on 30.6.2020
NIL					

13. Action taken against the operating agencies w.r.t non compliance of STPs during the period July, 2020 to Jan, 2021

Town	Reason for non compliance	Action Taken
1.5 MLD,PHED,Bhongra Road,Uchana,Jind	Sample of effluent exceeding the prescribed Limit (BOD- 30 mg/l).	SCN issued for Environment Compensation and prosecution action
2.0 MLD ,PHED,,Dablaln Road,Narwana,Jind	Sample of effluent exceeding the prescribed Limit (BOD- 30 mg/l).	SCN issued for Environment Compensation and prosecution action
10 MLD, STP, Vill-Amani, Tehsil-Tohana, Fatehabad	Sample of effluent exceeding the prescribed Limit (BOD- 30 mg/l).	Operational deficiencies removed after issue of SCN dated 03.11.2020 and the results of sample collected during the months of Oct, 2020 to Jan, 2021 are found within limits.
15 MLD STP , Shamsabad patti , Kalania Road, Sirsa by PHED	Sample of effluent exceeding the prescribed Limit (BOD- 30 mg/l).	
2 MLD STP Sec.7 , Urban Estate , Ambala City Ambala by HUDA	Sample of effluent exceeding the prescribed Limit (BOD- 10 mg/l).	STP was non complying earlier. Now, as per latest analysis report of Jan, 2021, the STP is complying.
5 MLD Baldev Nagar , Unit.I , Ambala City	Sample of effluent exceeding the prescribed Limit (BOD- 10 mg/l).	STP was non complying as per A/R of August, 2020. Now, as per latest analysis report of Nov to Dec, 2020, the STP is complying.
3.25 Baldev Nagar , Unit.II ,Ambala City	Sample of effluent exceeding the prescribed Limit (BOD- 10 mg/l).	STP was non complying earlier. Now, as per latest analysis report of Dec, 2020, the STP is complying.
5 MLD STP Moti Nagar , Unit.II , Ambala City by	Sample of effluent exceeding the prescribed Limit (BOD- 10 mg/l).	STP was non complying in Nov, 2020. Now, as per latest analysis report of Dec, 2020, the STP is

150

Town	Reason for non compliance	Action Taken
PHED Ambala		complying.
6 MLD STP Modal Town, Ambala City	Sample of effluent exceeding the prescribed Limit (BOD- 10 mg/l).	STP was non complying earlier. Now, as per latest analysis report of Dec-Feb, 2021, the STP is complying.
3.25 Nasirpur Ambala City by PHED	Sample of effluent exceeding the prescribed Limit (BOD- 10 mg/l).	STP was non complying earlier. Now, as per latest analysis report of Dec-Jan, 2021, the STP is complying.
25 MLD STP Thanesar, Kurukshetra by PHED	Sample of effluent exceeding the prescribed Limit (BOD- 10 mg/l).	STP was non complying earlier. Now, as per latest analysis report of Dec-Jan, 2021, the STP is complying.
11.5 MLD STP Ladwa Road , Shahbad Kurukshetra by PHED	Sample of effluent exceeding the prescribed Limit (BOD- 10 mg/l).	STP was non complying earlier. Now, as per latest analysis report of Dec-Jan, 2021, the STP is complying.
18 MLD STP Panchkula by HUDA	Sample of effluent exceeding the prescribed Limit (BOD- 10 mg/l).	STP was non complying earlier in Aug, 2020. Now, as per latest analysis report of Sep-Jan, 2021, the STP is complying.
39 MLD STP Panchkula by HUDA	Sample of effluent exceeding the prescribed Limit (BOD- 10 mg/l).	STP was non complying earlier in Aug, 2020. Now, as per latest analysis report of Sep-Jan, 2021, the STP is complying.
15 MLD STP Sector-28, Panchkula by HUDA	Sample of effluent exceeding the prescribed Limit (BOD- 10 mg/l).	STP was non complying earlier in Sept, 2020. Now, as per latest analysis report of Oct-Jan, 2021, the STP is complying.
4.5 MLD Kalka Panchkula by PHED	Sample of effluent exceeding the prescribed Limit (BOD- 10 mg/l).	
0.25 MLD Kalka Panchkula by PHED	Sample of effluent exceeding the prescribed Limit (BOD- 10 mg/l).	STP was non complying earlier. Now, as per latest analysis report of Nov-Jan, 2021, the STP is complying.
5 MLD STP Nalagarh Road, Manakpur, Pinjore Panchkula	Sample of effluent exceeding the prescribed Limit (BOD- 10 mg/l).	STP was non complying earlier. Now, as per latest analysis report of Jan, 2021, the STP is complying.
15 MLD STP by PHED Jind	Sample of effluent exceeding the prescribed Limit (BOD- 10 mg/l).	STP was non complying earlier. Now, as per latest analysis report of Dec, 2021, the STP is complying.
10 MLD by HUDA Jind	Sample of effluent exceeding the prescribed Limit (BOD- 10 mg/l).	STP was non complying earlier. Now, as per latest analysis report of Nov-Jan, 2021, the STP is complying.
3.5 MLD Patiala Road , Narwana by PHED	Sample of effluent exceeding the prescribed Limit (BOD- 10 mg/l).	STP was non complying earlier. Now, as per latest analysis report of Dec-Feb, 2021, the STP is complying.
3.75 MLD STP Narwana Jind by	Sample of effluent exceeding the prescribed Limit (BOD- 10	

Town	Reason for non compliance	Action Taken
PHED	mg/l).	
2 MLD STP Uchana Jind by PHED	Sample of effluent exceeding the prescribed Limit (BOD- 10 mg/l).	
5 MLD STP Jind	Sample of effluent exceeding the prescribed Limit (BOD- 10 mg/l).	.
0 MLD STP Cheeka , Kaithal by PHED	Sample of effluent exceeding the prescribed Limit (BOD- 10 mg/l).	STP was non complying earlier. Now, as per latest analysis report of Jan, 2021, the STP is complying.
10 MLD STP Manas Road, Kaithal by PHED	Sample of effluent exceeding the prescribed Limit (BOD- 10 mg/l).	STP was non complying earlier. Now, as per latest analysis report of Dec-Jan, 2021, the STP is complying.
10 MLD Manas Road,Kaithal bby PHED	Sample of effluent exceeding the prescribed Limit (BOD- 10 mg/l).	STP was non complying in July, 2020. Now, as per latest analysis report of Aug-Jan, 2021, the STP is complying.
5 MLD STP Kalayat , Kaithal by PHED	Sample of effluent exceeding the prescribed Limit (BOD- 10 mg/l).	
3.5 Pundri Kaithal by PHED	Sample of effluent exceeding the prescribed Limit (BOD- 10 mg/l).	
5 MLD STP Azad Nagar, Rajgarh Road Hisar by PHED	Sample of effluent exceeding the prescribed Limit (BOD- 10 mg/l).	
4 MLD STP Narnaund, Hisar by PHED	Sample of effluent exceeding the prescribed Limit (BOD- 10 mg/l).	STP was non complying earlier. Now, as per latest analysis report of Nov-Jan, 2021, the STP is complying.
15 MLD STP, Dabara Tosham Road , Hisar by HUDA	Sample of effluent exceeding the prescribed Limit (BOD- 10 mg/l).	STP was non complying in Aug, 2020. Now, as per latest analysis report of Sept-Jan, 2021, the STP is complying.
5 MLD STP ,Vill. Nattar 1 , Sirsa by PHED	Sample of effluent exceeding the prescribed Limit (BOD- 10 mg/l).	
5 MLD STP , Vill. Nattar 2 , Sirsa by PHED	Sample of effluent exceeding the prescribed Limit (BOD- 10 mg/l).	
.5 MLD STP Ellenabad Sirsa by PHED	Sample of effluent exceeding the prescribed Limit (BOD- 10 mg/l).	
9.5 MLD STP, Daddu Road,Kalanwali , Sirsa by PHED	Sample of effluent exceeding the prescribed Limit (BOD- 10 mg/l).	STP was non complying in Aug, 2020. Now, as per latest analysis report of Sept-Jan, 2021, the STP is complying.
16.5 MLD STP Dabwali, Sirsa by PHED	Sample of effluent exceeding the prescribed Limit (BOD- 10 mg/l).	STP was non complying in Sept, 2020. Now, as per latest analysis report of Oct-Jan, 2021, the STP is complying.

Town	Reason for non compliance	Action Taken
10 MLD STP Vill. Bhodia Khera, Bhattu Road , Fatehabad by PHED	Sample of effluent exceeding the prescribed Limit (BOD- 10 mg/l).	STP is under upgradation.
6.5 MLD STP Ratia , Fatehabad by PHED	Sample of effluent exceeding the prescribed Limit (BOD- 10 mg/l).	STP is under upgradation.

14. Inspection of industries by District Level Special Task Force during the period July, 2020 to Jan, 2021 and the action taken against defaulting industries.

Name of Regional Office	Month	No. of industries inspected	No. of non-complying industries	Action taken against the industry
Panchkula	Oct, 2020	3	1	Closed by Board and subsequently suspended closure order after compliance.
	Dec, 2020	1	NA	NA
	Jan, 2021	3	1	(1 SCN issued). (2 analysis report awaited)
Ambala	Jan, 2021	5	Inspections conducted on dated 30.01.2021. Results are awaited from Board's lab.	
Kaithal	July 2020 to Jan.2021	6	0	NA
Hisar	August , 2020	2	0	NA
	September, 2020	2	0	NA
	Total	**22**	**2**	

15. Status of installation of STPs for the villages as on 31.01.2021

Total no. of villages	Funds required in Rs Crores	Phase-I		Phase-II		Phase-III	
		No. of village covered	Timelines for completion	No. of village covered	Timelines for completion	No. of village covered	Timelines for completion
45	24.9	35*	30.06.2021	10	31.03.2022	NA	

*Out of these, work is completed in 1 no. Village.

16. Status of Health check up camps organized during the month July, 2020 to January, 2021.

Name of the District	No. of Health camps organized	No. of patient checked	No. of patient found suffered from water borne diseases (Gastro/intestinal)
Panchkula	0	0	0
Kaithal	87	3685	453
Sirsa	0	0	0
Fatehabad	15	617	20
Total	**102**	**4302**	**473**

17. **Information, Education & Communication (IEC) activities (July, 2020 to January, 2021)**

Sr. No.	Name of the Regional Office of PPCB	Date on which camp was organized for IEC activities	Activities performed
1	Panchkula region	Mar, 2020	Awareness program regarding Environment pollution and specially pollution in River Ghaggar was conducted in Burajkotian and Raipur Rani, Panchkula.
2		Apr, 2020	Activity not performed due to Lockdown
3		May, 2020	Awareness program regarding Environment pollution and specially pollution in River Ghaggar was conducted in Burajkotian and Raipur Rani, Panchkula
4		June, 2020	Awareness program regarding Environment pollution and specially pollution in River Ghaggar was conducted in BEL Colony, Panchkula
5		July, 2020	Awareness program regarding Environment pollution and specially pollution in River Ghaggar was conducted in Morni, Panchkula.
6		Aug, 2020	Awareness program regarding Environment pollution and specially pollution in River Ghaggar was conducted in Sec-25, 26, 27 and Sec-28, Panchkula.
7		Sept, 2020	Awareness program regarding Environment pollution a1nd specially pollution in River Ghaggar was conducted in Morni, Panchkula.
8		Oct, 2020	Awareness program regarding Environment pollution and specially pollution in River Ghaggar was conducted in Manak Tabra and Raipur Rani, Panchkula.
9		Nov, 2020	Awareness program regarding Environment pollution and specially pollution in River Ghaggar was conducted in Manak Tabra and Raipur Rani, Panchkula.
10		Dec, 2020	Awareness program regarding Environment pollution and specially pollution in River Ghaggar was conducted in Sec-25, Panchkula.
11	Jind & Kaithal	05.06.2020	Tree Plantation drive at RO office on the occasion of World Environment Day
12	Hisar	05.06.2020	Awareness program organized on World Environment Day in Jindal Stainless Steel Ltd., O.P. Jindal Marg, Delhi Road, Hisar
13	Sirsa	03.06.2020 & 05.06.2020	Awareness program regarding plantation programs in the Bal Bhawan, Sirsa & Ottu Weir head, Sirsa.

18. Environmental Flow

Regarding E-flow in Ghaggar it is brought out that Ghaggar river is not a perennial river and discharge varies from zero to maximum during flood seasons. Practically during normal season water flows only in creek and is not measurable. Around 15-20% of the lowest possible discharge in the lean season is required for maintaining E-flow. **In our case the discharge varies from zero to maximum, so maintaining E-flow is not possible.**

19. Septage and Faecal Sludge management

State level policy for Septage management has already been framed and many ULBs have also adopted at local level, but its implementation and monitoring mechanisms are yet to be firmed up. Chief Secretary advised the ULBD to immediately implement the system through special efforts and further directed that District level drives be initiated by ULBD along with district administration and District Level Task Forces, constituted by NGT, and such tankers, engaged in illegal discharge may be seized by the concerned authorities, following the due process.

Further, MCs have also started challaning of the tankers disposing septage illegally. From the month of June, 2020 to till date, 285 nos. of tankers have been challaned by MC, Gurugram, Yamunanagar, Hisar, Ambala Cantt & Nissing and penalty of Rs. 71,43,000/- has been recovered from the violators out of which 20 Challans amounting to Rs. 3,22,500/- were issued in month of December.

87 tankers have been deployed for disposal through tankers in the nearby STPs. Out of these, 31 tankers have installed GPS system for tracking. 102 MLD of sewage has been disposed through tankers since Jan,2020 to Jan, 2021.

20. Water shed management

The Action Plan amounting to **Rs. 2368.68 lakh** for construction of **1174** number of soil & water conservation structures in the catchment area of Ghaggar has been approved for the year 2020-21. The following Soil & Water Conservation Works namely Water Harvesting Structure, Check Dams, Earthen gully Plugs, Earthen Embankments, Percolation Pond, Farm Pond, Crate Wire Structures and Retaining Wall are to be executed at farmer's field / Community Land under various schemes being implemented by the Department. The district wise details are as under:

Sr. No.	District	Target		Achievement		Amount pending in FD (in Lakh)
		Structure (No.)	Amount	Structure (No.)	Amount	
1	Panchkula	468	1648.59	276	1097.44	86.39
2	Ambala	195	225	45	117	7
3	Kurukshetra	219	210.55	51	199.63	0
4	Fatehabad	237	205.97	25	54.89	0
5	Sirsa	55	78.57	18	58.57	0
	Total	**1174**	**2368.68**	**415**	**1527.53**	**93.39**

(i) A total number of 415 structures have been completed involving Rs. 1527.53 lakh.

(ii) The bills amounting to Rs. 93.39 lakh are pending in FD for approval.

21. In-situ bio remediation in the drains carrying untreated sewage and not connected to STPs.

The Nodal Department for execution of Bio/Phyto- Remediation idenfied. The SPV also asked the Department to submit the locations where the phyto remediation/bio-remediation wherever feasible.

ULB Department has started bio/phyto remediation works in the drains in Municipal Corporation, Yamuna Nagar – Jagadhri, as a pilot project, which will be replicated at other places. Municipal Corporation of Sonepat has also invited tenders for the bio/phyto remediation of drains. Similarly, Municipal Corporations of Gurugram and Faridabad are in the process of preparing the proposals for bio/phyto remediation. Municipal Corporation

of Panipat has already floated the tenders for the process in their jurisdiction. GMDA has also initiated a pilot project as an interim treatment for untreated discharge of Leg I via geo-synthetic dewatering tubes in consultation with CPCB. PHED has undertaken the *in-situ* phyto/bio remediation in its new STPs at Indri and Beri. Chief Secretary, during the review meeting held, has also directed that all concerned Departments shall expedite the work on Bio/Phyto-Remediation.

Annexure-6

OFFICE OF THE EXECUTING COMMITTEE

Constituted by the Hon'ble National Green Tribunal in Original Application no.138 and 139 of 2016 and OA No.606 of 2018

(Official Address: Tower No.5, 4th Floor, Forest Complex, Sector 68, SAS Nagar) Tel. No. 0172-2298091

Email: cecghaggar@gmail.com

To

The Member Secretary,
Himachal Pradesh State Pollution Control Board,
Shimla.

No.CEC/2020/1164
Dated: 29.12.2020

Subject: **Report on visit to the pollution sources and control thereof in Markanda river and Jattan Wala Nallah, Kala Amb area (Himachal Pradesh) in OA No.138 & 139 of 2016 w.r.t. control of pollution in river Ghaggar by the Executing Committee constituted by the Hon'ble NGT on 28.12.2020.**

Please find enclosed herewith a report on visit to the pollution sources and control thereof in Markanda river and Jattan Wala Nallah, Kala Amb area (Himachal Pradesh) in OA No.138 & 139 of 2016 w.r.t. control of pollution in river Ghaggar by the Executing Committee constituted by the Hon'ble NGT on 28.12.2020, for information and necessary action.

It is requested that copy of the report may kindly be sent to the concerned Departments with the request to take immediate action on the directions given by the Chairman of the Executing Committee on the various points relating to them and submit action taken report within 21 days.

DA/ as above

(Dr. Babu Ram)
Technical Expert,
Executing Committee

Endst. No. CEC/2020/1165 Dated: 29.12.2020

A copy of the above is forwarded to the Deputy Commissioner, Sirmour (HP) for information and necessary action.

DA/ as above

(Dr. Babu Ram)
Technical Expert,
Executing Committee

157

Report on visit to the pollution sources and control thereof in Markanda river and Jattan Wala Nallah, Kala Amb area (Himachal Pradesh) in OA No.138 & 139 of 2016 w.r.t. control of pollution in river Ghaggar by the Executing Committee constituted by the Hon'ble NGT on 28.12.2020.

The following were present during the visit

a) Members of the Executive Committee

Sr. No.	Name and Designation in the Deptt.	Name & Designation in the Committee
1.	Justice Pritam Pal, Former Judge Punjab & Haryana High Court	Chairman
2.	Ms. Urvashi Gulati, IAS, Former Chief Secretary, Haryana	Member
3.	Dr.Babu Ram, Former Member Secretary, PPCB	Technical Expert

b) The list of the officers, present during the visit, is as per Annexure-1

1.0 Background

Sukhna Nallah and River Markanda, which further fall into River Ghaggar, carry domestic and industrial wastewater of Parwanoo and Kala Amb area, respectively. The quantity of sewage of Parwanoo town is 1.9 MLD and 48 industries, located in Sukhna Nallah catchment area, have installed their captive ETPs. Similarly, the discharge of sewage of Kala Amb area is 1.5 MLD and 94 industries, located in the catchment area of river Markanda, have installed their individual ETPs.

In the last meeting held with State level Officers of State of Himachal Pradesh on 26.11.2019, it was informed that for providing STP of capacity 1.5 MLD in Kala Amb area and 1 MLD in Trilokpur area, falling in catchment area of River Markanda, construction work has been awarded and pipeline net work is under progress and 4 km sewer line has been laid. Similarly, for the installation of common Effluent Treatment Plant of capacity 5 MLD in Kala Amb area, land for CETP has been allotted and tender has been awarded on 31.8.2020. For the In-situ bio remediation technology in the drains/Nallah carrying untreated sewage and not connected to sewage treatment plant, it was informed that In-situ bio remediation technology has been proposed in Jattan Wala Nallah at 02 locations, for which, the tenders have been awarded and Jal Shakti Vibhag has started the construction work of Phyto remediation in the Nallah at one site and work is under construction.

For installation of Real Time Water Quality Monitoring System (RTWQMS), it was submitted in the last meeting that RTWQMS have been installed in River Kaushalya and River Markanda.

Accordingly, the Executive Committee made its plan to visit Kala Amb area to check the progress w.r.t installation of Real Time Water Quality Monitoring System (RTWQMS) in River Markanda, STP and CETP in Kala Amb area and in-situ bio remediation technology being setup in Jattan wala Nallah.

158

2.0 Visit to Pollution sources and control thereof in Kala Amb area

The Executive committee has visited the following sites.

2.1 Real Time Water Quality Monitoring System (RTWQMS) in River Markanda.

The Executing Committee visited the Real Time water quality system (RTWQS) station setup in River Markanda. It was observed that the data displayed on the mobile system indicated the value of BOD: 0.86 mg/l and F.coli nearly 750 MPN/100ml.In order to check the authenticity of the values of said parameters as shown by the online system with the manual analytical analysis results, the Chairman of the Executing Committee directed the officers of HPSPCB to collect the water sample of River Markanda and compare the analysis results of river water shown by online system with manual analysis results. The Photograph showing the Real Time Water Quality Monitoring System (RTWQMS) setup in River Markanda are as per **Plates-1 and 2**.

Plate-1

Plate-2

Plates-1 and 2: Photographs showing Real Time Water Quality Monitoring System (RTWQMS) setup in River Markanda

In view of the observations of the Executing Committee, it was directed as under:

1. **Jal Shakti Department, Himachal Pradesh shall install separate and independent display board to display the analysis results monitored by the Real Time Water Quality Monitoring System (RTWQMS) installed in river Markanda.**
2. **The analysis results of the Real Time Water Quality Monitoring System (RTWQMS) may be compared with the manual analysis result. In case, the variation in the analysis results is observed, the calibration of the Real Time water quality system (RTWQS) may be made within 15 days.**

2.2 Common Effluent Treatment Plant of capacity 5 MLD for treatment of effluent of Kala Amb area

For treatment of effluent of Kala Amb area, CETP of capacity 2.5 MLD of costing Rs 9.55 crore is under construction on the land measuring 5 acres. It was informed that in the

159

first Phase, CETP of capacity 2.5 MLD shall be installed and CETP of capacity 2.5 MLD shall be installed in 2nd Phase.

During the visit, the Executing Committee observed that excavation work of components of CETP namely equalization tank, MBBR-1, MBBR-2 and Anoxic tank was in progress and it was claimed that CETP shall be completed by 31.3.2021.

Separate effluent treatment plant of capacity of 0.15 MLD shall be installed for treatment of electroplating and phosphorus industries. The photographs showing the excavation work of components of CETP are as per **Plates-3 and 4**.

Plate-3

Plate-4

Plates-3 and 4: Photographs showing excavation work of components of CETP

After visit to the CETP site, The Chairman of the Executing Committee directed as under:

i. **CETP of capacity 2.5 MLD shall be completed by 31.3.2021.**

ii. **CETP of capacity 2.5 MLD, proposed to be install in 2nd phase shall be started constructing at the earliest possible to ensure that no untreated effluent is discharged into Jattan Wala Nallah and River Markanda further leading to river Ghaggar.**

iii. **Effluent Treatment Plant of capacity 0.15 MLD for electroplating industries may be based on Zero Liquid Discharge (ZLD) technologyas the metal contents may contaminate the surface water quality of the river.**

3.0 1.5 MLD STP for treatment of sewage of 03 villages namely Trilokpur, Kheri and Johron, Kala Amb area.

During the visit, it was observed as under:

1) Sewer line of length 4.7 km, out of total 8.5 km, has been laid.
2) STP of capacity 1.5 MLD is under installation for which foundation work of components of STP, consisting of equalization tank and SBR tanks has been started. The photographs showing the constructing status of STP are as per **Plates 5 and 6**.

160

Plate-5

Plate-6

Plates 5 and 6: Photographs showing the constructing status of 1.5 MLD STP

After visit to the site, The Chairman of the Executing Committee directed as under:

i. **STP of capacity 1.5 MLD for treatment of sewage of villages Trilokpur, Kheri and Johron, Kala Amb area, may be completed by 31.3.2021.**

ii. **The treated sewage of STP shall be utilized for industrial usage, construction activities, gardening and other useful purposes.**

iii. **The dried sludge of STP shall be disposed of in an environmentally sound manner.**

4.0 In-situ bio remediation technology in Jattan Wala Nallah

The Executing Committee was shown the 02 sites in Jattan Wala Nallah, where the work of in-situ bio remediation technology has been initiated. Site-1 is near to M/s Surya Textech, village Rampur Jattan, Kala Amb, weir of the same has been completed. During visit, it was informed that Phyto remediation system consisting of reed bed, shall be installed soon after the land issue is resolved with the local residents.

At site-2, which is near to M/S Saboo Tor Pvt. Ltd, the work of weir has been completed and Phyto remediation technology consisting of reed bed shall be started in the month of February, 2021. The photographs showing the work of in-situ bio remediation technology under construction at sites 1 and 2are as per **Plates 7 and 8.**

Plate-7: Site-1

Plate-8: Site-2

Plates-7 and 8: Photographs showing the work of in-situ bio remediation technology under construction at sites 1 and 2.

161

After visit and detailed discussion at site, The Chairman of the Executing Committee directed as under.

In-situ bio remediation technology in Jattan Wala Nallah at 02 locations near to M/s Surya Textech, village Rampur Jattan, Kala Amb and M/S Saboo Tor Pvt. Ltd, Trilokpur road, Kala Amb shall be completed by 28.2.2021.

Dr. Babu Ram

Ms. Urvashi Gulati

Justice Pritam Pal, Former Judge, Punjab & Haryana High Court and now as Chairman of the Executing Committee.

Note: The Chairman and members of the Executing Committees have given their concurrence on the report

29.12.2020

162

Annexure-7

OFFICE OF THE EXECUTING COMMITTEE

Constituted by the Hon'ble National Green Tribunal in Original Application no.138 and 139 of 2016 and OA No.606 of 2018

(Official Address: Tower No.5, 4th Floor, Forest Complex, Sector 68, SAS Nagar) Tel. No. 0172-2298091

Email: cecghaggar@gmail.com

To

The Member Secretary,
Himachal Pradesh State Pollution Control Board,
Shimla.

No.CEC/2021/1213
Dated: 27.1.2021

Subject: **Report on visit to the pollution sources and control thereof in Sukhna Nallah and river Kaushalya, Parwanoo area (Himachal Pradesh) w.r.t. OA No.138 & 139 of 2016 regarding control of pollution in river Ghaggar by the Executing Committee constituted by the Hon'ble NGT on 27.1.2021.**

.....

Please find enclosed herewith a report on visit to the pollution sources and control thereof in Sukhna Nallah and river Kaushalya, Parwanoo area (Himachal Pradesh) w.r.t. OA No.138 & 139 of 2016 regarding control of pollution in river Ghaggar by the Executing Committee constituted by the Hon'ble NGT on 27.1.2021, for information and necessary action.

It is requested that copy of the report may kindly be sent to the concerned Departments with the request to take immediate action on the directions given / recommendations made by the Chairman of the Executing Committee on the various points relating to them and submit action taken report within 21 days.

DA/ as above

(Dr. Babu Ram) 27.1.2021
Technical Expert,
Executing Committee

Endst. No. CEC/2021/ 1214 Dated: 27.1.2021

A copy of the above is forwarded to the Deputy Commissioner, Solan (HP) for information and necessary action.

DA/ as above

(Dr. Babu Ram) 27.1.2021
Technical Expert,
Executing Committee

Report on visit to the pollution sources and control thereof in Sukhna Nallah and river Kaushalya, Parwanoo area (Himachal Pradesh) w.r.t. OA No.138 & 139 of 2016 regarding control of pollution in river Ghaggar by the Executing Committee constituted by the Hon'ble NGT on 27.1.2021.

The following were present during the visit

a) Members of the Executive Committee

Sr. No.	Name and Designation in the Deptt.	Name & Designation in the Committee
1.	Justice Pritam Pal, Former Judge Punjab & Haryana High Court	Chairman
2.	Ms. Urvashi Gulati, IAS, Former Chief Secretary, Haryana	Member
3.	Dr.Babu Ram, Former Member Secretary, PPCB	Technical Expert

b) The list of the officers, present during the visit, is as per Annexure-1

1.0 Background

Sukhna Nallah, carrying domestic and industrial wastewater of Parwanoo area, falls into river Ghaggar. The quantity of sewage of Parwanoo town is 1.9 MLD and 48 industries, located in Sukhna Nallah catchment area, have installed their captive ETPs. In the last meeting held with State level Officers of State of Himachal Pradesh on 26.11.2020, it was informed that for providing 2 STPs each of capacity 1 MLD to treat sewage of Parwanoo area, tender work of both the Sewage Treatment Plants has been awarded on 19.3.2020. Land development work of 1st STP, based on MBBR Technology, has been started. Out of total 21.9 Km sewer line to be laid, 1.75 Km sewer line has been completed. 1st STP shall be completed by 31.03.2021. For the installation of 2nd STP of capacity 1 MLD, land is yet to be transferred by the Department of Forest for which the department has given clearance. After the availability of land for STP, the construction work of STP shall be started and same shall be completed by 31.03.2021.

For In-situ bio remediation technology to be provided in the drains carrying untreated wastewater, in Sukhna Nallah catchment area, civil work and plantation has been completed and the facility shall be made operational soon.

For installation of Real Time Water Quality Monitoring System (RTWQMS), it was submitted in the last meeting that RTWQMS have been installed in River Kaushalya.

Accordingly, the Executing Committee made its plan to visit Parwanoo area to check the progress w.r.t installation of 2 STPs each of capacity 1 MLD, in-situ bio remediation technology provided in the Parwanoo area and installation of Real Time Water Monitoring System in river Kaushalya.

164

2.0 Visit to Pollution sources and control thereof in Parwanoo area

The following sites were visited by the Executing Committee:

1. STP of capacity 1 MLD, Zone-I to treat sewage of Parwanoo area

The Executing Committee visited the STP, Zone-I of capacity 1 MLD, costing Rs.47.60 crores, the administrative approval of which has been granted by the Government of Himachal Pradesh on 15.10.2019. During visit, it was observed as under:

i) 10.296 Km pipeline of 150 mm dia and 2.4 Km pipeline of 200 mm dia meter have been supplied.

ii) 3.361 Km pipe line of diameter 150 mm and 0.945 Km pipe line of 200 mm diameter have been laid.

iii) The components namely equalization tank, MBBR-1, MBBR-2 and Settling Tank are under construction and 25% work has been completed.

The photographs showing the construction status of components of STP, Zone-I are as per plates 1 and 2.

Plate-1

Plate-2

Plates 1 and 2: photographs showing the components of STP, Zone-I of capacity 1 MLD under construction.

After visit to the STP Zone-1, the Executing Committee has made the following recommendations:

i) **STP Zone-I of capacity 1 MLD, being installed near Sukhna Nallah to treat sewage of Parwanoo area, shall be completed by 31.3.2021.**

ii) **Sewerage network shall be completed simultaneously with the completion of STP, Zone-I.**

iii) **The treated sewage of STP, Zone-I of capacity 1 MLD shall be utilized for construction activities, road cleaning, green belts and other useful usage.**

165

2. In-situ bio remediation technology installed in Samtel Nallah (Parwanoo area).

The Executing Committee visited Samtel Nallah, carrying untreated wastewater of Parwanoo area, which is further to be treated in STP, Zone-I of capacity 1 MLD, being setup near Sukhna Nallah. In the said nallah, In-situ bio remediation (Phyto-remediation) technology has been installed. During the visit, it was observed that some of the plants were found dried and these are required to be replaced with new plants. The photographs showing the phyto-remediation technology set up in Samtel Nallah are as per plates 3 and 4.

Plate-3

Plate-3: Photograph showing Samtel Nallah carrying untreated wastewater of Parwanoo area

Plate-4

Plate – 4: Photograph showing Phyto- remediation technology set up in the course of Samtel Nallah as an interim measures for treatment of wastewater.

After visit to the phyto-remediation technology set up in Samtel Nallah, the Executing Committee has made the following recommendations.

i) **The plants, which have become dry, should be replaced with new plants within 1 month and ensure that adequate number of plants are planted, which may function as Phyto-remediation system in the drain to treat sewage/wastewater as an interim measure.**

ii) **Himachal State Pollution Control Board shall collect the effluent samples at the inlet and outlet of the Phyto remediation technology setup in the Samtel Nallah within 15 days to assess effectiveness of the system.**

166

3 Identification of land for STP Zone II, to treat sewage of Parwanoo area.

The Executing Committee was shown the site where, it has been proposed to install STP of capacity 1 MLD to treat part of sewage of Parwanoo area. It was informed that forest clearance has been applied and the same is awaited. During visit, it was observed that only site has been identified, but the site has not been cleared by removing the bushes etc. The design and drawing of STP, Zone-II is also awaited. The photographs showing the status of land of STP zone II are as per plates 5 & 6.

Plate-5

Plate-6

Plates 5 and 6: Photographs showing the land identified for STP, Zone-2 of capacity 1 MLD

After visit to the STP, Zone-II site, the Executing Committee directed as under:

1. **Jal Shakti Bibhag shall get forest clearance for installation of STP, Zone- II within 15 days.**
2. **STP zone II of capacity 1 MLD may be completed by 30.6.2021.**

4.0 Visit to Kaushalya river and Real Time Water Quality Monitoring System (RTWQMS) installed in river Kaushalya

The Executing Committee visited Kaushalya river and Real Time Water Quality Monitoring System installed in the said river. During visit, it was observed as under:

i) Water quality of river Kaushalya was found clear.

ii) One drain carrying small quantity of wastewater from the nearby locality, was entering into river Kaushalya.

iii) Real Time Water Quality Monitoring System has been installed in river Kaushalya and it has been given its connectivity with mobile system of the officers of Jal Shakti Vibhag and HPSPCB.

167

iv) The values of BOD and DO shown by RTWQMS were 10.9 mg/l and 9 mg/l, respectively. For authenticity of the values of BOD and DO and other parameters, the calibration of the system is required to be done.

After visit to the site, the Executing Committee has made the following recommendations:

i) **HPSPCB shall close the drain carrying untreated wastewater entering into river Kaushalya near the bridge within 1 month.**

ii) **Display board indicating the values of the parameters monitored by Real Time Water Quality Monitoring System should be provided by Jal Shakti Vibhag within 1 month. Real Time Water Quality Monitoring System should have its connectivity with the server of Himachal Pradesh State Pollution Control Board (HPSPCB) and CPCB.**

iii) **Jal Shakti Vibhag shall get calibrate the Real Time Water Quality Monitoring System within 1 month.**

	Sd/-	Sd/-
Dr. Babu Ram	Ms. Urvashi Gulati	Justice Pritam Pal, Former Judge, Punjab & Haryana High Court and now as Chairman of the Executing Committee.

Note: **The Chairman and members of the Executing Committees have given their concurrence on the report**

27.1.2021

168

Annexure-8

OFFICE OF THE EXECUTING COMMITTEE

Constituted by the Hon'ble National Green Tribunal in Original Application no.138 and 139 of 2016 and OA No.606 of 2018

(Official Address: Tower No.5, 4th Floor, Forest Complex, Sector 68, SAS Nagar) Tel. No. 0172-2298091
Email: cecghaggar@gmail.com

To

The Member Secretary,
Himachal Pradesh Pollution Control Board,
Shimla.

No. CEC/2020/1130
Dated: 27.11.2020

Subject: **Minutes of 19th meeting (to review the directions given/recommendations made in 18th meeting held with State Level Officers of State of Himachal Pradesh on 19.8.2020) held under the Chairmanship of Justice Pritam Pal, Former Judge of Punjab and Haryana High Court and now as Chairman of the Executing Committee, constituted by Hon'ble NGT in OA No. 138-139 of 2016 in the matter of "Stench Grips Mansa's Sacred Ghaggar River" and Yogendera Kumar, w.r.t. control of pollution in river Ghaggar on 26.11.2020 at 11.00 AM (through video conference)**

Please find enclosed herewith minutes of 19th meeting (to review the directions given/recommendations made in 18th meeting held with State Level Officers of State of Himachal Pradesh on 19.8.2020) held under the Chairmanship of Justice Pritam Pal, Former Judge of Punjab and Haryana High Court and now as Chairman of the Executing Committee, constituted by Hon'ble NGT in OA No. 138-139 of 2016 in the matter of "Stench Grips Mansa's Sacred Ghaggar River" and Yogendera Kumar, w.r.t. control of pollution in river Ghaggar on 26.11.2020 at 11.00 AM (through video conference)

It is requested that these minutes may be conveyed under your signatures to all the concerned officers of your State under intimation to this office to take further action on the directions given in the said meeting.

DA/As above.

27.11.2020
(Dr. Babu Ram)
Technical Expert,
Executing Committee

Minutes of 19th meeting (to review the directions given/recommendations made in 18th meeting held with State Level Officers of State of Himachal Pradesh on 19.8.2020) held under the Chairmanship of Justice Pritam Pal, Former Judge of Punjab and Haryana High Court and now as Chairman of the Executing Committee, constituted by Hon'ble NGT in OA No. 138-139 of 2016 in the matter of "Stench Grips Mansa's Sacred Ghaggar River" and Yogendera Kumar, w.r.t. control of pollution in river Ghaggar on 26.11.2020 at 11.00 AM (through video conference)

The following were present during meeting.

a) **Members of the Executing Committee**

Sr. No.	Name and Designation in the Deptt.	Name & Designation in the Committee
1.	Justice Pritam Pal, Former Judge, Punjab and Haryana High Court	Chairman
2.	Ms. Urvashi Gulati, IAS, former Chief Secretary, Haryana	Member
3.	Dr. Babu Ram, former Member Secretary, PPCB	Technical Expert

The list of the officers, present in the meetings, is as per Annexure-1

the Chairman of the Executing Committee apprised the officers of various departments, present in the meeting, about the orders of Hon'ble NGT in various cases connected to the matter, which are briefly mentioned as under.

1) The Hon'ble National Green Tribunal vide order dated 10.01.2020 in OA No.606 of 2018 in the matter of compliance of Solid Waste Management Rules, 2016 in Para No.36 has directed that most of the statutory timelines have expired and directions of Hon'ble Supreme Court and the Tribunal to comply Solid Waste Management rules, 2016 remain unexecuted and accordingly, compensation scale is laid down for continued failure after 31.03.2020. The compliance of the rules requires taking of several steps mentioned in Rule 22 (S. No.1 to 10). Any such continued failure will result into liability of every Local Body to pay compensation at the rate of Rs. 10 lakh per month per Local Body for population of above 10 lakh, Rs. 5 Lakh per month per Local Body for population between 5 lakh and 10 lakh and Rs. 1 lakh per other Local Bodies from 1.04.2020 till compliance. If the Local Body is unable to bear financial burden, the liability will of the

170

State Govt. with liberty to take remedial action against erring Local bodies. Apart from compensation, adverse entries must be made in the ACRs of the CEO of the said Local Bodies and other senior functionaries in Department of Urban Development etc. who are responsible for compliance of order of this Tribunal. The Hon'ble Tribunal has also directed in para No 31 (ii) that the date of commencement of setting up of STPs is 31.3.2020, failing which compensation amounting to Rs 5 lakh/month/STP by the concerned local bodies/States in terms of order dated 28.8.2019 in OA No. 593/2017 and 6.12.2019 in OA No. 673/2018 w.e.f 1.4.2020 shall be imposed.

2) The Hon'ble Tribunal in its order dated 6.12.2019 in OA No. 673 of 2018 (mentioned in order dated 6.12.2019 uploaded on 12.12.2019 in OA No. 916 of 2018) had issued direction that 100% treatment of sewage may be ensured as directed by the Tribunal vide order dated 28.08.2019 in O.A No. 593/2017 by 31.03.2020 at least to the extent of in-situ remediation and before the said date, commencement of setting up of STPs and the work of connecting all the drains and other sources of generation of sewage to the STPs must be ensured. If this is not done, the local bodies and the concerned departments of States/UT's will be liable to pay compensation as directed vide order dated 22.08.2019 in case of river Ganga i.e. Rs. 5 lakh per month per drain for default in in-situ remediation and Rs. 5 lakh per STP for default in commencement of setting up of the STP. The timeline for completing all steps of action plans including completion of setting up STPs and there commissioning till 31.03.2021 in terms of order dated 08.04.2019 in the present case will remain as already directed.

3) It was further informed that the Hon'ble Tribunal vide its order dated 21.05.2020 in O.A No. 593 of 2017 at Para 8 [47(i) &ii)] has directed as under:

i) 100% treatment of sewage may be ensured as directed by this Tribunal vide order dated 28.08.2019 in O.A. No. 593/2017 by 31.03.2020 at least to the extent of in-situ remediation and before the said date, commencement of setting up of STPs and the work of connecting all the drains and other sources of generation of sewage to the STPs must be ensured. If this is not done, the local bodies and the concerned departments of the States/UTs will be liable to pay compensation as already directed vide order dated 22.08.2019 in the case of river Ganga i.e. Rs. 5 lakhs per month per drain, for default in in-situ

remediation and Rs. 5 lakhs per STP for default in commencement of setting up of the STP

ii) Timeline for completing all steps of action plans including completion of setting up STPs and their commissioning till 31.03.2021 in terms of order dated 08.04.2019 in the present case will remain as already directed. In default, compensation will be liable to be paid at the scale laid down in the order of this Tribunal dated 22.08.2019 in the case of river Ganga i.e. Rs. 10 lakhs per month per STP.

Further, in para 13 of order dated 21.05.2020 in OA No. 593 of 2017 has directed that as regards non-compliant STPs, further action may be completed by the State PCBs/PCCs and it may be ensured that there is 100% treatment of sewage and till STPs are set up, at least in-situ remediation takes place. However, on account of Corona pandemic which has affected several on-going activities, the timeline of levy of compensation in terms of order dated 28.08.2019 in O.A. No. 593/2017 read with order dated 06.12.2019 in O.A. No. 673/2018, of 01.04.2020 may be read as 01.07.2020 and 01.04.2021 may be read as 01.07.2021. Further reports may be taken by the CPCB from all the State PCBs/PCCs as per the system evolved by the CPCB from time to time.

4) The Hon'ble Tribunal vide its order dated 1.6.2020 in OA No. 325 of 2015 in the matter of Lt. Col. Sarvadaman Singh Oberoi vs Union of India &Ors, has directed in para No.6 that harvesting surplus water during excessive rains from any areas of catchment needs to be optimized by enhancing the capacity of the existing ponds/water bodies, creation of water harvesting structures in the sub-watersheds to the extent possible, apart from setting up of additional water bodies/water harvesting structures wherever viable, utilizing available funds including under MGNREGA and involving the community at large at every level. Gram Panchayats can certainly play a significant role in the matter. Once adequate capacity enhancement of water bodies takes place, excess flood/rain water can be channelized by using appropriate water harvesting techniques. This action needs to be coordinated by the District Magistrates in coordination with the Department of Irrigation and Flood Control or other concerned Departments such as Department of Rural Development/Urban Development/Local Bodies/Forests/Revenue etc. The District Magistrate may as far as possible hold a meeting of all the stakeholders for the purpose as per the District Environment Plan or Watershed Plan within one month from today.

172

The District Magistrates may also ensure that as far as possible at least one pond/water body must be restored in every village, apart from creation of any new pond/water body.

5) The State of Punjab has moved an application before Hon'ble National Green Tribunal for extension in timelines for remediation of legacy waste and for Commissioning of STPs. However, the Hon'ble Tribunal vide its order 17.9.2020 has rejected the prayer for extension in time.

6) The National Green Tribunal in its order dated 28.10.2020 in OA No 138 of 2016 and 139 of 2016 in the matter of Stench Grips Mansa's Sacred Ghaggar River and Yogendera Kumar has passed the detailed order and has given coercive directions and para no. 12 of the said directions is reproduced as under:

Para 12

1. *We Accordingly direct the Chief Secretaries of the Himachal Pradesh, Punjab, Haryana and UT Chandigarh must meet (physically or online) within one month for brainstorming with reference to the recommendations of the Executing Committee for meaningful prompt action and fixing of the accountability for the erring officers. Such meeting may be convened and facilitated as per further direction in this order. Remedial action should not only include setting up of requisite equipment and interim measures but also making persons to whom the job is entrusted personally accountable in terms of their performance. After first meeting also, the four Chief Secretaries must meet atleast once in a month to take stock of the situation. First such meeting may be held on or before 30.11.2020 and meaningful action must be taken latest by 31.01.2021. In case of default, the Tribunal may have no option except to take coercive measures against the erring authorities.*

Thereafter, the agenda of the meeting was taken up for discussion as under.

1. Water quality of river Ghaggar at various locations and sources of pollution in river Ghaggar and details of the drains carrying sewage/industrial effluent into the river Ghaggar.

Based on the water quality analysis data of Kaushalya river, Markanda river u/s Jattanwala Nallah, Jattanwala Nallah, river Markanda d/s Jattanwala Nallah, the Executing Committee in its 18th meeting held on 19.8.2020 had directed as under.

- HPPCB shall issue necessary directions to the concerned agencies contributing high values of faecal coliform in Jattanwala drain so as to bring them within the norms.

Now, it has been reported that high values of faecal coliform in Jattanwala Nallah and River Markanda are due to discharge of untreated sewage from Kala Amb area. Accordingly, HPSPCB has issued show cause notice to Secretary Gram Panchayat, Kala Amb for failing to adopt appropriate scientific practice for treatment and disposal of the sewage or maintain sewage laid under Environment (Protection) Act, 1986.

After detailed discussion on the issue, it was directed as under.

i) **Gram Panchayat, Kala Amb shall take appropriate steps to adopt scientific technique to control Faecal Coliform and organic parameters within the norms in Kala Amb area till the STP of capacity 1.5 MLD and CETP of capacity are completed and commissioned.**

ii) **Phytoremediation technology, being constructed in Jattanwala Nallah at 02 locations, should be completed by 31.12.2020.**

iii) **HPPPCB shall continue to monitor the water quality of Sukhna Nallan, Semtal Nallah, river Kaushalya, Jattanwala Nallah, Markanda river, river Markanda d/s Jattanwala Nallah on monthly basis and the analysis results be conveyed to the Executing Committee on quarterly basis.**

2. **Status of laying of sewerage network, sewage treatment plants which are in operation & their performance, sewage treatment plants which are under construction and sewage treatment plants which are under proposal.**

The status of sewerage system and STPs for the treatment of sewage of Kala Amb and Parwanoo area was submitted as under.

A) **Markanda Catchment area (Kala Amb Area)**

a) **1 MLD STP in Trilokpur area.**

The status is as under.

- Sewer pipes have been procured and 4 km sewer line has been laid.
- The land for STP has been handed over to the contractor.
- Civil construction work has been started on site and STP shall be completed by 31.3.2021.

b) **1.5 MLD STP in Kala Amb area.**

It was informed that work of 1.5 MLD STP has been awarded on 7.03.2020 and 4km sewer line has been laid and STP shall be completed by 31.3.2021

c) **CETP of capacity 5 MLD to be installed in Kala Amb area.**

The status was submitted as under.

- Land for CETP of capacity 5 MLD has been allotted.
- Tender has been awarded on 31.08.2020.
- Land development work shall be started soon and CETP is likely to be completed by 28.02.2021.

B) **Sukhna Nallah Catchment area (Parwanoo area)**

The status of 2 STPs each of capacity 1 MLD to treat sewage of Parwanoo area was submitted as under.

- Tender work of both STPs has been awarded on 19.03.2020. Land development work of 1stSTP, based on MBBR Technology, has been started. Out of total 21.9 Km sewer line to be laid, 1.75 Km sewer line has been completed. 1st STP shall be completed by 31.03.2021.
- For the installation of 2nd STP of capacity 1 MLD, land is yet to be transferred by the Department of Forest for which the department has given clearance. After the availability of land for STP, the construction work of STP shall be started and same shall be completed by 31.03.2021.

C) **Performance of 2 small STPs each of capacity 70 KLD**

It was submitted as under

- HPSPCB has conducted the performance study of small 70 KLD STP installed at sector-5 during the period Jan, 2020 to Sep, 2020 and the analysis results of the treated effluent samples indicate that all the parameters are within the prescribed norms.
- 2nd STP of capacity 70 KLD is under stabilization.

After detailed discussion on the issues, the Chairman of the Executing Committee directed as under.

i. **2 STPs each of capacity 1 MLD to treat sewage of Parwanoo area should be completed by 31.03.2021.**

ii. **1 STP of capacity 1 MLD in Trilokpur area and 1.5 MLD in Kala Amb area should be completed by 31.03.2021.**

iii. **CETP of capacity 5 MLD to be installed in Kala Amb area should be completed by 28.02.2021.**

iv. **HPSPCB shall continue to monitor the performance of both the STPs of capacity 70 KLD on monthly basis.**

3. **Gap in treatment of sewage**

It was submitted that after the commissioning of 2 STPs each of capacity 1 MLD in Parwanoo area, 1 STP of capacity 1 MLD in Trilokpur area, 1.5 MLD STP in Kala Amb area and 5 MLD capacity CETP in Kala Amb area, there shall be no gap in treatment of sewage.

The Chairman of the Monitoring Committee directed that HPSPCB shall ensure that all the sources of generation of sewage and industrial effluent should be tackled by the proposed STPs and CETPs and there shall be no extra discharge which may lead into any Nallah/ river further leading to river Ghaggar.

4. **Status of installation of effluent treatment plants by industries, inspection by SPCB and action against the violating industries.**

HPSPCB stated as under.

- HPSPCB has constituted surveillance squad on 5.09.2020 and the said squad has carried out inspection of 18 industries in Parwanoo and Kala Amb along with inspection of Sukhna Nallah in Parwanoo area. Action against the violating industries is under process.
- Besides, regular inspection of the industrial units is being carried out by Regional Office, Parwanoo and 70 Inspections of industries have been conducted, out of which 3 industries were found violating the norms and accordingly these industries have been issued show cause notices.

- In Kala Amb area, 135 industries have been inspected during 4 months and 8 industries were found violating the norms and environmental compensation amounting to Rs 18.70 Lakh has been imposed and the same has been recovered from the erring industries.

  After detailed discussion, it was directed that HPSPCB shall continue to inspect the industries in Parwanoo area and Kala Amb area on surprise basis, effluent samples of the industries be collected and action against the violating industries may be taken as per the provisions of the Water Act,1974.

5. **Implementation of irrigation scheme to utilize treated sewage for irrigation and irrigation schemes which are under construction/planning.**

In the 18th meeting held on 19.08.2020, it was directed that HPSPCB shall issue necessary directions to the Executing Agencies of STPs and CETPs to prepare detailed scheme for utilization of treated sewage of Parwanoo and Kala Amb area within 3 months and the said scheme may be implemented for utilization of treated sewage for various usages simultaneously along with commissioning of STPs.

Now, it has been informed that due to geographical constraints in Himachal Pradesh area, feasibility of reuse of treated sewage for irrigation is low.

The matter regarding utilization of treated sewage for irrigation and other usage was discussed in detail and it was directed as under:

i. **HPSPCB shall convey the standards prescribed for discharge of treated effluent for irrigation of crops/ vegetables eaten as raw and other crops to the concerned department within 7 days and the said department shall prepare irrigation schemes to utilize treated sewage of Parwanoo area and Kala Amb area for irrigation within 2 months.**

ii. **HPSPCB and Irrigation and Public Health Engineering Department shall jointly prepare the scheme/plan for using treated sewage for various usage like road cleaning, toilet flushing, construction activities, gardening, plantation and vehicle washing etc. within 15 days.**

6. **Non point sources and control of pollution of these sources.**

In 18th meeting, it was directed that HPSPCB and Rural Development & Panchayats shall jointly carry out the survey along the Nallah/ river and check as to whether any

illegal discharge of sewage/ industrial effluent through tankers or any other mechanism is discharged into these nallahs/ river. In case violators are found, legal action under the provision of the Water Act, 1974 may be taken accordingly.

Now, it has been informed that in Parwanoo area, HPSPCB and Rural Development & Panchayats have conducted regular surprise inspection in the Sukhna catchment and no illegal discharge of sewage/industrial effluent has been observed. Similarly, in Kala Amb area, teams have been constituted to conduct surprise inspections to ensure that there is no illegal disposal of septage and faecal sludge from septic tanks into nallahs/rivers. The joint inspection was carried out on 9.10.2020 and the Secretary, Gram Panchayat, Kala Amb has been asked to maintain the septic tanks.

After detailed discussion, the Chairman of the Monitoring Committee directed that HPSPCB and Department of Rural Development and Panchayat shall jointly continue to carry out survey along Sukhna Nallah, Jattanwala Nallah and Markanda River to check as to whether any illegal discharge of sewage/ industrial effluent through tankers or any other mechanism is discharged into these nallahs/ river. In case any violator is found, legal action under the provision of the Water Act, 1974 may be taken accordingly.

7. **Installation of in-situ remediation technology in the drains/nallahs carrying untreated sewage and not connected to STPs**

It was submitted as under.

- For installation of in-situ remediation technology in Jattanwala Nallah at 2 locations, tenders have been awarded and Jal Shakti Vibhag has started the construction work of Phytoremediation in the Nallah at 1 site and work is under progress.
- In Sukhna Nallah catchment (Parwanoo area), civil work and plantation has been completed and construction of polishing tank is under progress and the facility shall be made operational soon.

After detailed discussion, it was directed that Jal Shakti Vibhag shall install and commission in-situ remediation technology in Jattanwala

Nallah at 2 locations and Sukhna Nallah at atleast 1 location by 31.12.2020.

8. **Installation of sewage treatment plants for the villages.**

It was reported that the sewage of all the villages, falling in the catchment area of Sukhna Nallah and River Markanda, has been proposed to be connected to 02 STPs each of capacity 1 MLD to be installed in Parwanoo area and 1.5 MLD STP and 1 MLD STP in Kala Amb area and Trilokpur area, respectively and with the connectivity of sewage of these villages with these STPs, there shall be no gap in treatment of sewage of villages in the catchment areas of these Nallahs/river Markanda.

The Executing Committee noted the compliance.

9. **Groundwater quality in catchment area of river Ghaggar.**

The Executing Committee was apprised that HPSPCB has conducted the groundwater quality analysis of ground water sources located in the catchment area of Sukhna Nallah and Markanda River and the analysis results of various parameters are within the permissible limits.

The Monitoring Committee noted the compliance and directed that HPSPCB shall continue to monitor groundwater quality of groundwater sources located in the catchment area of Sukhna Nallah and Markanda River as per the directions of Hon'ble NGT.

10. **Installation of Real Time Water Quality Monitoring Stations (RTWQMS) in river Ghaggar.**

In 18th meeting of the Executing Committee, it was observed that HPPCB has installed RTWQMS in river Kaushalya and its analysis results indicate that the value of pH, DO and BOD monitored through RTWQMS as well as manual monitoring were almost matching except F.Coli, where large variation was observed and accordingly, it was observed that there was need to make some changes/ modifications in the system.

Now, HPSPCB has reported that Jal Shakti Vibhag was directed to check the RTWQMS and repair/calibrate the same as there was variation in the values shown by online system and manual monitored values. The RTWQMS has now been rectified and

operational. Further, Real Time Water Quality Monitoring System has also been installed in river Markanda.

The Executing Committee noted the compliance and directed that HPSPCB shall monitor the water quality of river Kaushalya and Markanda manually on fortnightly basis for 2 months and these analysis results may be compared with the analysis results shown by the online systems installed in river Kaushalya and Markanda.

11. Environmental Flow and Water Shed Management.

In the last meeting, it was reported that 27 and 30 check dams have been constructed in Sukhna nallah at Parwanoo and river Markanda at Kala Amb. Besides 03 low height dams and 03 rain harvesting structures shall be provided within next 03 months. Also, 8450 plants have been planted in the catchment area of Sukhna nallah and Markanda river.

Now, the Department has proposed to construct more check dams and rain water harvesting structures in the catchment area of Sukhna Nallah and river Markanda.

The Executing Committee noted the progress and directed that the concerned Department of the State shall provide adequate number of check/low height dams and rain water harvesting structures in the catchment area of Sukhna Nallah and river Markanda in a time bound manner so as to maintain Environmental Flow in these Nallahs/river and management of watershed in the area.

12. Septage and Faecal sludge management

In 18th meeting, the Executing Committee directed that the team constituted by HPPSB shall continue to make surprise inspection in the catchment area of Sukhna nallah and river Markanda from time to time and ensure that there is no disposal of septage and faecal sludge in the nallah/river.

Accordingly, HPSPCB has carried out surprise inspection in the catchment area of Sukhna Nallah and river Markanda and no disposal of any septage and faecal sludge has been observed.

The Executing Committee noted the compliance and directed that HPSPCB shall continue to make surprise inspection in the catchment area of Sukhna

Nallah and river Markanda from time to time and ensure that there is no disposal of septage and faecal sludge in the nallah/ river.

13. **Status of prosecution launched by the State Pollution Control Board against the violators under the provisions of the Water Act, 1974.**

It was informed that no prosecution has been launched by Himachal State Pollution Control Board against the violators under the provision of Water Act, 1974 till date. However, HPSPCB is imposing environmental compensation on the violating industries/ polluters and electric power connections to these violating industries/ polluters are released only after compliance of the incompletions and recovery of environmental compensation from the violating agencies.

The Executing Committee noted the compliance and directed that HPSPCB shall continue to make surprise inspection of the industries/pollution sources and action against the violating industries/ agencies may be taken under the provisions of the Water Act, 1974 and may impose environmental compensation on the violators as cost of the damage caused to the Environment.

Lastly, the Chairman of the Executing Committee appreciated the efforts made by HPSPCB and other concerned departments of State of Himachal Pradesh for accelerating the ongoing works w.r.t control of pollution in Sukhna Nallah and river Markanda and subsequently river Ghaggar and directed that these agencies should install and commission STPs, CETPs, in-situ remediation technology, more check dams/rain water harvesting structures within the time schedule as mentioned above.

sd/-	sd/-	sd/-
Dr. Babu Ram	Ms. Urvashi Gulati	Justice Pritam Pal former Judge Punjab & Haryana High Court now as Chairman of Executing Committee

Note: The Chairman and the members of the Executing Committee have given their concurrence on the minutes of the meeting

27.11.2020

Annexure - 9

OFFICE OF THE EXECUTING COMMITTEE

Constituted by the Hon'ble National Green Tribunal in Original Application no.138 and 139 of 2016 and OA No.606 of 2018

(Official Address: Tower No.5, 4th Floor, Forest Complex, Sector 68, SAS Nagar) Tel. No. 0172-2298091
Email: cecghaggar@gmail.com

To

The Member Secretary,
Chandigarh Pollution Control Committee,
Paryavaran Bhawan, Sector 19-B, Chandigarh
U.T. Chandigarh.

No. CEC/2020/1101
Dated: 3.11.2020

Subject: **Minutes of review meeting (to review the directions given/recommendations made in 18th meeting held with State Level Officers of UT, Chandigarh on 19.8.2020) held under the Chairmanship of Justice Pritam Pal, Former Judge of Punjab and Haryana High Court and now as Chairman of the Executing Committee, constituted by Hon'ble NGT in OA No. 138/139 of 2016 in the matter of Stench Grips Mansa's Sacred Ghaggar River and Yogendera Kumar, w.r.t. control of pollution in river Ghaggar on 2.11.2020 at 11.00 AM(through video conference)**

.....

Please find enclosed herewith minutes of review meeting (to review the directions given/recommendations made in 18th meeting held with State Level Officers of UT, Chandigarh on 19.8.2020) held under the Chairmanship of Justice Pritam Pal, Former Judge of Punjab and Haryana High Court and now as Chairman of the Executing Committee, constituted by Hon'ble NGT in OA No. 138/139 of 2016 in the matter of Stench Grips Mansa's Sacred Ghaggar River and Yogendera Kumar, w.r.t. control of pollution in river Ghaggar on 2.11.2020 at 11.00 AM(through video conference)

It is requested that these minutes may kindly be conveyed under your signatures to all the concerned departments of U.T. Chandigarh under intimation to this office to take further action on the directions given in the said meeting.

DA/as above

(Dr. Babu Ram)
Technical Expert,
Monitoring Committee

Endst. No. CEC/2020/ 1102 Dated: 3.11.2020

A copy of the above is forwarded to the Commissioner, Municipal Corporation, Chandigarh for information and necessary action.

DA/as above

(Dr. Babu Ram)
Technical Expert,
Monitoring Committee

Minutes of review meeting (to review the directions given/recommendations made in 18th meeting held with State Level Officers of UT, Chandigarh on 19.8.2020) held under the Chairmanship of Justice Pritam Pal, Former Judge of Punjab and Haryana High Court and now as Chairman of the Executing Committee, constituted by Hon'ble NGT in OA No. 138/139 of 2016 in the matter of Stench Grips Mansa's Sacred Ghaggar River and Yogendera Kumar, w.r.t. control of pollution in river Ghaggar on 2.11.2020 at 11.00 AM(through video conference)

The following were present during meeting

a) **Members of the Executing Committee**

Sr. No.	Name and Designation in the Deptt.	Name & Designation in the Committee
1.	Justice Pritam Pal, Former Judge, Punjab and Haryana High Court	Chairman
2.	Ms. Urvashi Gulati, IAS, former Chief Secretary, Haryana	Member
3.	Dr. Babu Ram, former Member Secretary, PPCB	Technical Expert

The lists of the officers, present in the meetings, are as per Annexure-1

The Chairman of the Monitoring Committee apprised the officers of various departments, present in the meeting, about the orders of Hon'ble NGT in various cases connected to the matter, which are briefly mentioned as under.

1) The Hon'ble Tribunal in its order dated 6.12.2019 in OA No. 673 of 2018 (mentioned in order dated 6.12.2019 uploaded on 12.12.2019 in OA No. 916 of 2018) had issued direction that 100% treatment of sewage may be ensured as directed by the Tribunal vide order dated 28.08.2019 in O.A No. 593/2017 by 31.03.2020 at least to the extent of in-situ remediation and before the said date, commencement of setting up of STPs and the work of connecting all the drains and other sources of generation of sewage to the STPs must be ensured. If this is not done, the local bodies and the concerned departments of States/UT's will be liable to pay compensation as directed vide order dated 22.08.2019 in case of river Ganga i.e. Rs. 5 lakh per month per drain for default in in-situ remediation and Rs. 5 lakh per STP for default in commencement of setting up of the STP. The timeline for completing all steps of action plans including completion of setting up STPs and there commissioning till 31.03.2021 in terms of order dated 08.04.2019 in the present case will remain as already directed.

2) It was further informed that the Hon'ble Tribunal vide its order dated 21.05.2020 in OA No. 593 of 2017 at Para 8 [47(i) &ii)] has directed as under:

   i) 100% treatment of sewage may be ensured as directed by this Tribunal vide order dated 28.08.2019 in O.A. No. 593/2017 by 31.03.2020 at least to the extent of in-situ remediation and before the said date, commencement of setting up of STPs and the work of connecting all the drains and other sources of generation of sewage to the STPs must be ensured. If this is not done, the local bodies and the concerned departments of the States/UTs will be liable to

183

pay compensation as already directed vide order dated 22.08.2019 in the case of river Ganga i.e. Rs. 5 lakhs per month per drain, for default in in-situ remediation and Rs. 5 lakhs per STP for default in commencement of setting up of the STP

ii) Timeline for completing all steps of action plans including completion of setting up STPs and their commissioning till 31.03.2021 in terms of order dated 08.04.2019 in the present case will remain as already directed. In default, compensation will be liable to be paid at the scale laid down in the order of this Tribunal dated 22.08.2019 in the case of river Ganga i.e. Rs. 10 lakhs per month per STP.

Further, in para 13 of order dated 21.05.2020 in OA No. 593 of 2017 has directed that as regards non-compliant STPs, further action may be completed by the State PCBs/PCCs and it may be ensured that there is 100% treatment of sewage and till STPs are set up, at least in-situ remediation takes place. However, on account of Corona pandemic which has affected several on-going activities, the timeline of levy of compensation in terms of order dated 28.08.2019 in O.A. No. 593/2017 read with order dated 06.12.2019 in O.A. No. 673/2018, of 01.04.2020 may be read as 01.07.2020 and 01.04.2021 may be read as 01.07.2021. Further reports may be taken by the CPCB from all the State PCBs/PCCs as per the system evolved by the CPCB from time to time.

3) The Hon'ble Tribunal vide its order dated 1.6.2020 in OA No. 325 of 2015 in the matter of Lt. Col. Sarvadaman Singh Oberoi vs Union of India &Ors, has directed in para No.6 that harvesting surplus water during excessive rains from any areas of catchment needs to be optimized by enhancing the capacity of the existing ponds/water bodies, creation of water harvesting structures in the sub-watersheds to the extent possible, apart from setting up of additional water bodies/water harvesting structures wherever viable, utilizing available funds including under MGNREGA and involving the community at large at every level. Gram Panchayats can certainly play a significant role in the matter. Once adequate capacity enhancement of water bodies takes place, excess flood/rain water can be channelized by using appropriate water harvesting techniques. This action needs to be coordinated by the District Magistrates in coordination with the Department of Irrigation and Flood Control or other concerned Departments such as Department of Rural Development/Urban Development/Local Bodies/Forests/Revenue etc. The District Magistrate may as far as possible hold a meeting of all the stakeholders for the purpose as per the District Environment Plan or Watershed Plan within one month from today. The District Magistrates may also ensure that as far as possible at least one pond/water body must be restored in every village, apart from creation of any new pond/water body.

4) The Hon'ble National Green Tribunal has considered the 6th report of the Executing Committee and has passed the detailed order dated 28.10.2020 and has given coercive directions and para no. 12 of the said directions is reproduced as under.

184

Para 12

We Accordingly direct the Chief Secretaries of the Himachal Pradesh, Punjab, Haryana and UT Chandigarh must meet (physically or online) within one month for brainstorming with reference to the recommendations of the Executing Committee for meaningful prompt action and fixing of the accountability for the erring officers. Such meeting may be convened and facilitated as per further direction in this order. Remedial action should not only include setting up of requisite equipment and interim measures but also making persons to whom the job is entrusted personally accountable in terms of their performance. After first meeting also, the four Chief Secretaries must meet atleast once in a month to take stock of the situation. First such meeting may be held on or before 30.11.2020 and meaningful action must be taken latest by 32 31.01.2021. In case of default, the Tribunal may have no option except to take coercive measures against the erring authorities.

The Chairman of the Executing Committee apprised that Municipal Corporation, Chandigarh and UT Administration have to show the tangible results with regard installation of new STPs, Upgradation of existing STPs and improving the water quality of Sukhna Choe, N- Choe and river Ghaggar otherwise the Executing Committee shall be more hardened in their action.

Thereafter, the agenda was taken up for discussion as under.

1. Water quality of river Ghaggar

It was apprised that CPCC has monitored the water quality of river Ghaggar in the month of August to October, 2020 and its analysis results indicate that the value of BOD was found varying between 3.1 to 16 mg/l and faecal coliform between 400000 - 4500000 MPN/100 ml. The value of TSS was observed between 533-687 mg/l.

No improvement with respect to these parameters has been achieved. CPCC reiterated that water quality in river Ghaggar can be improved only after closing all the outlets falling into Sukhna Choe and N- Choe, installation of new STPs, upgradation of existing STPs, installation of in-situ remediation technology in Sukhna Choe and N- Choe STPs in a time bound manner.

The Executing noted the observations.

2. Status of pollution in river Ghaggar and details of the drains carrying sewage/industrial effluent in river Ghaggar.

It was reported that area along Sukhna Choe and N- Choe has been visited by CPCC and following outlets have been found operating and untreated sewage is being discharged into these Choes.

Sukhna Choe

ii) **Kishangarh Outlet.**

iii) **Outlet of Shastri Nagar**

iv) **Village Daria**

iv) **Outlet behind Central Poultry Development organization, industrial, Phase-1, Chandigarh.**

185

The Commissioner, Municipal Corporation, Chandigarh informed that these outlets have been closed and now no wastewater is discharged into Sukhna Choe through these outlets.

N-Choe

1. Garden of springs where the sewage water is coming from Mohali.
2. Sector 36 near CFSL- ISKCON side.

It was apprised in the meeting that w.r.t. outlet no.1, the Commissioner, Municipal Corporation Mohali has infirmed telephonically to the Technical Expert, Executing Committee that no sewage is discharged through the said outlet and only effluent containing small leakages of water is discharged and the same shall be closed within 3 days.

Regarding outlet No.2, it was informed by the Commissioner, Municipal Corporation, Chandigarh that the outlet has been closed and no sewage is being discharged into N-Choe through the said outlet.

After detailed discussion on the issue, the Chairman of the Executing Committee directed that Commissioner, Municipal Corporation, Chandigarh and CPCC shall jointly visit all the outlets falling into Sukhna Choe and N-Choe within 3 days and submit their report regarding closing/operation of the outlets into Sukhna Choe and N-Choe. In case any outlet is found in operation, the same shall be closed within 3 days and CPPCC shall submit report to the Executing Committee within 4 days.

3. Repairing of the damaged sewer line to stop the discharge from outlet at village Daria into Sukhna Choe.

It was informed that work of repair of damaged sewer line at village Daria has been completed and now the outlet at village Daria has been closed.

The Chairman of the Executing Committee desired that the said outlet may also be inspected by the joint team consisting of Commissioner, Municipal Corporation Chandigarh and CPCC within 3 days and submit the report to the Executing Committee regarding its closure.

4. Joint survey of the area by the joint Committee to detect the agency responsible for discharge of untreated sewage into N-Choe.

It was apprised that survey was conducted on 11.9.2020 and the untreated sewage of Mohali area was found discharging into N-Choe and it was decided that Municipal Corporation, Mohali shall take immediate steps to stop the discharge of sewage.

As already informed in above para, the matter has been discussed by the Technical Expert of the Executing Committee with the Commissioner, Municipal Corporation, Mohali on 2.11.2020 and it has been informed that no sewage is being discharged

186

through this outlet into N-Choe and effluent containing only small leakages of water is being discharged into N-Choe and the same shall be closed within 3 days.

After detailed discussion, it was directed as under.

i) **The Commissioner, Municipal Corporation, Mohali shall close the outlet at Garden of springs into Sukhna Choe within 3 days**

ii) **A joint committee of Commissioner, Municipal Corporation, Chandigarh, and CPCC shall visit the said outlet within 3 days and report regarding stoppage of discharge through the said outlet into Choe may be submitted to the Executing Committee.**

5. **Water quality of Sukhna Choe and N-Choe at their exit points.**

CPCC informed that water quality of Sukhna Choe and N-Choe has been monitored and the values of BOD and F.Coli in Sukhna Choe and N-Choe have been found BOD:113-125 mg/l, F.Coli:400000-1400000 MPN/100 ml and BOD: 43-51 mg/l, F.Coli: 120000-930000 MPN/100ml, respectively.

The Executing Committee has taken serious view regarding poor quality of water flowing into Sukhna Choe and N-Choe having much higher values than the values of these parameters at the outlet of the STPs. The Executing Committee is of the view that these higher values of BOD and F.Coli may be due to direct discharge of untreated sewage from some of the outlets and these outlets are required to be identified.

After detailed discussion on the issue, the Chairman of the Executing Committee directed that CPCC shall make comprehensive survey along Sukhna Choe and N-Choe and identify the outlets carrying untreated sewage and their discharge within 15 days and necessary directions may be issued to the concerned departments to close these outlets within 21 days.

6. **Performance of existing STPs**

It was informed that CPCC has conducted the performance study of 5 existing STPs and the analysis results indicate that STP 3 BRD and STP Diggian are meeting with norms w.r.t. parameters namely BOD (3-6 mg/l, 18-29 mg/l) and TSS (4-13 mg/l, 10-29 mg/l), whereas, the value of F.Coli at both the STPs are quite high (17200- 54000MPN/100 ml and 140000 – 1300000 MPN/100 ml), respectively. The analysis of effluent samples collected from STP, Raipur Kalan and Raipur Khurd were found containing high value of BOD ranging between 46-87 mg/l, 26-48 mg/l and F.Coli varying between 180000-2100000 MPN/100ml and 170000-1800000 MPN/100ml, respectively.

STP Dhanas and STP Maloya have been found meeting with the norms w.r.t. BOD (2-8 mg/l) and F.Coli (1.8-110 MPN/100 ml) and BOD(1.2-2.4 mg/l) and F.Coli (9.2-27 MPN/100ml), respectively.

The Executing Committee has observed that the value of BOD and DO at the outlet of STP Maloya are same (2.4 mg/l for both the parameters), which seem to be incorrect

187

because these parameters are probably inversely proportion to each other. Moreover, the value of F.coli has been mentioned in decimal and possibility of very low values of F.Coli in the treated sewage of these STPs is also needed to be rechecked.

After detailed discussion on the issue, it was directed that CPCC shall collect the treated and untreated sewage of STP Dhanas and STP Maloya within 10 days and report be submitted to the Executing Committee within 25 days.

7. STPs under construction

It was informed that for installation of STP at Kishangarh, financial bid has been opened and tender has been allotted and the work shall be started at the earliest.

The Chairman of the Executing Committee directed that Municipal Corporation, Chandigarh shall ensure that STP should be completed by 31.3.2021.

8. Status of STPs which required technologically upgradation

The status was submitted as under:

- **STP Diggian**: The work has been allotted to M/S L&T Ltd.
- **STPs Raipur Kalian and Raipur Khurd**: The work has been allotted to M/S GSJ Envo Ltd.
- **STPs at 3 BRD and Dhanas**: The work has been allotted to M/S Passavant Energy & Environment India Pvt. Ltd.

After detailed discussion, it was directed as under:

i. **The upgradation work of all the 5 STPs (Diggian, Raipur Kalian and Raipur khurd, 3 BRD and Dhanas) should be completed by 31.3.2021.**

ii. **Municipal Corporation Chandigarh shall ensure that no untreated sewage is discharged into sewerage system or Sukhna Choe and N Choe or any other outlet during the process of upgradation of all the 5 existing STPs.**

9. Status of effluent treatment plant, inspection, performance of ETPs and action against violating industries.

It was informed that during the month Sep and October, 2020, 8 industries have been inspected, out of which 5 industries have been found non-compliant and action against these non compliant industries is under process.

The Chairman of the Executing Committee has taken a serious view for visiting very less no. of industries during 02 months and even the action against the non-compliant industries found in the month of Sep, 2020 has not been finalized so for.

It was directed that the CPCC shall inspect more no. of industries and action against the violating industries may be finalized as the earliest.

10. Installation of CETPs and their operation

It was reported that for installation of CETP for electroplating industries, the case for getting environment clearance is pending due to Covid-19 activities.

The Chairman of the Executing Committee directed that CPCC shall pursue the case of environment clearance for CETP and efforts may be made to get install CETP in time bound manner.

11. Utilization of treated sewage of STPs for other usage

It was informed that the treated sewage can be supplied for other usage like watering of gardens in left out areas of the city where tertiary treatment network is not available and Indian Railway, Bus depot and industrial cluster etc.

It was directed that Municipal Corporation Chandigarh shall ensure that maximum quantity of treated sewage shall be utilized for other usage like green areas in the Chandigarh, Indian Railways, Bus depot and industrial cluster etc.

12. Non point sources and control of pollution of these sources

It was reinterred that 4 outlets into Sukhna Choe and 3 outlets in N-Choe, carrying untreated sewage, are falling. With Regard to operation of 4 outlets into Sukhna Choe, Municipal Corporation Chandigarh has claimed that these outlets have been closed and presently, no sewage is being discharged into Sukhna Choe through these outlets.

3 outlets were reported to be discharging untreated sewage into N-Choe. However, regarding outlet at the Garden of Spring, Sec-53, it was apprised by the Commissioner, Municipal Corporation Mohali that no sewage is being discharged into N-Choe through the said outlet effluent containing only some leakages of water is being discharged into N- Choe through the said outlet and the same shall be closed within 3 days.

The Executing Committee noted the report and directed that Municipal Corporation Chandigarh and CPCC shall act as directed in aforesaid point No.4 above.

13. Groundwater quality in the catchment area of River Ghaggar

CPCC reported that the water quality of groundwater sources has been analyzed in Oct, 2020 and it was found that the values of BOD and TSS in the groundwater samples have been found between 0.8-2.5 mg/l and 2 - 7 mg/l, respectively, whereas. as per the drinking water standards (IS:10500 of 2012), such parameters are not desirable.

After detailed discussion on the issue, it was directed as under:

CPCC and officers of Public Health Engineer Department of U.T Chandigarh shall visit these groundwater sources within 15 days and display boards mentioning that the ground water is not fit for drinking purposes may be erected at the sites of these ground water sources.

189

14. In-situ bio remediation in the drains carrying untreated sewage and not connected to STP.

The Executing Committee was informed that about 3500-4000 trees have been planted along Sukhna Choe and N-Choe and slopes. For installation of In-situ bio remediation technology in Sukhna Choe and N-Choe, a technical team shall be deputed to visit Punjab area for further amendment in the system.

The Executing Committee observed that the water quality in Sukhna Choe and N-Choe is very poor and these are carrying sewage only and installation of new STP and upgradation of existing STPs will take time to achieve the desired norms. Therefore, it becomes utmost imperative that In-situ bio remediation technology should be installed in Sukhna Choe and N-Choe.

After detailed discussion on the issue, it was directed as under:

i. **A technical team consisting of U.T administration, Municipal Corporation Chandigarh, Department of Forest and CPCC shall visit In-situ bio remediation technology setup in Punjab area within 7 days.**

ii. **The work of installation of In-situ bio remediation technology in Sukhna Choe and N-Choe may be started within 01 month.**

iii. **The department of Forest may be involved during installation of In-situ bio remediation technology in the Choes.**

15. Installation of Real Time Water Quality Monitoring Stations (RTWQMS) in River Ghaggar

It was reported as under:

i) For installation of Real Time Water Quality Monitoring Stations at N-Choe, the installation work has been started and the same shall be completed within 10 days.

ii). No proper space and infrastructure is available at Sukhna Choe and no electricity is available nearby Choe.

The Executing Committee observed that installation of Real time Water quality Monitoring stations in N-Choe and Sukhna Choe is very essential to know the Real time values of parameters in the water flowing into these Choes so that in case any abnormal and alarming values of the parameters are observed, the necessary reasons may be identified and rectified so that water quality in these choes may remain within the norms.

190

16. Watershed management

It was informed that Chandigarh Forest Department is continuously undertaking various soil and moisture conservation measures to control soil erosion. Furthermore, 100 check dams have been constructed in Sukhna wildlife sanctuary which are being maintained by Chandigarh Forest Department.

The Executing Committee noted the compliance.

17. Status of legal cases.

It was reported as under: -

i) The Hon'ble High Court has been requested through U.T. Administration to designate a Special Court only for Environmental issues.

ii) Quarterly progress report regarding court cases shall be provided to the Executing Committee.

iii) CPCC shall also pursue the cases of saw mills in the Hon'ble High Court as and when the hearings in Punjab & Haryana High Court will resume.

The Executing Committee noted the compliance and directed that CPCC shall ensure that saw mills cases are persuaded timely in the Hon'ble Punjab & Haryana High Court and quarterly progress report w.r.t. these cases alongwith other cases may be submitted to the Executing Committee.

18. Organization of Health Checkup camps in the catchment area of River Ghaggar

It was apprised that due to Covid-19 situation, no health checkup camps could be organized. As and when, the situation is improved, the department of Health & Family Welfare shall continue to organize Health Checkup camps in the catchment area of River Ghaggar.

The Executing Committee noted the observation and directed that the department of Health & Family Welfare shall continue to organize Health Checkup camps in the catchment area of River Ghaggar as and when the Covid-19 situation is improved.

Sd/	Sd/	sd/
Dr. Babu Ram	**Ms. Urvashi Gulati**	**Justice Pritam Pal, former Judge Punjab & Haryana High Court now as Chairman of Executing Committee**

Note: The Chairman and members of the Monitoring Committee have given their concurrence on the minutes of the meeting.

2.1.2020

191

Annexure -10

OFFICE OF THE EXECUTING COMMITTEE

Constituted by the Hon'ble National Green Tribunal in Original Application no.138 and 139 of 2016 and OA No.606 of 2018

(Official Address: Tower No.5, 4th Floor, Forest Complex, Sector 68, SAS Nagar) Tel. No. 0172-2298091
Email: cecghaggar@gmail.com

To

The Member Secretary,
Punjab Pollution Control Board,
Patiala.

No. CEC/2020/1125
Dated: 20.11.2020

Subject: **Minutes of the review meeting to review the action taken by the various departments of State of Punjab on the directions given/recommendations made by the Executing Committee during its 18th meeting held on 19.8.2020 with State Level Officers w.r.t control of pollution in river Ghaggar to be held under the Chairmanship of Justice Pritam Pal, Former Judge of Punjab and Haryana High Court and now as Chairman of the Executing Committee (constituted by Hon'ble NGT in OA No. 138/139 of 2016 in the matter of Stench Grips Mansa's Sacred Ghaggar River and Yogendera Kumar) on 19.11.2020 at 11.00 AM (through video conferencing)**

Please find enclosed herewith minutes of the review meeting to review the action taken by the various departments of State of Punjab on the directions given/recommendations made by the Executing Committee during its 18th meeting held on 19.8.2020 with State Level Officers w.r.t control of pollution in river Ghaggar to be held under the Chairmanship of Justice Pritam Pal, Former Judge of Punjab and Haryana High Court and now as Chairman of the Executing Committee (constituted by Hon'ble NGT in OA No. 138/139 of 2016 in the matter of Stench Grips Mansa's Sacred Ghaggar River and Yogendera Kumar) on 19.11.2020 at 11.00 AM (through video conferencing)

It is requested that these minutes may be conveyed under your signatures to all the concerned officers of the State Government to take necessary action on the directions given by the Chairman of the Executing Committee during the meeting and action taken report be submitted to the Committee within 21 days.

DA/As above.

(Dr. Babu Ram) 20/11/2020
Technical Expert,
Executing Committee

Endst. No. CEC/2020/ 1126 Dated: 20.11.2020

A copy of the above is forwarded to the Chairman, Monitoring Committee, constituted by Hon'ble NGT in OA No. 916 of 2018 in the matter of Sobha Singh vs. State of Punjab for information please.

DA/As above.

(Dr. Babu Ram) 20.11.2020
Technical Expert,
Executing Committee

Endst. No. CEC/2020/ 1127 Dated: 20.11.2020

A copy of the above is forwarded to the Chief Executive Officer, Punjab Water Supply & Sewerage Board, Chandigarh for information and necessary action please.
DA/As above.

(Dr. Babu Ram) 20.11.2020
Technical Expert,
Executing Committee

Minutes of review meeting (to review the directions given/recommendations made in 18th meeting held with State Level Officers of State of Punjab on 19.8.2020) held under the Chairmanship of Justice Pritam Pal, Former Judge of Punjab and Haryana High Court and now as Chairman of the Executing Committee, constituted by Hon'ble NGT in OA No. 138/139 of 2016 in the matter of Stench Grips Mansa's Sacred Ghaggar River and Yogendera Kumar, w.r.t. control of pollution in river Ghaggar on 19.11.2020 at 11.00 AM (through video conference)

The following were present during meeting.

a) **Members of the Executing Committee**

Sr. No.	Name and Designation in the Deptt.	Name & Designation in the Committee
1.	Justice Pritam Pal, Former Judge, Punjab and Haryana High Court	Chairman
2.	Ms. Urvashi Gulati, IAS, former Chief Secretary, Haryana	Member
3.	Dr. Babu Ram, former Member Secretary, PPCB	Technical Expert

The list of the officers, present in the meetings, are as per Annexure-1

The officers of various departments, present in the meeting, were apprised about the orders of Hon'ble NGT in various cases connected to the matter by the Chairman of the Executing Committee, which are briefly mentioned as under.

1) The Hon'ble National Green Tribunal vide order dated 10.01.2020 in OA No.606 of 2018 in the matter of compliance of Solid Waste Management Rules, 2016 in Para No.36 has directed that most of the statutory timelines have expired and directions of Hon'ble Supreme Court and the Tribunal to comply Solid Waste Management rules, 2016 remain unexecuted and accordingly, compensation scale is laid down for continued failure after 31.03.2020. The compliance of the rules requires taking of several steps mentioned in Rule 22 (S. No.1 to 10). Any such continued failure will result into liability of every Local Body to pay compensation at the rate of Rs. 10 lakh per month per Local Body for population of above 10 lakh, Rs. 5 Lakh per month per Local Body for population between 5 lakh and 10 lakh and Rs. 1 lakh per other Local Bodies from 1.04.2020 till compliance. If the Local Body is unable to bear financial burden, the liability will of the State Govt. with liberty to take remedial action against erring Local bodies. Apart from compensation, adverse entries must be made in the ACRs of the CEO of the said Local Bodies and other senior functionaries in Department of Urban Development etc. who are responsible for compliance of order of this Tribunal. The Hon'ble Tribunal has also directed in para No 31 (ii) that the date of commencement of setting up of STPs is 31.3.2020, failing which compensation amounting to Rs 5 lakh/month/STP by the concerned local bodies/States in terms of order dated 28.8.2019 in OA No. 593/2017 and 6.12.2019 in OA No. 673/2018 w.e.f 1.4.2020 shall be imposed.

2) The Hon'ble Tribunal in its order dated 6.12.2019 in OA No. 673 of 2018 (mentioned in order dated 6.12.2019 uploaded on 12.12.2019 in OA No. 916 of 2018) had issued

193

direction that 100% treatment of sewage may be ensured as directed by the Tribunal vide order dated 28.08.2019 in O.A No. 593/2017 by 31.03.2020 at least to the extent of in-situ remediation and before the said date, commencement of setting up of STPs and the work of connecting all the drains and other sources of generation of sewage to the STPs must be ensured. If this is not done, the local bodies and the concerned departments of States/UT's will be liable to pay compensation as directed vide order dated 22.08.2019 in case of river Ganga i.e. Rs. 5 lakh per month per drain for default in in-situ remediation and Rs. 5 lakh per STP for default in commencement of setting up of the STP. The timeline for completing all steps of action plans including completion of setting up STPs and there commissioning till 31.03.2021 in terms of order dated 08.04.2019 in the present case will remain as already directed.

3) It was further informed that the Hon'ble Tribunal vide its order dated 21.05.2020 in O.A No. 593 of 2017 at Para 8 [47(i) &ii)] has directed as under:

i) 100% treatment of sewage may be ensured as directed by this Tribunal vide order dated 28.08.2019 in O.A. No. 593/2017 by 31.03.2020 at least to the extent of in-situ remediation and before the said date, commencement of setting up of STPs and the work of connecting all the drains and other sources of generation of sewage to the STPs must be ensured. If this is not done, the local bodies and the concerned departments of the States/UTs will be liable to pay compensation as already directed vide order dated 22.08.2019 in the case of river Ganga i.e. Rs. 5 lakhs per month per drain, for default in in-situ remediation and Rs. 5 lakhs per STP for default in commencement of setting up of the STP

ii) Timeline for completing all steps of action plans including completion of setting up STPs and their commissioning till 31.03.2021 in terms of order dated 08.04.2019 in the present case will remain as already directed. In default, compensation will be liable to be paid at the scale laid down in the order of this Tribunal dated 22.08.2019 in the case of river Ganga i.e. Rs. 10 lakhs per month per STP.

Further, in para 13 of order dated 21.05.2020 in OA No. 593 of 2017 has directed that as regards non-compliant STPs, further action may be completed by the State PCBs/PCCs and it may be ensured that there is 100% treatment of sewage and till STPs are set up, at least in-situ remediation takes place. However, on account of Corona pandemic which has affected several on-going activities, the timeline of levy of compensation in terms of order dated 28.08.2019 in O.A. No. 593/2017 read with order dated 06.12.2019 in O.A. No. 673/2018, of 01.04.2020 may be read as 01.07.2020 and 01.04.2021 may be read as 01.07.2021. Further reports may be taken by the CPCB from all the State PCBs/PCCs as per the system evolved by the CPCB from time to time.

4) The Hon'ble Tribunal vide its order dated 1.6.2020 in OA No. 325 of 2015 in the matter of Lt. Col. Sarvadaman Singh Oberoi vs Union of India & Ors, has directed in para No.6 that harvesting surplus water during excessive rains from any areas of catchment needs to be optimized by enhancing the capacity of the existing ponds/water bodies, creation of water harvesting structures in the sub-watersheds to the extent possible, apart from

194

setting up of additional water bodies/water harvesting structures wherever viable, utilizing available funds including under MGNREGA and involving the community at large at every level. Gram Panchayats can certainly play a significant role in the matter. Once adequate capacity enhancement of water bodies takes place, excess flood/rain water can be channelized by using appropriate water harvesting techniques. This action needs to be coordinated by the District Magistrates in coordination with the Department of Irrigation and Flood Control or other concerned Departments such as Department of Rural Development/Urban Development/Local Bodies/Forests/Revenue etc. The District Magistrate may as far as possible hold a meeting of all the stakeholders for the purpose as per the District Environment Plan or Watershed Plan within one month from today. The District Magistrates may also ensure that as far as possible at least one pond/water body must be restored in every village, apart from creation of any new pond/water body.

5) The State of Punjab has moved an application before Hon'ble National Green Tribunal for extension in timelines for remediation of legacy waste and for Commissioning of STPs. However, the Hon'ble Tribunal vide its order 17.9.2020 has rejected the prayer for extension in time.

6) The National Green Tribunal in its order dated 28.10.2020 in OA No 138 of 2016 and 139 of 2016 in the matter of Stench Grips Mansa's Sacred Ghaggar River and Yogendera Kumar has passed the detailed order and has given coercive directions and para no. 12 of the said directions is reproduced as under:

Para 12

1. *We Accordingly direct the Chief Secretaries of the Himachal Pradesh, Punjab, Haryana and UT Chandigarh must meet (physically or online) within one month for brainstorming with reference to the recommendations of the Executing Committee for meaningful prompt action and fixing of the accountability for the erring officers. Such meeting may be convened and facilitated as per further direction in this order. Remedial action should not only include setting up of requisite equipment and interim measures but also making persons to whom the job is entrusted personally accountable in terms of their performance. After first meeting also, the four Chief Secretaries must meet atleast once in a month to take stock of the situation. First such meeting may be held on or before 30.11.2020 and meaningful action must be taken latest by 31.01.2021. In case of default, the Tribunal may have no option except to take coercive measures against the erring authorities.*

Thereafter agenda of the meeting was taken up for discussion as under.

1. Water quality of river Ghaggar

In the last meeting, it was directed by the Executing Committee that PPCB shall carry out monitoring of point sources falling into river Ghaggar within 15 days. The responsible agencies contributing high values of BOD may also be identified and these agencies be directed to take time bound action to bring down the values of organic parameters within the norms. The responsible agencies for contributing high levels of parameters at Jharmal Nadi and Sardulgarh may also be identified and action may be taken as per the provisions of Water Act, 1974.

195

Now, it has been apprised that water quality of river Ghaggar has been monitored in the year 2019 and 2020 and data has been compared for the period August to October, 2019 and August to October, 2020 and it indicates that there is no improvement in the water quality of river Ghaggar except 2 locations where also insignificant improvement has been observed w.r.t. BOD and T.Coli parameters. Further, the river water quality indicates that its quality varies between D to E as per the Water Quality Criteria prescribed by CPCB.

PPCB also informed that due to low discharge in river Ghaggar during the months September and October of the years 2019 and 2020 as compared to the discharge measured in the month August, 2019-2020, dilution in river Ghaggar is less and hence the values of the contaminants have been increased in river Ghaggar.

PPCB has also carried out the water quality monitoring of major drains and river Ghaggar at the upstream and downstream of the confluence points of major drains and in these major drains, all the parameters have been found much higher and there is deterioration in the water quality of the drains and ultimately these have deteriorated the water quality of river Ghaggar.

The Executing Committee observed that there is need to carry out the detailed monitoring of point sources falling into river Ghaggar and the responsible agencies contributing high values of parameters are is to be identified so that these agencies be directed to take time bound action to bring down the values of the various parameters within the norms.

PPCB reported that monitoring of point sources, falling into river Ghaggar, has been completed and the report is under preparation and most likely, the report shall be ready within 15 days.

The Chairman of the Executing Committee directed that next meeting of the Executing Committee shall be held on 24.12.2020, wherein, Punjab Pollution Control Board shall present the report in detail. PPCB shall also call the concerned departments to attend the meeting. Copy of the report may be sent to the Executing Committee atleast 10 days before the date of meeting.

2. Status of laying of sewerage network in the towns and interception of sewage

It was reported in the last meeting that more than 50% sewerage system has been laid in all the 30 towns except Bassi Pathana (42%), Bhadson (0%), Boha (0%), Lalru (23%) and Sanaur (0%) and accordingly it was directed that sewerage system in all the towns shall be completed simultaneously along with the completion of STPs by 31.3.2021.

PWSSB apprised that out of total 30 towns, sewerage network more than 75% has been completed in 18 towns, 50- 75 % in case of 6 towns, 25–50% in case of 2 towns and less than 25% in case of 4 towns located in the catchment area of river Ghaggar.

196

The Executing Committee noted the compliance and directed that sewerage network in all the towns shall be completed simultaneously along with the completion of STPs by 31.3.2021.

3. Performance of Existing STPs

PPCB reported that monitoring of 21 existing STPs has been carried out in the month September, 2020 and October, 2020. The monitoring of STPs conducted in the month of October, 2020 indicates that 17 STPs were found complying, whereas 4 STPs were found non complying and action against the operating agencies of these STPs has been taken by way of imposing environmental compensation and filing of legal case under the provisions of Water Act, 1974.

PWSSB informed that out of 4 STPs for the towns Bareta, Sardoolgarh, Bhikhi and Budhladha, 3 STPs (Bareta, Sardoolgarh and Bhikhi) are meeting with the prescribed norms and there is need to conduct composite sampling of these STPs. For STP of Budhlada town, efforts are being made to improve the performance of STP and is expected that its performance shall be improved before 31.3.2021.

After detailed discussion, the Chairman of the Executing Committee directed as under:

i) **Punjab Pollution Control Board shall continue to monitor all the existing STPs on monthly basis and action against the responsible agencies for not operating the STPs effectively may be taken under the provisions of the Water Act, 1974.**

ii) **PPCB and PWSSB shall jointly conduct composite sampling of STPs namely Bareta, Sardoolgarh and Bhikhi within 15 days.**

iii) **PWSSB improve the performance of STP of Budhladha town before 31.3.2021 so as to meet with the prescribed norms .**

4. STP under construction

In the last meeting, Executing Committee was informed that 10 STPs of capacity 42.5 MLD are under construction but the percentage of work done was very low (0-27%) except Boha town where 52% of construction work has been completed.

Now, it has been reported that the progress w.r.t. construction of STPs has been increased and these STPs shall be completed as per the timelines mentioned in the report.

The Chairman of the Executing Committee emphasised that Hon'ble NGT has rejected the application made by State of Punjab for extension in time period beyond 31.3.2021 for completion of STPs and directed that the Executing Agencies of STPs shall complete all the 10 STPs by 31.3.2021.

5. STPs under planning

PWSSB reported that out of total 12 STPs for 8 towns, which are under planning, 08 STPs are at tendering stage, 03 are at DNIT stage and for 01 STP is at DPR stage. For STPs of smaller capacity, nono-bubble technology has been proposed

197

and the department is quite hopeful that with the installation of said technology, the prescribed standards for parameters shall be achieved.

After discussion on the issue, it was directed that PWSSB shall compete 12 STPs of capacity 34 MLD for 08 towns by 30.3.2021 and shall achieve the prescribed standards for the parameters.

6. Status of STPs where land issues are to resolved

It was informed that there are 05 STPs where land issues are yet to be resolved for installation of STPs. The Deputy Commissioners of the concerned Districts have decided to acquire the land under Compulsory Acquisition Act. In one case of the town (Amloh), approval has been received from the Department of Local Government to make payment to purchase of land required for installation of STP. In case of land for STP for another town (Lalru Mandi), the residents of the area has filed case in the Hon'ble Court and next date of hearing in the case is 2.2.2021. However, the Department is in the process of exploring the feasibility of acquiring another piece of land for STP.

After detailed discussion, the Chairman of the Executing Committee directed that land issues of 5 STPs of capacity 21.7 MLD may be resolved within 2 months and STPs shall be completed by 30.3.2021.

7. Status of STPs require technological up gradation and capacity enhancement

It was reported that 03 STPs based on old technology (WSP) have been proposed to be upgraded for which presently no funds have been tied up. However, the department is exploring the various options like installation of Nano Bubble technologies, Solar Aeration System, Extended Aeration in the system or any other option and the STPs shall be upgraded by 31.03.2021.

The capacity enhancement of STP for Patiala town from 46 MLD to 61 MLD, whose work has been completed to 78%, shall be completed by 31.01.2021.

After detailed discussion, the Chairman of the Executing Committee directed as under:

1) **PWSSB shall upgrade 3 existing STPs for the towns Bareta, Bhikhi and Sardulgarh by 31.03.2021 and shall ensure that these STPs shall meet with the prescribed standards.**
2) **PWSSB shall complete the enhancement work of STP Patiala from 46 MLD to 61 MLD by 31.01.2021.**
3) **PPCB shall issue necessary directions to MES authorities to complete 6 MLD STP for Patiala and 1 MLD STP for Nabha by 31.03.2021.**

8. Gap in treatment of sewage

It was submitted that wastewater generation and capacity of STPs installed for 30 towns have been assessed and gap of 66.47 MLD has been observed, which is to be treated by providing STPs in different towns in a time bound manner.

198

The Chairman of the Executing Committee directed that treatment of sewage to cover the gap shall be completed by 30.03.2021 and PWSSB or any other Executing Agency shall ensure that after 31.03.2021 there shall be no gap in sewage to be treated.

9. Status of ETP, inspection, performance of ETPs and action against the violating industries

Punjab Pollution Control Board reported that that 48 industries exist in catchment area of river Ghaggar, out of which 27 industries were visited and all 3 industries were found violating the norms and action under the provisions of Water Act, 1974 has been taken against these 3 industries.

After detailed discussion, it was directed that PPCB shall continue to make surprise inspection of the industries located in the catchment area of river Ghaggar and action against the violating industries may be taken under the provisions of the Water Act, 1974.

10. Status of irrigation schemes to utilize the treated sewage of STPs

The department of Soil and Water Conservation reported as under.

- In order to utilize the treated sewage for irrigation, 10 irrigation schemes have been commissioned.
- Irrigation schemes for 24 towns have been prepared but the funds have not been tied up.
- In case of 4 towns, irrigation schemes are not feasible.
- To utilize the treated sewage of STP of capacity 7 MLD for Rajpura town, irrigation schemes is under progress and shall be completed by 31.12.2020.
- For utilization of treated sewage of STPs of 4 towns namely Mandi Gobindgarh, Patiala, Dhuri, and Sangrur, funds have been tied up under RIDF-25 scheme, out of which, funds for installation of irrigation scheme to utilize treated sewage of 25 MLD STP of Mandi Gobindgarh amounting to Rs. 4.46 crores have been released.
- The Department has prepared its proposal under State Plan Scheme for utilization of wastewater of other STPs with an outlay of Rs.479 crores and the same has been sent to Government for approval.

After detailed discussion, the Executing Committee directed as under:

1) **The Chief Secretary, Punjab shall direct the concerned Department to arrange funds to lay irrigation network to utilize the treated sewage of 24 towns for irrigation.**
2) **Irrigation scheme to utilize 7 MLD treated sewage of Rajpura town shall be completed 31.12.2020.**
3) **The Department of Soil Conservation shall start installation of irrigation scheme to utilized treated sewage of 25 MLD capacity STP of Mandi Gobindgarh by 15.12.2020 and commission the same by 31.3.2021.**

4) **For release of funds for laying of irrigation network to utilize the treated sewage of STPs of Patiala : 10 MLD, Dhuri: 5 MLD and Sangrur: 11 MLD, the Department of Soil and Water Conservation shall take up the matter with the Department of Finance through its Administrative Secretary.**

11 Status of installation of STPs for the villages

It was informed that out of total 389 villages, 87 villages have been covered under phase-1 for treatment of sewage of the villages. Out of these 87 villages, STPs have been completed in 29 villages and in 43 villages, the work of STPs is under progress. For the construction of STPs for the remaining 317 villages, funds are being arranged for installation of STPs.

After detailed discussion, it was directed as under:

i) **STPs for 43 villages, out of 87 villages shall be completed by 31.12.2020.**

ii) **STPs for the remaining 317 villages shall be completed by 31.03.2021.**

12 Ground water quality in the vicinity of river Ghaggar

PPCB reported that Ground Water Quality of 26 ground water sources has been analyzed and it has observed that inorganic parameters like TDS, total hardness, total alkalinity, calcium and magnesium have been found beyond acceptable limits but within the permissible limits in most of the ground water samples. However, in 3 ground water sources, parameters namely iron, total alkalinity and TDS have been found beyond the permissible limits.

After detail discussion on the issue, the Chairman of the Executing Committee directed as under:

i) **PPCB shall continue to carry out monitoring of ground water sources located in the catchment of river Ghaggar as per the frequency decided by the Hon'ble NGT.**

ii) **PPCB shall seal 3 ground water sources, where the parameter iron, total alkalinity and TDS have been found higher than the permissible limits within 1 month and display board mentioning that "Water is not for drinking" may be erected at these locations.**

13 Maintaining Environment Flow and Water Shed Management.

It was informed that the meeting of the team constituted by Executing Committee in its meeting held on 16.9.2020 was held on 12.10.2020 and field visit was conducted on 14.10.2020 and the team is in the process of preparing its report.

After detailed discussion on the issue, it was decided that the team, constituted for conducting detailed survey along river Ghaggar for the preparation of proposal/plan for construction of storage ponds/basin/reservoir/water retaining structures along river Ghaggar

200

or any other mechanism to maintain environment flow and eco system in the river, shall submit its report within 15 days.

14 Management of Septage and Faecal Sludge

It was informed that the draft guidelines/policy framed by the Technical Committee for providing various technological options for treatment of wastewater in rural areas shall be provided within 3 days to the Executing Committee for further action.

After discussion on the issue, it was directed that PPCB shall supply the copy of the draft guidelines/policy framed by the Technical Committee within 3 days and the Committee constituted by the State Government shall submit its findings w.r.t. treatment of septage and faecal sludge to the Executing Committee within 2 months.

15 In-Situ Bioremediation in the drains carrying untreated sewage and not connected to STPs

PPCB informed as under.

i. PWSSB has installed in-situ remediation technologies consisting of Facultative Pond followed by constructed wetland system along with plantation in Sirhind Choe to treat 0.5 MLD sewage of Nagar Panchayat Bhadson.

ii. PPCB has installed in-situ remediation technologies in Bhulana Drain carrying waste water of 27 colonies near village Riwal. This technology consisting of 3 green bridges, Nano Bubble Aeration system, 2 Stage cascade aeration system and Phytoremediation. The analysis data of the in-situ remediation technology carried out by PPCB in the month of June and July indicated that there is reduction of BOD in the range of 12%-65%.

iii. PPCB shall again carry out the analysis of effluent samples at the inlet and outlet of the in-situ remediation technology set up in Bhulana Drain in the month of December, 2020 to assess its effectiveness.

After detailed discussion, it was decided as under:

The Executing Committee shall visit in-situ remediation technology set up in Sirhind Choe, micro forest area developed along Budha Nallah in Ludhiana and Real Time Water Quality Monitoring System installed in river Sutlej at Ludhiana on 27.11.2020 and the concerned officers of PPCB, PWSSB and any other concerned departments shall accompany the Executing Committee on the day of visit. Chief Environmental Engineer, Punjab Pollution Control Board, Ludhiana shall coordinate the matter.

201

16. Installation of real time water quality monitoring stations (RTWQMS) in river Ghaggar

PPCB reported as under.

- There is proposal to install 4 Real time Water Quality Monitoring Stations (RTWQMS) in river Ghaggar at the following locations.
  - ✓ Bhankarpur near Derabassi
  - ✓ Downstream Patiala nadi
  - ✓ Downstream Sagarpara drain
  - ✓ Sardulgarh
- Supply order has been placed to M/s Nevco Engineers for installation of RTWQMS.
- These RTWQMS shall be installed by 30.11.2020.

The Executing Committee appreciated the efforts made by Punjab Pollution Control Board to install RTWQMS in river Ghaggar and directed that these RTWQMS shall be ensured to be installed by 30.11.2020 and their analysis results may be displayed on PPCB and CPCB websites.

17. Status of Prosecution launched by PPCB

It was informed that in 3 Districts namely Patiala, SAS Nagar and Mansa, located in the catchment area of river Ghaggar, 125 cases have been filed in the various Courts, out of which 1 case is pending before Hon'ble High Court.

All other cases are pending in the various Hon'ble courts of the Districts.

After detailed discussion on the issue, the Chairman of the Executing Committee directed that PPCB through the Department of Science Technology & Environment, State of Punjab shall move the application before the Registrar of Hon'ble Punjab & Haryana High Court to constitute Special Environment Court in the State of Punjab or alternatively special Court may be designated for early and speedy decisions of the Court cases filed under the various Environment Acts

sd/ **Dr. Babu Ram**	sd/ **Ms. Urvashi Gulati**	sd/ **Justice Pritam Pal** Former Judge, Punjab & Haryana High Court now as Chairman of Executing Committee

Note: The Chairman and members of the Executing Committee have given their concurrence on the minutes of the meeting

Babu
20.11.2020

202

Annexure - II

Office of the Executing Committee

Constituted by Hon'ble National Green Tribunal in OA No.138/139 of 2016 and 606 of 2018 and OA No. 606 of 2018 in the matter of compliance of Solid Waste Management Rules, 2016
Office address: 4th floor, 5th Tower, forest complex, Sector- 68, SAS Nagar

To

The Member Secretary,
Haryana State Pollution Control Board,
C-11, Sector 6, Panchkula.

No. CMC/SB/2020/1122 dated: 13.11.2020

Subject: Minutes of 19th meeting (to review the directions given/recommendations made in 18th meeting held with State Level Officers of Haryana on 19.8.2020) held under the Chairmanship of Justice Pritam Pal, Former Judge of Punjab and Haryana High Court and now as Chairman of the Executing Committee, constituted by Hon'ble NGT in OA No. 138/139 of 2016 in the matter of Stench Grips Mansa's Sacred Ghaggar River and Yogendera Kumar, w.r.t. control of pollution in river Ghaggar on 12.11.2020 at 11.00 AM (through video conference)

Please find enclosed herewith minutes of 19th meeting (to review the directions given/recommendations made in 18th meeting held with State Level Officers of Haryana on 19.8.2020) held under the Chairmanship of Justice Pritam Pal, Former Judge of Punjab and Haryana High Court and now as Chairman of the Executing Committee, constituted by Hon'ble NGT in OA No. 138/139 of 2016 in the matter of Stench Grips Mansa's Sacred Ghaggar River and Yogendera Kumar, w.r.t. control of pollution in river Ghaggar on 12.11.2020 at 11.00 AM (through video conference) for your information and necessary action please.

It is requested that minutes of the meeting may kindly be conveyed to all the concerned departments with the request to take necessary action on the directions/recommendations of the Executing Committee and action taken report be sent to the Executing Committee within 21 days.

DA/ as above

Babu Ram, 13.11.2020
Technical Expert,
Executing Committee

Minutes of 19th meeting (to review the directions given/recommendations made in 18th meeting held with State Level Officers of Haryana on 19.8.2020) held under the Chairmanship of Justice Pritam Pal, Former Judge of Punjab and Haryana High Court and now as Chairman of the Executing Committee, constituted by Hon'ble NGT in OA No. 138/139 of 2016 in the matter of Stench Grips Mansa's Sacred Ghaggar River and Yogendera Kumar, w.r.t. control of pollution in river Ghaggar on 12.11.2020 at 11.00 AM(through video conference)

The following were present during meeting

a) **Members of the Executing Committee**

Sr. No.	Name and Designation in the Deptt.	Name & Designation in the Committee
1.	Justice Pritam Pal, Former Judge, Punjab and Haryana High Court	Chairman
2.	Ms. Urvashi Gulati, IAS, former Chief Secretary, Haryana	Member
3.	Dr. Babu Ram, former Member Secretary, PPCB	Technical Expert

The lists of the officers, present in the meetings, are as per Annexure-1

The Chairman of the Monitoring Committee apprised the officers of various departments, present in the meeting, about the orders of Hon'ble NGT in various cases connected to the matter, which are briefly mentioned as under.

1) The Hon'ble Tribunal in its order dated 6.12.2019 in OA No. 673 of 2018 (mentioned in order dated 6.12.2019 uploaded on 12.12.2019 in OA No. 916 of 2018) had issued direction that 100% treatment of sewage may be ensured as directed by the Tribunal vide order dated 28.08.2019 in O.A No. 593/2017 by 31.03.2020 at least to the extent of in-situ remediation and before the said date, commencement of setting up of STPs and the work of connecting all the drains and other sources of generation of sewage to the STPs must be ensured. If this is not done, the local bodies and the concerned departments of States/UT's will be liable to pay compensation as directed vide order dated 22.08.2019 in case of river Ganga i.e. Rs. 5 lakh per month per drain for default in in-situ remediation and Rs. 5 lakh per STP for default in commencement of setting up of the STP. The timeline for completing all steps of action plans including completion of setting up STPs and there commissioning till 31.03.2021 in terms of order dated 08.04.2019 in the present case will remain as already directed.

2) It was further informed that the Hon'ble Tribunal vide its order dated 21.05.2020 in OA No. 593 of 2017 at Para 8 [47(i) &ii)] has directed as under:

   i) 100% treatment of sewage may be ensured as directed by this Tribunal vide order dated 28.08.2019 in O.A. No. 593/2017 by 31.03.2020 at least to the extent of in-situ remediation and before the said date, commencement of setting up of STPs and the work of connecting all the drains and other sources of generation of sewage to the STPs must be ensured. If this is not done, the local bodies and the concerned departments of the States/UTs will be liable to pay compensation as already directed vide order dated 22.08.2019 in the case of river Ganga i.e.

Rs. 5 lakhs per month per drain, for default in in-situ remediation and Rs. 5 lakhs per STP for default in commencement of setting up of the STP

ii) Timeline for completing all steps of action plans including completion of setting up STPs and their commissioning till 31.03.2021 in terms of order dated 08.04.2019 in the present case will remain as already directed. In default, compensation will be liable to be paid at the scale laid down in the order of this Tribunal dated 22.08.2019 in the case of river Ganga i.e. Rs. 10 lakhs per month per STP.

Further, in para 13 of order dated 21.05.2020 in OA No. 593 of 2017 has directed that as regards non-compliant STPs, further action may be completed by the State PCBs/PCCs and it may be ensured that there is 100% treatment of sewage and till STPs are set up, at least in-situ remediation takes place. However, on account of Corona pandemic which has affected several on-going activities, the timeline of levy of compensation in terms of order dated 28.08.2019 in O.A. No. 593/2017 read with order dated 06.12.2019 in O.A. No. 673/2018, of 01.04.2020 may be read as 01.07.2020 and 01.04.2021 may be read as 01.07.2021. Further reports may be taken by the CPCB from all the State PCBs/PCCs as per the system evolved by the CPCB from time to time.

3) The Hon'ble Tribunal vide its order dated 1.6.2020 in OA No. 325 of 2015 in the matter of Lt. Col. Sarvadaman Singh Oberoi vs Union of India &Ors, has directed in para No.6 that harvesting surplus water during excessive rains from any areas of catchment needs to be optimized by enhancing the capacity of the existing ponds/water bodies, creation of water harvesting structures in the sub-watersheds to the extent possible, apart from setting up of additional water bodies/water harvesting structures wherever viable, utilizing available funds including under MGNREGA and involving the community at large at every level. Gram Panchayats can certainly play a significant role in the matter. Once adequate capacity enhancement of water bodies takes place, excess flood/rain water can be channelized by using appropriate water harvesting techniques. This action needs to be coordinated by the District Magistrates in coordination with the Department of Irrigation and Flood Control or other concerned Departments such as Department of Rural Development/Urban Development/Local Bodies/Forests/Revenue etc. The District Magistrate may as far as possible hold a meeting of all the stakeholders for the purpose as per the District Environment Plan or Watershed Plan within one month from today. The District Magistrates may also ensure that as far as possible at least one pond/water body must be restored in every village, apart from creation of any new pond/water body.

4) The State of Punjab has moved an application before Hon'ble National Green Tribunal for extension in timelines for remediation of legacy waste and for Commissioning of STPs. However, the Hon'ble Tribunal vide its order 17.9.2020 has rejected the prayer for extension in time.

5) The Hon'ble National Green Tribunal has considered the 6th report of the Executing Committee and has passed the detailed order dated 28.10.2020 and has given coercive directions and para no. 12 of the said directions is reproduced as under.

Para 12

We Accordingly direct the Chief Secretaries of the Himachal Pradesh, Punjab, Haryana and UT Chandigarh must meet (physically or online) within one month for brainstorming with reference to the recommendations of the Executing Committee for meaningful prompt action and fixing of the accountability for the erring officers. Such meeting may be convened and facilitated as per further direction in this order. Remedial action should not only include setting up of requisite equipment and interim measures but also making persons to whom the job is entrusted personally accountable in terms of their performance. After first meeting also, the four Chief Secretaries must meet atleast once in a month to take stock of the situation. First such meeting may be held on or before 30.11.2020 and meaningful action must be taken latest by 32 31.01.2021. In case of default, the Tribunal may have no option except to take coercive measures against the erring authorities.

Thereafter, the agenda was taken up for discussion as under.

1. **Water quality of River Ghaggar at various locations**

The Executing Committee was apprised that the water quality of river Ghaggar is being monitored at 47 locations and average value ranges between 6.0 to 110 mg/l. The Executing Committee observed that the value of BOD at the exit from the State of Haryana is 3.2 mg/l and after meeting with the pollution sources like river Markanda, Cheeka drain, Sagarpara drain, Kaithal drain, discharge of sewage of Jakhal, Ratia town and Ellenabad, Sirsa, the value of BOD in river Ghaggar water has been founf\d varying between 26 mg/l to 58 mg/l. The values of F.Coli from these sources entering into river Ghaggar have been observed as 72000 – 180000 MPN/100m.

It was observed by the Executing Committee that even after the achievement of the standards for BOD parameter below 10 mg/l, the water quality in river Ghaggar shall not be improved if the values of F.Coli remains too high and not brought within the norms.

Engineering- in- Chief, PHED informed that out of 49 STPs owned by his department, 21 STPs shall be upgraded to bring F. Coliform parameter within the norms by 31.12.2020. 8 STPs by 31.3.2021 and remaining by 31.12.2021. HSVP stated that necessary upgradation in the existing 9 STPs owned by it shall be made by 30.6.2021.

After detailed discussion on the issue, it was directed as under:

All the Executing Agencies namely PHED, HSVP, ULB, D& P, HSDIIC and Garrison Engineer shall install new STPs and upgrade the existing STPs based on the Standards of 100 MPN/100ml for F.Coli parameter by 31.3.2021 so that water quality in river Ghaggar may be improved.

2. **Status of pollution in river Ghaggar and details of the drains carrying sewage/industrial effluent in river Ghaggar.**

It was reported that the Department of irrigation has supplied the list of 289 points, which carry the untreated sewage and enters into main drains and further lead to river Ghaggar. The latest status of these points was mentioned as under.

- Sewage points carrying treated sewage = 18
- Points which are carrying untreated sewage = 235
- Points which have been proposed to be connected to sewerage system and further to STPs = 36

After detailed deliberation, it was directed as under.

i. **All the 36 points, which have been proposed to be connected to sewerage system and further to STPs by 31.3.2021.**

ii. **The concerned departments viz. PHED, HSVP, ULB, HSIIDC and D&P shall prepare proper scheme/proposal to manage 235 points relaing to their departments either by connecting to the nearby sewerage system leading to STPs or by installing independent STPs for individual points or connecting points falling in the nearby vicinity and installing common STPs for group of points. The said schemes may be prepared by 30.11.2020 and shall be submitted to HSPCB under intimation to the Monitoring Committee.**

3. Status of laying of sewerage network in the towns and interception of sewage.

It was submitted as under.

- 27 towns are located in the catchment of River Ghaggar.
- Sewerage system (80.35 Kms) has been completed in 21 towns.
- 508.22 Km of sewer line is to be laid in 6 towns.

The Chairman of the Executing Committee directed that complete sewerage network of 508.22 Kms should be completed in all the remaining 6 towns by 31.12.2020.

4. Diversion/Tapping of sewage from 92 locations

HSPCB reported that183 MLD of effluent was proposed to be tapped/ diverted at 92 locations.

32 tapping points have been excluded because,

- ✓ 4 points have been found carrying treated sewage.
- ✓ At I location, effluent flows in rainy season.
- ✓ 1 point has been wrongly marked.
- ✓ 12 locations of Ambala and 9 locations of Hisar have been covered under sewerage system.
- ✓ 5 points of Barwala and 3 points of Ukhlana Mandi are basically ponds.

Therefore, 55.6 MLD effluent is to be diverted at 60 locations, the status of which is as under.

- ✓ 15.9 MLD effluent has been diverted at 18 locations.
- ✓ Work is in progress at 9 locations for diversion of 4.7 MLD effluent.
- ✓ Work has not been started for diversion of 35 MLD effluent at 33 locations.

After detailed discussion, it was directed as under.

The department of Urban Local Bodies shall connect the sewage of 33 locations to the nearest STPs to divert 35 MLD sewage by 31.3.2021.

5. **Status of sewage treatment installed for treatment of sewage of the towns located on river Ghaggar and their performance.**

It was submitted that 59 STPs have been installed in the catchment of river Ghaggar having capacity of 514 MLD. The gist of which is as under.

Department	Total No. Of STPs	Capacity (MLD)
PHED	49	373.5
HSVP	9	131.5
Garrison	1	9.0
Total	59	514

It was further informed that HSPCB is monitoring the performance of these STPs on monthly basis. The Monitoring Committee observed that 19 STPs out of 59 STPs are not meeting with BOD parameter, whereas, all the STPs have been found failure for F.Coli parameter.

After detailed discussion, it was directed that all the concerned departments namely PHED, HSVP and Garrision Engineer, MES shall upgrade existing STPs to bring BOD and F.Coli parameters within the norms by 31.3.2021.

6. **Status of Sewage Treatment Plants which are under construction/ planning.**

It was reported as under.

- Out of 20 STPs which were under construction, 6 STPs have been completed.
- 14 new STPs of capacity 68 MLD are under construction and lokely to be completed by 30.06.2021.

The Chairman of the Monitoring Committee directed that 6 STPs may be commissioned by 30.11.2020 and 14 new STPs of capacity 68 MLD may be completed by 31.3.2021.

7. **Status of sewage treatment plant which are under proposal**

The Executing Committee was apprised that for future population to be come up in the planned areas, 8 STPs of capacity 46.5 MLD have been proposed by HSVP. The timelines for completion of these STPs have been mentioned between 31.12.2021 to 30.6.2025.

The Executing Committee observed that such a huge quantity of untreated discharge of 46.5 MLD should not be allowed to be discharged, as such, there is need to prepare plan/ scheme including DPR and process of identification of land may be started timely so that simultaneously with the construction of houses/buildings, the work of STPs may also be started by HSVP. Accordingly. It was directed that HSVP shall prepare plan/ scheme including DPR and process of identification of land by 31.12.2020.

8. Status of sewage treatment plant which require technologically upgradation

It was reported as under.

Technological upgradation of 8 STPs of capacity 77.5 MLD is under progress, out of which 02 STPs have been completed. The construction work of 06 STPs has completed between 30 – 80%.

18 STPs of capacity 69.5 MLD (mostly on MBBR technology) have also been proposed for upgradation but these STPs are at DPR stage.

02 STPs (Kalka: 4.5 MLD and Ambala City: 6 MLD) have also been proposed for upgradation but the land is not available for upgradation of these STPs.

After discussion, the Executing Committee directed as under:

i) **8 STPs of capacity 77.5 MLD, where the upgradation work has been started, shall be installed and commissioned by 30.3.2021.**

ii) **18 STPs of capacity 69.5 MLD, which are at DPR stage may be completed by 30.6.2021.**

iii) **2 STPs of capacity 10.5 MLD (Kalka: 4.5 MLD and Ambala City: 6 MLD), where presently, no land is available for upgradation, possibility may be explored to adjust the components for upgradation by 30.11.2020 and best suited technology may be used for upgradation of STPs at the existing locations so that these may be upgraded by 30.6.2021.**

9. Gaps in treatment of sewage of the towns located on river Ghaggar.

The Executing Committee was informed as under.

- The total sewage discharge of 27 towns located in the catchment area of river Ghaggar is 258 MLD
- Present capacity of STPs in these 27 towns is 514 MLD and there is gap of 0.7 MLD in Ambala town only.

The Executing Committee observed as under.

- Untreated sewage through 235 points from different localities of towns is discharged into main drains which further lead to river Ghaggar. Quantity of sewage of these outlets/points shall add to the gap in sewage quantity.
- There is no proposal to treat sewage of 35 MLD through 33 locations, which is being discharged into river Ghaggar, as such, the discharge of 35 MLD shall also add the gap in sewage to be treated.
- For estimation of sewage discharge of 27 towns, standard term of 135 lpcd consumption of water has been considered and 80% of consumption i.e 108 lpcd has been taken for calculation of sewage discharge of the towns, whereas, in urban areas, normally, the water consumption varies between 200 – 300 lpcd. Moreover, the water supplied through tube wells installed by Municipal Councils/ Corporations for the

residential and commercial areas of the towns has also not been considered while calculating consumption of water in the towns viz – a viz quantity of sewage discharge of the towns. As such, the quantity of sewage discharge from these 27 towns shall be more as compared to the discharge of the towns as calculated and mentioned in Annexure - 9.

After discussion on the issue, it was directed by the Chairman of the Executing Committee that Haryana State Pollution Control Board shall reanalyze the data w.r.t quantity of sewage of 27 towns based on the factors as mentioned above by 31.12.2020 and actual gap in sewage quantity to be treated may be calculated and report may be produced before the Executing Committee in its next meeting to be held on 14.1.2021.

10. **Status of installation of effluent treatment plants by the industries, inspection by State Pollution Control Board, performance of ETPs and action against the violating industries and status of CETPs.**

It was informed as under.

HSPCB is regularly conducting inspections of the all the industries in the catchment of river Ghaggar and action is being taken against violating units as per policy. Action taken report against non complying units was mentioned as under.

- Total No. of industries in the Catchment area of river Ghaggar: 197
- No. of industries inspected :137
- No. of violating units where Environment Compensation imposed :19
- Amount of EC imposed : Rs. 56 Lakh
- No. of units closed by Board : 97
- No. of industries which have joined 3 CETP of capacity 6 MLD : 50 industries having discharge 1.05 MLD

The Executing Committee noted the compliance and directed that HSPCB shall continue to monitor the all the industries located in the catchment area of river Ghaggar and action against the violating industries may be taken under the provisions of water Act, 1974.

11. **Implementation of irrigation scheme to utilize treated sewage for irrigation and the irrigation scheme which are under construction/planning.**

It was informed as under.

- 15 irrigation projects to utilize the treated sewage of the towns are likely to be completed by 30.6.2022
- Specific Irrigation schemes to utilize the treated sewage of the towns namely Ratia, Tohana, Jakhal and village Rishi Nagar Hisar for irrigation are likely to be completed by 30.06.2021.

- These irrigation projects have been planned for execution in 5 years and likely to be completed by 2025
- The balance projects/schemes covered under Ghaggar Action Plan, under consolidated project of Rs 1098.25 Cr project for 207 STPs, are likely to be completed within 5 years i.e. upto 2024-25.

After detailed discussion, the Chairman of the Executing Committee directed as under:

- **All the 15 irrigation projects to utilize the treated sewage of STPs located in the catchment area of river Ghaggar should be completed by 31.3.2021.**
- **Specific Irrigation schemes to utilize the treated sewage of the towns namely Ratia, Tohana, Jakhal and village Rishi Nagar Hisar for irrigation should be completed by 30.06.2021.**
- **Out of total 207 STPs located in the catchment area of river Ghaggar and Yamuna, , priority may be given to the remaining 44 STPs (59-15) of Ghaggar catchment area to utilize their treated sewage for irrigation.**

12. Non point sources and control of pollution of these sources.

The Executing Committee was informed as under.

- There are complaints of illegal discharge through tankers. It has been decided in the recent CS meeting that the same can be effectively tackled only by special drives through district level teams constituted with officers from Revenue, Irrigation, PHED, Industries and Police, who were advised to conduct such drives as frequently as possible and seize the vehicles under the provisions available.
- State level policy has already been framed and many ULBs have also adopted at local level, but its implementation and monitoring mechanisms are yet to be firmed up. Chief Secretary advised the ULBD to immediately implement the system through special efforts and further directed that District level drives be initiated by ULBD along with district administration and District Level Task Forces, constituted by Hon'ble NGT, and such tankers, engaged in illegal discharge may be seized by the concerned authorities.

MS, HSPCB and Director General, department of Urban Local Bodies assured that teams of officers of revenue department, irrigation, PHED, HSVP, industries and police shall be deputed within one week to make surprise inspection/raid on such illegal discharges into the drains/river.

After detailed discussion, it was directed that District level teams consisting of officers from revenue department, irrigation, PHED, HSVP, industries and police may be deputed immediately to make surprise checks/raids on the tankers carrying illegal discharge and legal action may be taken against the defaulting persons/agencies.

13. **Status of installation of sewage treatment plant for the villages.**

It was submitted as under.

- 45 villages have been identified in the catchment of river Ghaggar
- Work for installation of treatment system in 36 villages has been sanctioned.
- In 1 village, the construction work STP has been completed
- Work of STPs in 31 villages is under progress
- No work started in 4 villages (village Mouli of Panchkula District and village Harnola, Kutubpur and Ghuhna of Kaithal District).

- **After detailed discussion on the issue, it was directed by the Chairman of the Executing Committee that STPs in all the 45 villages falling in the catchment area of river Ghaggar should be completed by 31.3.2021.**

- **Also, while having discussion on the issue of installation of STPs for the villages, it was observed by the Executing Committee that in villages Dholuwal, Burjkotla, Toda, Mouli, Khetpural, Rehor and Bharoli of district Panchkula, soakage pits are under construction, whereas, soakage pit is not a scientific and environmentally sound technology as it may cause ground water contamination. Therefore, the concerned department and HSPCB shall jointly look into the issue and take appropriate action accordingly so that ground water contamination may not occur.**

14. **Ground water quality in the catchment of area of river Ghaggar.**

As per HSPCB, ground water quality is being monitored at 25 locations in the catchment of river Ghaggar. Out of total 25 locations, ground water is found fit for drinking at 16 locations and non complying at 9 locations.

Directions have already been conveyed to all the task forces to cap such water sources and a display board mentioning that "Water is not for drinking purpose" may be placed. The same has been compiled by the task forces.

The Chairman of the Executing Committee informed that in the Action Taken Report of 18th meeting, it has been mentioned that in Kaithal, Hisar, Sirsa and Fatehbad, the number of non- compliance Locations have been observed as 13, 2, 8 and 14 and asked as to whether these ground water sources have been capped or not. HSPCB apprised that all these ground water sources have been caped and display boards mentioning that "Water is not for drinking purpose" have been erected at these locations.

The Chairman of the Executing Committee directed that Haryana State Pollution Control Board shall continue to monitor groundwater sources in the catchment area of river Ghaggar as per the frequency maintained by it and in case the contaminated sites are observed, the same shall be sealed by the Board and display board mentioning "water is not fit for drinking" may be erected at these sites.

15. Environmental Flow

It was apprised by the department of Irrigation as under.

- Feasibility Report submitted by WAPCOS for three dams namely Bhud Dam, Khetpurali Dam and Dudhgarh Dam on tributaries of river Tangri, which after examination was sent to Govt., wherein the proposal of only Bhud dam has been approved and other two have been kept pending.
- The action is being taken for required clearances such as Interstate, Environment, Forest etc.
- Detailed Project Report (DPR) will be prepared after clearances. These projects are for providing drinking and irrigation facilities to Barwala block of Panchkula district.
- Ghaggar Standing Committee (GSC) of CWC in its 28th meeting held on 01.03.2019 decided that, CWPRS will carry out the Mathematical Model studies and after complete study any decision will be taken regarding construction of dams or other structures on Ghaggar or Tangri. Mathematical Model studies are likely to be completed by 31.10.2020 and after that GSC may take any decision.
- However, no E-flow/Ecosystem is possible through these dams.
- Further decision regarding construction of dams i.e. "increasing the storage capacity" on river Ghaggar as well its tributary river Tangri will depend upon discussions and deliberations in Ghaggar Standing Committee and decisions taken therein.

The Executing Committee noted the observations and directed that department of Irrigation shall also explore the possibilities of other projects which may maintain Environmental Flow in the river Ghaggar.

16. Septage and Faecal sludge management.

It was apprised that the proposal is under consideration. So far, the quantum of the sludge collected is very small in quantity and is being handled at the existing STPs. The problem has not been faced by the State so far, but for future course of action, the exercise is under proposal.

The Executing Committee apprised that in the last meeting, it was directed that Urban Local Bodies department, PHED, HSVP, D & P in consultation with Haryana State Pollution Control Board shall quantify the discharges of septage and Faecal sludge to be disposed off at particular STPs keeping in view the capacity of STPs and quantity of sewage being treated at the STPs so that disposal of such sludge may not hamper the functioning of STPs. However, the report is awaited.

After detailed discussion, it was directed that HSPCB shall pursue the matter and report be submitted by 30.11.2020.

17. In-situ bio-remediation in the drains carrying untreated sewage and not connected to STPs.

It was informed as under.

- Nodal Departments for execution of bio/phyto- remediation have been identified but work is yet to be taken up.

- ULBD intimated that they have started in Gurugram and Yamuna Nagar as pilot projects.
- The Chief Secretary, has advised that the departments concerned may have a direct experience of implementation in Delhi / Punjab, where such projects have been taken up and the same may be implemented immediately.
- The department visited sites of Punjab on 11.08.2020 and subsequently a workshop was organized through video conferencing on 17.08.2020 by HSPCB.

After detailed discussion, it was directed that Executing Agencies like ULB department, HSVP, PHED and Panchayat Departments shall identify the drains carrying untreated sewage and not connected to STPs immediately and provide appropriate in-situ bio remediation technology in the drains by 31.12.2020.

18. **Installation of Real Water Quality Monitoring Stations (RTWQMS) in River Ghaggar.**

HSPCB informed that permission to set up Real Water Quality Monitoring Stations (RTWQMS) in River Ghaggar has been granted by the concerned department.

It was again directed that Haryana State Pollution Control Board shall take immediate action to install Real Time Water Quality Monitoring Stations by 31.12.2020 at appropriate locations.

19. **Watershed Management**

It was submitted that the Agriculture Department is constructing various structures like check dams/ bunds etc. for watershed management in catchment area of river Ghaggar. 1514 such structures of costing Rs. 45.83 crore have been constructed. However, no report has been received from Panchayat department.

The Executing Committee noted the compliance and directed as under.

- **Agriculture Department shall construct and complete the remaining structures in a time bound manner.**
- **Panchayat department shall also submit its report regarding Watershed Management within 10 days.**

20. **Status of prosecution launched by the State Pollution Control Board against the violators under the provisions of Water Act, 1974.**

The latest status of prosecutions launched by HSPCB against the violators, in the catchment area of river Ghaggar, under the provisions of Water Act,1974 was submitted as under.

Abstract showing prosecution cases filed against the violators in Ghaggar River catchment area.

Sr. No.	Region	No. of cases filed Before'2018	No. of cases filed after'2018	Total
1	Panchkula	4	17	21
2	Ambala	25	14	39
3	Kaithal	5	3	8
4	Hisar	4	8	12
5	Kurukshetra	0	5	5
6	Total	38	47	85

MS, HSPCB apprised that court cases against the violators are filed only after checking all the documents and duly vetted by Law Officers.

The Executing Committee noted the compliance and directed as under.

- **HSPCB shall hold monthly meetings with the concerned officers dealing with court matter the status of the cases pending before the Environment Courts may be discussed in the meetings.**
- **HSPCB shall pursue the cases before the Hon'ble Courts for early decisions in the cases. Quarterly report in this regard may be sent to the Executing Committee.**

21. Status w.r.t. tree plantation and bio-diversity parks to be developed along River Ghaggar

A) Tree Plantation

It was reported that in urban areas 19593, 13416, 9500 and 18078 trees have been planted by HSVP during the years 2016-17 to 2019-20. Plantation developed in the catchment area of River Ghaggar by the Forest Department was mentioned as under.

Details of plantation in catchment areas of Ghaggar river				
	Plantation in the year2018-2019		Plantation Target for the year 2019-2020	
District	Area (Ha.)	No. of plants	Area (Ha.)	No. of plants
Panchkula	1117	8,31,000	404	4,81,000
Fatehabad	1519	11,41,000	855	7,20,000
Sirsa	863	8,81,000	624	5,27,000
Total	3499	2853000	1883	1728000

Forest Department has selected around 51 villages in the catchment areas of river Ghaggar and has proposed to plant around 2.6 lakh plants in the coming season. The sites for development of Parks have also been identified and a plan has also been prepared. The details are as under.

District	No of Villages	No. of Plants to be planted
Panchkula	30	71150
Ambala	2	43000
Kaithal	3	3650
Fatehabad	12	131930
Sirsa	4	9000
Total	**51**	**258730**

B) Setting up biodiversity parks on flood plains by removing encroachment.

The details of Herbal parks for Bio-diversity conservation were submitted as under.

Herbal Parks for Bio-diversity conservation		
District	**Name**	**Areas in Acre.**
Panchkula	i) World Herbal Forest, Morni	12500
	ii) Kapoor Vatika at Mallah	25
	iii) Thapli Herbal Park at Village Thapli	10
	iv) Tikka-Tal Herbal Park	20
Fatehabad	i) Mulethi Vatika at Gilakhera	14
	ii) Er. Kanwar Sain Gupta Herbal Park at Tohana	25
Sirsa	i) Bahera Vatika at Village Fulkan Village	17
Total		**12611**

The Executing Committee noted the progress and directed that HSVP, department of Forest and other concerned department shall continue with the development of plantation and bio-diversity parks in the areas along the catchment area of river Ghaggar to attenuate the air quality, ecosystem and improvement in quality of the environment.

22. Additional Issues

i) Overflowing of ponds

The Chairman of the Executing Committee informed that number of complaints are being received regarding overflowing of village ponds and unhealthy conditions are being created for the villagers. There is urgent need to give attention towards the problem of villagers.

It was informed by Department of Panchayat that number of village ponds have been cleaned and desilted and capacity enhancement has been made. The department has taken note of it and the problem of overflow of pond shall be taken care of and necessary directions shall be issued to the Deputy Commissioners of the concerned Districts and necessary plan shall be prepared by 30.11.2020 to take appropriate steps to get stop the overflow of the ponds and report shall be submitted accordingly.

The Chairman of the Executing Committee noted the commitment made by the department of Panchayat.

ii) Pollution sources in Saraswati river

The Chairman of the Executing Committee apprised that during the last visit of the Executing Committee, it was noted that some of the industries were discharging untreated effluent in Saraswati river and were contaminating its water quality.

The Chairman of the Executing Committee directed that the concerned officer of department of irrigation of State of Haryana shall ensure that no such contaminated effluent of the industries or any other source may be allowed in Saraswati river and in future in every State level meeting of the Executing Committee, the concerned officer should be present in the meeting. HSPCB should convey the same to the concerned officer of department of Irrigation.

Lastly, the Chairman of the Executing Committee appreciated the efforts made by the concerned officers for preparation of data for the meeting and steps taken by the various department to control pollution in river Ghaggar. It was further desired that all the concerned departments should take proactive steps to menace the pollution in river Ghaggar in time bound manner.

sd/	sd/	sd/
Dr. Babu Ram	**Ms. Urvashi Gulati**	**Justice Pritam Pal, former Judge Punjab & Haryana High Court now as Chairman of Executing Committee**

Note: The Chairman and members of the Executing Committee have given their concurrence on the minutes of the meeting.

Babu Ram
13.11.2020