

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

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

**In Re: News item in the Tribune dated 12.05.2014 captioned:
Stench Grips Mansa's Sacred Ghaggar River**

Date of hearing: 22.11.2019

CORAM: **HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON**
HON'BLE MR. JUSTICE S.P WANGDI, JUDICIAL MEMBER
HON'BLE MR. JUSTICE K. RAMAKRISHNAN, JUDICIAL MEMBER
HON'BLE DR. NAGIN NANDA, EXPERT MEMBER
HON'BLE MR. SAIBAL DASGUPTA, EXPERT MEMBER

For Respondent(s): Mr. Shubha Bhalla, Advocate for Chandigarh PCC
Ms. Saloni Jain, Advocate for Punjab PCB
Mr. Rahul Khurana, Advocate for State of Haryana and
Haryana State PCB
Mr. Rajkumar, Advocate for CPCB

ORDER

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Introduction – the issue and the background till passing of order dated 07.08.2018

1. This order is being passed in continuation of order dated 11.04.2019 on the subject of effective steps for making Ghaggar river pollution free. 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.
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, Faecal Coliform, Lead and Iron were beyond permissible limits at most of the locations in Himachal Pradesh, Haryana, Punjab and Chandigarh.

Order of Tribunal 07.08.2018 constituting Executing / Monitoring Committee headed by Justice Pritam Pal, former Judge of Punjab and Haryana High Court to oversee execution of plan to prevent and remedy pollution of river Ghaggar and submit reports to this Tribunal

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.

Proceeding on the issue of remediation of polluted river stretches generally

5. The issue of 351 polluted river stretches was taken up by this Tribunal vide orders dated 20.09.2018, 19.12.2018 and 8.04.2019, in O.A. No. 673 of 2018. On 20.09.2018, the concerned States were required to constitute River Rejuvenation Committees (RRCs) to prepare action plans to make polluted river stretches pollution free. The action plans were to be submitted to CPCB. The matter was further reviewed on 19.12.2018 and thereafter. The matter is now fixed for 29.11.2019. This issue was also subject matter of consideration in order dated 16.01.2019, in Original Application No. 606 of 2018, which pertained to compliance of Municipal Solid Waste Management Rules. This Tribunal directed the Chief Secretaries of all the States to appear in person before this Tribunal after acquainting themselves with the progress not only on the issue of solid waste management but also other significant issues, including the subject of polluted river stretches. Accordingly, Chief Secretaries of Himachal Pradesh, Haryana, Punjab and Advisor to Administrator, Chandigarh appeared on 05.03.2019, 06.03.2019, 07.03.2019 and 26.03.2019 respectively and filed their reports which also included reports on the issues of polluted river stretches. The Tribunal directed the Chief Secretaries to continue to monitor the subject and furnish quarterly reports. Reports were also furnished by RRCs to CPCB which matter was dealt with by the Tribunal on 08.04.2019 and by subsequent orders.

Reports of Justice Pritam Pal Committee:

- a. **Report dated 28.02.2019**

6. As already mentioned, the present matter was last reviewed on 11.04.2019 in the light of the report of the Executing Committee dated 28.02.2019. The core issues considered included remedying the gap with regard to the sewage generation and management, preventing discharge of untreated industrial and municipal effluents and discharging of solid waste.

Gaps in sewage generation and management

7. Gap in report of sewage management, as per report dated 28.02.2019 of the Executing Committee, was found to be as follows:-

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

Water quality of the river and its tributaries

8. With regard to the challenge posed by uncontrolled discharge of untreated industrial effluents, deficiencies in solid waste management, bio-medical waste management and hazardous waste management in the State of Himachal Pradesh, Haryana, Punjab and UT Chandigarh, it was found that the samples of water taken from the rivers did not comply with the water quality criteria. The status of water samples was found to be as follows:-

“River Markanda

- *Dissolved Oxygen which is in the order of 8-12 mg/l and complying to the water quality criteria for bathing at the monitored locations.*

- BOD is in the order of 1-3 mg/l and is complying with the water quality criteria for bathing at the monitored locations.
- Faecal Coliform is in the order of 33000 to 70000 MPN/100ml and is not complying with the water quality criteria for bathing at the monitored locations.

Therefore, based on the measured values at the sampling locations, river Markanda is not complying to the water quality criteria for bathing.

River Kaushalaya

- Dissolved Oxygen concentration at the monitored location is observed as 7.8 mg/l and complying to the water quality criteria for bathing at the monitored location.
- BOD is observed as 2 mg/l and is complying with the water quality criteria for bathing at the monitored location.
- Faecal Coliform is observed as 11000 MPN/100ml and is not complying with the water quality criteria for bathing at the monitored locations.

Therefore, based on the measured values at the sampling location, river Kaushalya is not complying to the water quality criteria for bathing

River Ghaggar

- Dissolved Oxygen content is in the order of 0.3 to 7.6 at all the 14 sampling locations. 11 out of 14 sampling locations are not complying to the water quality criteria for bathing.
- BOD is in the order of 2-94 mg/l and 13 out of 14 sampling locations are not complying with the water quality criteria for bathing. Highest BOD of 94 mg/l is observed after confluence of Patiala drain/nadi.
- Faecal Coliform is in the order of 200 to 3,40,000 MPN/100ml and is not complying with the water quality criteria for bathing at 9 out of 13 monitored locations.

Therefore, based on the measured values at the sampling locations, river Ghaggar is not complying to the water quality criteria for bathing.

Drain Samples

The analysis results of the drain samples for analyzed parameters reveal that

- TSS is in the order of 30 -612 mg/l whereas TDS is observed as 120 to 6060 mg/l and highest TSS and TDS observed at Patiala drain and Derabassi drain respectively.
- COD is in the order of 30 - 6741 mg/l and highest COD is observed at Derabassi Drain;
- BOD is in the order of 6- 2000 mg/l and highest BOD is observed Derabassi Drain
- NH₃-N is in the order of 3-89 mg/l and highest Ammonical Nitrogen is observed at Patiala drain.”

Status of functioning of STPs

9. The details of functioning of STPs was found to be as follows:-

“With regard to Chandigarh –

The analysis results of the treated sewage from the sewage treatment plants for the period January 2019 reveals that the observed values of the 3 out of 5 STPs located at Khurd, Diggian and Raipur Kalan are observed in the order of 59-69 mg/l, 51-58 mg/l, 59-70 mg/l and the measured values w.r.to BOD is not complying to the prescribed parameter. Also, all the treated sewage is having Faecal Coliform more than 1000 MPN/100 ml which may be due to improper disinfection. Therefore, all the existing STPs require upgradation.

With regard Punjab -

- As observed during the visit, 02 out of the 20 STPs are not in operation.
- Treated sewage from all the 18 STPs is complying with the parameters viz., pH and TSS.
- 09 out of 18 STPs inspected are not complying to the Faecal Coliform, which may be due to improper disinfection.
- In 18 STPs, BOD content in the treated sewage was observed to be in the order of 7 to 61 mg/l and 05 STPs located at Bhikhi, Budhlada, SAS Nagar, Sardulgarh and Patiala are not complying to the treated sewage discharge norms with respect to BOD.
- Faecal Coliform content in all the 18 inspected STPswas observed to be in the order of 780 to330 MPN/100 ml and 09 STPs are not complying to the norm w.r.to Faecal Coliform.
- STPs located at Bhikhi, Budhlada, SAS Nagar, Sardulgarh and Patiala are not complying to both the parameters such as BOD and Faecal Coliform.
- Total STPs Complying = 09; Total STPs Non Complying = 09

With regard Haryana –

BOD content is observed in treated sewage samples of STP, Urban Estate, Ambala Cant (52 mg/l); STP, Baldevnagar, AmbalaCitty (56 mg/l); STP, Devinagar, Ambala (64 mg/l); STP, PHED Industrial Area, Jind (110 mg/l), STP at Debwali, Sirsa (36 mg/l) and STP, Vill, Amani, Fatehbad (56 mg/l) i.e., 06 out of 53 STPs monitored are having BOD more than 30 mg/l and afore-said STPs are not complying to the treated sewage discharge norms which may be due to improper operation of these STPs.”

10. Sludge characteristics were found to be as follows :-

“Based on the analysis results of the sludge samples collected from 07 STPs in the catchment of river Ghaggar concluded that the sludge of all the said STPs is not fit for use as manure especially for food based crops and may be used for greenery.”

Ground water quality

11. Ground water quality was noted to be as follows:

“Himachal Pradesh

The analysis results of the collected 57 water samples reveals that 05 out of 57 samples are not complying with respect to TDS (> 500 mg/l), 18 out of 57 samples w.r.to Total Alkalinity (200 mg/l), 2 out of 57 samples w.r.to Fluoride (> 1 mg/l), 05 out of 57 samples w.r.to Total Hardness (> 200 mg/l) as well as Iron content(> 0.3 mg/l) when compared with the drinking water standards prescribed under IS10500-2012.

Chandigarh

The analysis results of the collected 7 water samples reveal that

- *Pre - monsoon samples are not complying when compared with the drinking water standards prescribed under IS10500-2012 with respect to*
- *NH3-N at ground water samplings locations located at Sector-15, Village Palsora*
- *Turbidity at ground water samplings locations at DaduMajra, Sector-25, Sector-22, Village Palsora, Dhanas and Sector-35*
- *Total Alkalinity at ground water samplings locations at Dadu Majra, Sector-25, Sector-22, Village Palsora, Dhanas, Sector-20 and Sector-35*
- *TDS at ground water samplings locations Sector-15 and Village Palsora;*
- *Faecal Coliform at ground water samplings locations at Dadu Majra and Dhanas.*
- *Post-monsoon samples are not complying when compared with the drinking water standards prescribed under IS10500-2012 with respect to*

- *NH3-N at ground water samplings locations located at Dadu Majra, Sector-21, Village Palsora, Dhanas, Sector-20 and Sector-35;*
- *Turbidity at ground water samplings locations at Dadu Majra, Sector-15, Village Palsora, Dhanas, Sector-20 and Sector-35;*
- *Total Alkalinity at ground water samplings locations at Dadu Majra, Sector-15, Village Palsora, Dhanas, Sector-20 and Sector-35*
- *TDS at ground water samplings locations Dadu Majra, Sector-15, Sector-35 and Village Palsora;*
- *Faecal Coliform at ground water samplings locations at Sector-22 and Village Palsora.*

Punjab

As per directions of Executing Committee, the Punjab Pollution Control Board has carried out ground water sampling at 79 locations in and around 62 industries (in some industries, more than one sample was drawn) to ascertain the quality of ground water in respect of parameters such as fluoride, sulphate, cadmium, copper, lead, nickel, zinc, arsenic, mercury and oil & grease. Out of these, 71 samples were found conforming to the prescribed standards as laid down in IS: 10500 – 2012. In 8 samples, the concentration of either fluoride or sulphate or both was found beyond the prescribed standards. The Board will take necessary action and monitor the quality of ground water regularly and the same will be reviewed at the district and state level.

Haryana

The industries found indulged in reverse pumping are closed and power of closure has already been delegated to the Regional Officers of HSPCB. Further, the STFs have also been directed to close down the contaminated sources of drinking water and also place sign boards nearby the respective contaminated source regarding "Water is not fit for Drinking purpose". The monthly action taken reports are being sought in this regard from District Level Task Forces constituted in this matter by the State Government.

The Committee is also of the view that the technology available, can also be used for the surveillance of the industries located in the catchment area of river Ghaggar by all the concerned States in order to assess illegal discharge by the industries.”

Conclusions and recommendations

12. The conclusions of the Committee and recommendations were noted as follows:-

“During the water sample collection by the Executing Committee, at most of the places river Ghaggar is having highly coloured wastewater might be due to discharge of industrial effluent likely from Paper & Pulp Industries, Sugar and Distilleries as

these industries have not been insisted for removal of 'colour' under Consent mechanism by the respective States and not having strict vigilance by the respective State Pollution Control Boards.

Considering depletion of groundwater resources, Government of Punjab should take a policy decision with regard to the supply of meter water to the public as per the demand or supply prescribed under the guidelines issued by Ministry of Urban Development.

Also, policy with regard to the utilization of treated sewage for beneficial use which include agriculture, construction activity and green development so as to reduce abstraction and consumption of the ground water resources should be implemented and promoted.

Also, all the industries located in the catchment of river Ghaggar should be allowed to use ground water abstraction for commercial use only with the approval of the Central Ground Water Authority and such industries also be suggested to explore alternate water supply sources (including adoption of low water consuming technologies) without depending on the natural ground water resources.

All the existing STPs should be insisted upon to obtain Consent under Water (Prevention and Control of Pollution) Act, 1974 from the Punjab Pollution Control Board, with immediate effect.

Therefore, Punjab Government should bring all the STPs under one authority so that it becomes easy for planning, commissioning and for ensuring proper operation and maintenance of the existing or upcoming STPs.

Government should allocate adequate budget for management of sewage in the State and this allocated budget should be released as and when required. Periodic training of all the officials i.e., O & M Staff, field staff or supervisors of the concerned departments involved in operation of the STPs should be organized by PPCB in association with the reputed organizations such as NEERI, Nagpur or NPC, Delhi or IITs.

All the existing STPs should also be connected with electromagnetic flow meters at all the salient points (i.e., inflow, at the bye-pass arrangement, after treatment and before discharge of treated water within the STPs) and proper records maintained. Also, STPs also be connected with continuous online effluent monitoring system for monitoring of prescribed parameters including discharges with a provisions of CC Cameras and real time data also be displayed at the entrance of the STPs and also transferred to the servers of PPCB and CPCB.

Therefore, all the STPs should have a provision of uninterrupted power supply or DG Set of adequate capacity for ensuring proper treatment of sewage during power failures.

All the parameters of the treated sewage may be get analyzed as per the frequency prescribed by the States through any laboratory approved under the E (P) Act, 1986 or NABL approved laboratory.

All such drains should be restored by properly designed sewerage network connectivity (including interception and diversion of sewage from the drains to the existing STPs or upcoming STPs), for ensuring proper treatment of generated sewage to comply with the discharge norms and thereafter only such treated sewage may be discharged into the drains as a part of maintaining the E-flows.

All such existing STPs should be upgraded for ensuring compliance to the effluent discharge norms notified under the Environment (Protection) Act, 1986.

Also, the option of 'Sludge Digester' as a part of STP be created for methane recovery and such generated sludge from the sludge digester may be used as manure and STPs shall ensure that at any instance the generated STP sludge should not be disposed of in river system.

All upcoming STPs preferably should have standby arrangements atleast for two days as a part of the upcoming STPs.

Therefore, Pollution Control Boards are required to prescribe PETP Standards for all the CETPs located in the catchment of river Ghaggar and in the respective States.

In addition to the action plans prepared by the respective Governments, following action plans also need to be included with timelines:

Development of Bio-diversity parks in the catchment of river Ghaggar.

Watershed management and maintaining E-flows in the river Ghaggar and its tributaries for maintaining biological system of the water body.

Evolving and Effective Implementation of Sand Mining Policy of the Governments.

Dredging and maintenance of all the drains contributing to river Ghaggar pollution and proper disposal of the sludge generated from the dredging and maintenance of the drains.

Restoration of all the drains as natural drains for carrying only storm water;

Provision of measurement of flows in all the drains before its outfalls in to the river Ghaggar or its tributaries in all the States to know the contribution of discharges into the river Ghaggar or its tributaries and records shall be maintained by the concerned departments in order to evolve further strategies if required.

Installation of real time water quality of monitoring stations at all the outfalls of the drains and at the salient points of the river Ghaggar or its tributaries and display of such data in public domain, by all the concerned State Governments.

Interception of diversion of wastewater from the drains (not meeting to the water quality criteria), to the nearby STPs or CETPs for ensuring further treatment to comply with the discharge norms.

Septage management in the catchment areas of river Ghaggar and its tributaries for beneficial use including irrigation, construction activities.”

Directions in order dated 11.04.2019

13. The Tribunal 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.

Report dated 14.06.2019

14. Interim report dated 14.06.2019 was filed. Status with regard to sewage management was reported to be as follows:

9.1 State of Punjab:

“9.1.2 Status of proposed 23 STPs to be installed w.r.t. timelines

Sl. No.	Name of the Town	STPs required	Installed	Proposed	Timelines proposed as per Action Plant
1	Ghanour	01	-	2 MLD	• DPR approved. • Tendering by 31.07.2019. • Commissioning - 31.10.2020
2	Sonour	01	-	4 MLD	• Land yet to be identified.
3	Bhadson	01	-	3 MLD	• DPR approved
4	Nabha	01	-	12 MLD	• DPR approved
5	Sangrur	02	-	4 MLD	• 31.07.2020
6	-	-	-	11 MLD	• 31.12.2020
7	Dhuri	02	-	5 MLD	• 31.12.2020
8	-	-	-	6 MLD	• 31.12.2020
9	Longowal	01	-	3 MLD	31.10.2020
10	Cheema	01	-	2 MLD	31.10.2020

11	Gholumajra Village	01	-	0.3 MLD	31.12.2020
12	Chaundhari & Samal heri Village	01	-	0.3 MLD	31.12.2020
13	Sirhind	03	-	2 MLD, 4 MLD & 5 MLD	31.07.2020
14	Lalru	03	01	1 MLD at Deparlalru	31.10.2020
15	-	-	-	1.5 MLD at LalruMandi	Under legal litigation for change of land
16	Issapur and Mirpur Village	01	-	2 MLD	31.10.2020
17	Mubarkpur Village	01	-	2 MLD	31.10.2020
18	Amlah	01	-	3 MLD	31.12.2020
19	Bassi Pathana	01	-	3 MLD	31.07.2020
20	Cheema	01	-	2 MLD	31.10.2020
21	Boha	01	-	2 MLD	31.07.2020

9.1.3 Up-gradation of existing STPs

Sr. No.	Name of the Town	STPs required	Installed	Timelines for up gradation
1	Patiala	3	3	Up-gradation of 46 MLD STP to 61 MLD by 31.01.2021
2	Baretta	1	1	31/12/2020
3	Bhikhi	1	1	31/12/2020
4	Sardhulgarh	1	1	31/12/2020

9.2 State of Himachal Pradesh:

9.2.1 Performance status of existing STPs

- No STP exists in Kala Amb and Parwanoo area which are located on catchment area of River Ghaggar.

9.2.2. Status of proposed 3 STPs to be installed w.r.t timelines

Sr. No.	Name of the Town	STPs required	Installed	Proposed	Timelines proposed As per Action Plan	Remarks
1.	Kala Amb	CETP-cum-STP	-	5 MLD	31/01/2022	-

2.	Parwanoo	2	-	1 MLD each		<ul style="list-style-type: none"> • Land for one STP identified. • No Identification for second STP.
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U.T. Chandigarh:

9.3.2. Status of proposed 2 STPs to be installed w.r.t timelines

Sr. No.	Name of the Town	Proposed	Timelines proposed as per Action Plan
1.	Raipur Kalan	9 MLD	30/06/2019
2.	Kishangarh	1.8 MLD	30/11/2021

State of Haryana:

4.2. Status of proposed 14 STPs to be installed w.r.t timelines

Sr. No.	Name of the Town	Proposed STP (in MLD)	Timelines proposed as per Action Plan
1.	Barara	4	31.10.2019
2.	Jind	7	30.11.2019
3.	Sec-6, Urban Estate, Thanesar	15	31.03.2020
4.	Sec-21 Urban Estate, Ambala City	5	31.12.2019
5.	12 Cross Road	12	30.11.2019
6.	Village Nagal	12	30.11.2019
7.	Khagesara & Taka	0.5	31.12.2019
8.	Nangal & Allipur	0.5	31.12.2019
9.	Khatoli	0.75	31.12.2019
10.	Kot	0.75	31.12.2019
11.	Sukhdarshanapur	0.75	31.12.2019
12.	Ramgarh	1	31.12.2019
13.	Tipra (Khanguwala)	1	31.12.2019
14.	Village Dabra	8	31.03.2020

Report dated 01.10.2019

15. Further report dated 01.10.2019 has been filed, in continuation of which is subject matter of consideration today. The Committee carried out inspection of various units with a view to check status of

discharge of untreated effluents as well as of STPs. Such status is duly reflected in the comprehensive report of the Committee.

12.1 State of Punjab:

12.1.1 Performance of existing Sewage treatment plants

30 towns have been identified, which are directly/ indirectly discharging their sewage into river Ghaggar. In these 30 towns, 43 STPs are required to be installed. Presently, 21 STPs in 18 towns have been installed and are in operation. The performance status of these 21 STPs is as under:

Sr. no.	Name of the Town	Capacity of STP	Performance w.r.t. parameter BOD and TSS		
			June, 2019	July, 2019	August, 2019
1.	Banur	4	Complying	Complying	Complying
2.	Baretta	3	Non-Complying	Non-Complying	Non-Complying
3.	Bhikhi	3	Non-Complying	Non-Complying	Complying
4.	Budhlada	6.5	Non-Complying	Complying	Non-Complying
5.	Mandi Gobindgarh	25	Complying	Non-Complying	Complying
6.	Samana	10	Complying	Complying	Complying
7.	Sardulgarh	4	Complying	Non-Complying	Non-Complying
8.	Sunam	8	Complying	Complying	Complying
9.	Zirakpur	17	Complying	Non-Complying	Complying
10.	Khanauri	3	Complying	Complying	Complying
11.	Lehragaga	4	Complying	Complying	Complying
12.	Moonak	3	Complying	Complying	Complying
13.	Patran	4	Complying	Complying	Complying
14.	Rajpura	7	Complying	Complying	Complying
15.		10	Complying	Complying	Complying
16.	SAS Nagar	45.4	Non- Complying	Non-Complying	Non-Complying

17.	MC Dera Bassi	4	Non- Complying	Complying	Non-Complying
18.	Lalru	1.5	Complying	Complying	Complying
19.	Patiala	46	Complying	Complying	Complying
20.		10	Complying	Complying	Complying
21.		13	Complying	Complying	Complying

The above data indicate that out of these 21 STPs, 6 STPs are not complying with norms w.r.t parameters BOD and TSS. Further, almost all the STPs are not meeting with the standard of 1000 MPN/100m1 for Fecal Coliform.

12.1.2 The status of remaining 22 Sewage Treatment Plants which are either under construction or at planning stage:

Sr. no.	Name of the Town	Proposed capacity	Status as on 31.08.2019
1.	Boha	2	5 % completed
2.	Cheema	2	DNIT is being revised.
3.	Bhadson	3	Funds not tied up
4.	Nabha	12	DNIT Prepared and under approval
5.	Dhuri	5	16 % completed
6.	Dhuri	6	Land arrangement under process by MC, Dhuri. Panachayat land identified.
7.	Sangrur	4	12 % completed
8.	Sangrur	11	Land feasibility report submitted to EO, MC Sangrur. Advertisement given by MC, Sangrur in Newspapers.
9.	Bassi Pathana	3	5 % completed
10.	Longowal	3	DNIT is being revised.
11.	Amloh	3	Case for final approval for land is in process in DLG office
12.	Dera Bassi	2	Tender received and being checked
13.	Dera Bassi	2	Tender received and being checked
14.	Lalru (Mandi)	1.5	Private land is being identified
15.	Lalru (Dappar)	1	Tender received and being checked
16.	Lalru (Gholu Majra)	0.35	Issues of technology to be decided by the PWSSB.

17.	Lalru (chaundheri Samalheri)	0.35	
18.	Sanour	4	Issues of land and funds are to be resolved.
19.	Ghanaur	2	Tender under process.
20.	Sirhind	2	Pond water diversion in progress
21.	Sirhind	4	5% work completed.
22.	Sirhind	5	10% work completed.

12.1.3 Upgradation of existing STPs

Sr. No.	Name of the Town	Capacity of STP (MLD)	Latest status for upgradation to meet with latest norms.
1.	Bareta (PWSSB)	3	DPR is under preparation.
2.	Bhikhi (PWSSB)	3	-do-
3.	Sardulgarh (PWSSB)	4	- do-
4.	Patiala (MC, Patiala)	Capacity enhancement (46MLD to 61MLD)	Construction work of foundation started

12.2 U.T. Chandigarh:

12.2.1 Performance status of existing 06 STPs

Sr. no.	Name of the STPs	Capacity of STPs (MLD)	Performance w.r.t parameters BOD and TSS		
			June 2019	July 2019	Aug 2019
1.	3 BRD	49.9	Complied	Complied	Complied
2.	Dhanas	7.5	Complied	Complied	Complied
3.	Raipur Kalan	22.5	Not complied	Not complied	Not complied
4.	Raipur Khurd	5.6	Not complied	Not complied	Not complied
5.	Diggian	135	Not complied	Not complied	Not complied
6.	Maloya	22.5	Not started operation	Not started operation	Complied

Total	243 MLD	
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12.2.2 Status of Proposed STPs

Sr. no.	Name of the STPs	Capacity of STPs (MLD)	Timeline of commissioning of STP
1.	Kishangarh	2	November / 2021

12.2.3 Status of upgradation of existing STPs to meet with latest norms

Sr. no.	Name of the STPs	Capacity of STPs (MLD)	Timeline of upgradation of STP to meet with latest norms
1.	Raipur Kalan	22.5	November / 2021
2.	Raipur Khurd	5.6	November / 2021
3.	Diggian	135	November / 2021

12.3 State of Haryana:

12.3.1 Performance status of existing STPs

There are 62 existing STPs in the State of Haryana having total treatment capacity of 503.6 MLD. Performance of these existing STPs monitored during the months June,2019 to August,2019 is mentioned as under.

Sr. No.	Name of the district	Name of the town/ city	Existing STP and Capacity (MLD)	Performance w.r.t parameters BOD and TSS		
				Jun-19	Jul-19	Aug-19
1	Ambala	Naya Gaon, Unit-I, Ambala City	3.25	-	-	-
2	Ambala	Naya gaon, Unit-II, Ambala City	3.25	-	-	-

3	Ambala	Baldev Nagar, Unit-I, Ambala City	5	Complied	-	-
4	Ambala	Baldev Nagar, Unit-II, Ambala City	3.25	Complied	-	-
5	Ambala	Moti Nagar, Unit-I, Ambala City	5	-	-	-
6	Ambala	Moti Nagar, Unit-II, Ambala City	5	-	-	-
7	Ambala	Modal Town, Ambala City	6	-	-	-
8	Ambala	Nasirpur, Ambala City	3.25	-	-	-
9	Ambala	Sadipur	0.25	-	-	-
10	Ambala	Devi Nagar, Ambala City	3.25	-	-	-
11	Ambala	Naraingarh	3	Complied	-	-
12	Kurukshetra	Thanesar	25	-	-	-
13	Kurukshetra	Modal Town, Pehowa	8	-	-	-
14	Kurukshetra	Ladwa Road, Shahbad	11.5	-	-	-
15	Kurukshetra	Indri Road, Ladwa	7	-	-	-
16	Panchkula	Kalka	4.5	-	Complied	-
17	Panchkula	Kalka	0.25	-	Complied	-
18	Panchkula	Nalagarh Road, Pinjore	5	-	Complied	-
19	Jind	Jind	15	-	-	Not Complied
20	Jind	Narwana	3.5	-	-	-
21	Jind	Narwana	3.75	-	-	-
22	Jind	Narwana	2.6	-	-	-
23	Jind	Uchana	2	Complied	-	-
24	Jind	Uchana	1.5	Complied	-	-
25	Jind	Jind	5	-	-	-
26	Jind	Safidon	9	-	-	-

27	Jind	Julana	4	Not	-	-
28	Kaithal	Cheeka	10	-	-	-
29	Kaithal	Jind Road, Kaithal	10	-	-	-
30	Kaithal	Manas Road, Kaithal	10	-	-	-
31	Kaithal	Manas Road, Kaithal	10	-	-	-
32	Kaithal	Kalayath	5	-	-	-
33	Kaithal	Pundri	3.5	-	-	-
34	Hisar	Dhani Kushal, Bhiwani Road, Hansi	5	-	Complied	-
35	Hisar	Lalpura- Jind	7.5	-	Complied	-
36	Hisar	Dhani Gram, Barwala	6	Complied	-	-
37	Hisar	Azad Nagar, Rajgarh Road Hisar	15	Complied	-	-
38	Hisar	Rishi Nagar, Hisar	40	Complied	-	Complied
39	Hisar	Hisar	4	Complied	-	Complied
40	Hisar	Narnaund	4	Complied	-	-
41	Hisar	Hansi	6.5	-	-	-
42	Hisar	Uklana	6.5	-	-	Not Complied
43	Sirsa	Chautala Road, Dabwali	16.5	Complied	-	-
44	Sirsa	Shamsabad Kalaria Road, Sirsa	15	-	-	-
45	Sirsa	Vill. Nattar 1, Sirsa	5	-	-	-
46	Sirsa	Vill. Nattar 2, Sirsa	5	-	-	-
47	Sirsa	Daddu Road, Kalanwali	9.5	-	-	-
48	Sirsa	Ellenabad	7.5	-	-	-
49	Sirsa	Rania	6	Complied	-	-
50	Fatehabad	Vill. Bhodia Khera, Bhattu Road, Fatehabad	- 10	Complied	-	Complied
51	Fatehabad	Fatehabad	5	Complied	-	Complied

52	Fatehabad	Vill.Amani, Tohana,	10	Complied	-	-
53	Fatehabad	Ratia	6.5	Complied	-	-
54	Fatehabad	Jakhal Mandi	3.0	-	-	-
	HSVP					
55	Ambala	Sec-7, Urban Estate, Ambala City	2	-	-	-
56	Panchkula	Sec-20, Panchkula	18	-	-	-
57	Panchkula	Sec-20, Panchkula	39	-	-	-
58	Panchkula	Sec-28, Panchkula	15	-	-	-
59	Jind	Jind	10	-	-	Not
60	Kaithal	Kaithal	7.5		-	
61	Hisar	Dabara Tosham Road, Hisar	15	Complied	-	-
62	Fatehbad	Village Majra	10	Complied	-	Complied
		Total	506.6			

12.3.2 Status of Proposed STPs

Sr. No.	Name of the Town	Proposed STP (in MLD)	Timelines proposed as per Action Plan	Progress report
1.	Barara	4	31.10.2019	85% work has been done
2.	Jind	7	30.11.2019	75%
3.	Sec-6, Urban Estate, Thanesar	15	31.03.2020	95%
4.	Sec-21 Urban Estate, Ambala City	5	31.12.2019	20%
5.	12 Cross Road, Ambala	12	30.11.2019	5%
6.	Khagesara & Toka	0.5	31.12.2019	70%
7.	Nangal & Allipur	0.5	31.12.2019	75%
8.	Khatoli	0.75	31.12.2019	12%

9.	Kot	0.75	31.12.2019	80%
10.	Sukhdarshanapur	0.75	31.12.2019	62%
11.	Village Dabra	8	31.03.2020	10%
12.	Ambala	5	31.03.2020	20%
13.	Khuda Khurd, Ambala	12	4.02.2020	2%
14.	Sirsa	20	30.11.2019	85%
Total	91.25			

12.4 State of Himachal Pradesh:

12.4.1 Performance status of existing STPs

Presently, no STP is operational in Parwanoo and Kala Amb Area, which are located in the catchment area of river Ghaggar.

12.4.2 Status of Proposed STP

- Sukhna Nallah at Parwanoo and River Markanda at Kala Amb fall in the catchment area of River Ghaggar.
- **Parwanoo town is located in the catchment of Sukhna Nallah.**
 - For installation of STPs in Parwanoo town, 02 STPs have been proposed.
 - In one case land has been finalized which is adjoining the Solid Waste management site of MC Parwanoo at Sector 05 and is proposed to be commissioned by 31.03.2021.
 - The other STP for Parwanoo town is proposed in Village Tipra and the said area is a forest land.
 - Both these STPs each of capacity 01 MLD and shall be completed and commissioned by 31.03.2021.
- **Kala Amb town is located on River Markanda.**
 - One CETP cum STP of capacity 5 MLD costing Rs. 23 Crores shall be installed in Kala Amb area for which DPR has been prepared.
 - Land for CETP has been acquired by Deptt. of Industries. Environmental Clearance has been applied by SPV.

Conclusion and recommendations

16. The conclusions and recommendations in respect of the States of Punjab, Haryana, Himachal Pradesh and UT Chandigarh are as follows:-

Based on the data and meetings held with State Level Officers, District Level Officers and spot inspections made by the Executive Committee, the State wise conclusion and recommendations are made as under:

13.1 State of Punjab:

Conclusions and recommendations

1. *The Executive Committee had visited the following 4 industries of Patiala area*

(Punjab) on 28.5.2019:

- i) M/s Vishal Paper Industries Pvt. Ltd., Vill. Khusropur, Maine Road, Patiala;*
- ii) M/s Vishal Coaters, Vill. Khusropur, Maine Road, Patiala;*
- iii) M/s Patiala Distillers and Manufactures Ltd., Vill. Maine, Patiala*
- iv) M/s DSG Papers Pvt. Ltd., Vill. Bhanri, PO Wizidpur, Patiala*

The recommendations made in case of each industry were sent to Chairman, Punjab Pollution Control Board, Patiala vide No. CEC/2019/211, dated 3.7.2019. These recommendations have been mentioned at pages 9 to 12 of this report. Chairman, Punjab Pollution Control Board, Patiala shall submit the action taken report on the recommendations made by the Executive Committee.

2. *30 towns have been identified, which are directly / indirectly discharging their sewage into River Ghaggar. For these 30 towns, 43 STPs are required to be installed. Presently, 21 STPs in 18 towns have been installed.*

3. *The performance of these 21 STPs as monitored during the month June to August, 2019 indicate that 6 STPs namely Baretta, Bhikhi, Budhlada, Sardulgarh, Mohali and Dera Bassi are regularly not meeting with the prescribed standards.*

Punjab Pollution Control Board shall take legal action under the provisions of Water Act, 1974 against the departments responsible for operation and maintenance of these STPs.

4. *Out of 22 STPs to be installed in the remaining 12 towns, the status is as under:*

- ✓ -15% construction work has been completed only in 6 towns.*

- ✓ No land has been finalized in 5 STPs (Dhuri : 6 MLD; Sangrur : 11 MLD; Lalru : 1.5 MLD; Amluh : 3 MLD and Sangrur : 4 MLD).
- ✓ 3 STPs are at DNIT preparation Stage (Cheema, Nabha and Longowal).
- ✓ No funds have been tied up in case of one STP (Bhadson : 3 MLD)
- ✓ 4 STPs at tendering stage (2 STPs of Dera Bassi each of capacity 2 MLD, Lalru : 1 MLD and Ghanaur : 2 MLD).
- ✓ Technology issues are to be decided in the case of 3 STPs.

The concerned departments of State of Punjab shall ensure that all the remaining 22 STPs shall be completed and commissioned by 31-3-2021.

5. 3 STPs for the towns namely Baretta (3 MLD), Bhikhi (3 MLD) and Sardulgarh (4 MLD) have been proposed for upgradation to meet with the latest norms. Presently, these are at DPR stage. In case of one town (Patiala), capacity of STP is to be enhanced from 46 MLD to 61 MLD and construction work has been started at the site.

The concerned departments of the State Government shall ensure that the upgradation work of 3 STPs and capacity enhancement of STP at Patiala (46 MLD to 61 MLD) shall be completed and commissioned by 31.03.2021.

6. Tender for installation of 6 MLD capacity STP by the Garrison Engineer, MES, Patiala for cantonment at Patiala has been floated. Further for installation of STP of 1 MLD capacity for cantonment at Nabha, DPR has been prepared. Garrison Engineer, MES, shall ensure that STP for Patiala cantonment and Nabha cantonment shall be completed and commissioned by 31.12.2020 and 31.03.2021, respectively.

7. Proposed STPs, STPs under construction and the existing STPs shall be installed/upgraded to achieve the standards as directed by the Hon'ble NGT in OA No.1069 of 2018 in the matter of Nitin Shankar Deshpande Vs. Union of India & others.

8. Punjab Pollution Control Board has inspected 11 industries in the month of June 2019, 6 industries in the month of July, 2019 and 11 industries in the month of August, 2019. But, the number of industries inspected, in view of the importance of the task, was very less.

PPCB should increase frequency of regular inspection and surprise checking of industries located in the catchment area of River Ghaggar to ensure that the ETPs of all the industries are always in operation and should meet with the prescribed norms. These industries may not be allowed to discharge their treated / untreated wastewater into drains / nallah / choes / river Ghaggar.

Punjab Pollution Control Board shall also compare the analysis results of the wastewater with the values of parameters shown during visit by the OCEMS and take appropriate action in

the matter in case any major difference is found on comparison. The Punjab Pollution Control Board will also carry out the data analysis of OCEMS to identify the violators.

9. No inspection of any industry was carried out by the District Level Special Task Force (DLSTF) upto July, 2019. However, DLSTF, Patiala has visited Jacob drain, Patiala on 21.08.2019 on which paper mills and distillery unit are located and river Ghaggar at Badshapur to check the discharge of industrial effluent into river Ghaggar. Also, 3 paper mill and 1 distillery at Patiala has been visited by DLSTF, Patiala and none of the industry was found discharging its effluent into river Ghaggar.

However, monthly checking / inspection of water polluting industries by the District Level Special Task Force (DLSTF) of all the 4 Districts (Patiala, SAS Nagar, Sangrur and Mansa) should be ensured and recommendations to take legal action against the violating industries under the provisions of the Water Act, 1974 may be sent to the regulatory body.

10. Data w.r.t. water quality of River Ghaggar monitored during January to July, 2018 and January to July, 2019 indicate that there is slight improvement w.r.t. BOD and DO parameter at all the 14 locations and improvement w.r.t Total coliform has been observed only at 3 locations.

Further, improvement w.r.t. the parameters namely BOD, DO and Total coliform has also been observed in the month of August, 2019 in comparison to the water quality as monitored in the month of July, 2018.

Department of Local Government and Punjab Water & Sewerage Board shall ensure that all the STPs shall be made operational at all the times and proper and adequate dose of disinfectant may be given at each STP to bring T.coli and F.coli parameters within prescribed norms. These departments shall ensure that all the STPs may achieve the stringent norms.

PPCB shall continue to make surprise inspections to monitor the sewage treatment plants of the local bodies and action against the violating local bodies should be taken within 21 days from the date when the violations were observed.

11. All the Departments of State of Punjab shall ensure to comply with the decisions taken / recommendations made in each meeting of the Executive Committee so that the activities to be carried out to control pollution in River Ghaggar may be completed and commissioned within the time schedule.

12. Ground water quality monitored at 14 locations along the catchment area of River Ghaggar indicate that the values of calcium (3 locations), magnesium (3 locations) and hardness at 2 locations are higher than the permissible limits and these may be due to geogenic reasons.

Punjab Pollution Control Board shall continue to carry out ground water monitoring of all the ground water sources located along River Ghaggar and these groundwater samples may be analyzed for all the required parameters and in case any

groundwater sample is found contaminated and is unfit for drinking purposes, such ground water source may be capped and a display Board mentioning that "**water is not fit for drinking**" may be placed at the contaminated source.

13. Irrigation schemes to utilize the treated sewage for irrigation of agriculture fields have been implemented in 9 towns discharging 43 MLD treated sewage, which cater 1427 hectares of land. 2 irrigation schemes for utilization of treated sewage of the towns namely Khanauri (3 MLD) and Rajpura (7 MLD) are under construction and these are likely to be commissioned by 30.6.2020 and 31.3.2020, respectively. Under these irrigation schemes, 250 Hectares of agriculture land shall be irrigated.

Further, irrigation schemes for 15 STPs (11 towns) having total discharge of treated sewage as 133.5 MLD have been proposed and are likely to be completed by 31.3.2021.

The Department of Water & Soil conservation and Department of Irrigation shall ensure that irrigation schemes to utilize the treated sewage, conforming to the prescribed standards, for all the remaining towns located in catchment area of river Ghaggar may be completed simultaneously with the commissioning of STPs.

14. Regarding treatment and management of treated sewage of villages, the concerned departments of State of Punjab has identified 389 villages. The phase wise completion of treatment system are proposed as under:

Phase — I

- 87 villages, where treatment system for treatment of sewage shall be implemented in Phase-I, have been identified.
- The cost of treatment system shall be Rs. 26.10 Crore.
- Treatment system for these villages shall be completed by 30.6.2020.

Phase — II

- 150 villages for treatment of sewage, have been covered under Phase".
- Funds amounting to Rs. 45.6 Crore shall be required for completion of treatment system of these villages.
- Timelines for completion of these projects shall be 01.03.2020 to

30.6.2021.

Phase — III

- Under phase-III, 150 villages have been covered.
- Funds amounting to Rs. 45 Crores shall be required for completion of treatment systems of these villages.
- Timelines for completion of the project is 01.03.2021 to 30.6.2022.

Presently, under phase-I, Out of 87 villages, treatment systems of 14 villages have been completed (**Annexure-A**) and the treatment systems of other 14 villages are under progress (**Annexure-B**).

The department of Rural Development & Panchayat shall ensure that treatment systems for the villages as covered under Phase-I, II and III shall be completed and commissioned within time schedule as mentioned above.

15. Health checkup camps have been organized in all the 4 districts namely Patiala, Mohali, Sangrur and Mansa, where 1183 patients were checked in the month of July, 2019. Out of 1183 patients, 38 patients have been found suffered with water borne diseases. Also, in the month Aug, 2019, department of Health has organized health camps in 4 Districts and 626 Patients were diagnosed, out of which 29 patients were found suffered with water borne diseases.

The department of Health and Family Welfare shall continue to organize health check up camps in all the 4 Districts (Patiala, SAS Nagar (Mohali), Sangrur and Mansa) of the State, which are located in the catchment area of river Ghaggar.

16. PPCB shall ensure that all the remaining industries which have not installed Online Continuous Effluent Monitoring System (OCEMS), shall install and commission the same by 30.09.2019. These OCEMS shall have its connectivity with PPCB and CPCB server.

17. The department of Local Government, Punjab Water Supply and Sewerage Board, Department of Water Supply and Sanitation or any other concerned department, relating to operation and maintenance of existing sewage treatment plants, shall install CCTV cameras on all the STPs by 30.09.2019.

13.2 U.T. Chandigarh:

Conclusions and recommendations

1) For the treatment of sewage of localities/areas covered under U.T., Chandigarh, 6 STPs of total treatment capacity of 242.3 MLD are in operation. The performance of these STPs carried out by CPCC during the months June to August 2019 indicates that out of 6 STPs, 3 STPs are not complying with the norms. CPCC shall take legal action against the stakeholders for not operating their STPs effectively.

2) As per CPCC data, total discharge of sewage of Chandigarh is 243 MLD and 6 STPs of capacity 242.3 MLD are in operation. Therefore, there is a gap of only 0.7 MLD, which is to be treated by the Municipal Corporation, Chandigarh. Thus, to treat the balance quantity of wastewater, STP of capacity 2 MLD has been proposed to be set up at Kishangarh to meet with the latest stringent norms. The STP is likely to be completed by November, 2021. However, the Executive Committee recommends that this

proposed STP may be completed and commissioned by 31.3.2021.

3) For upgradation of existing STPs (Raipur Kalan : 22.5 MLD; Raipur Khurd : 5.6 MLD and Diggian : 135 MLD) to meet with the latest stringent norms, there is proposal to upgrade these STPs. The upgradation work of these STPs shall be completed by November 2021. However, the Executive Committee recommends that upgradation work of existing STPs may be completed by 31.3.2021.

4) Proposed STPs, STPs under construction and the existing STPs shall be installed/upgraded to achieve the standards as directed by the Hon'ble NGT in OA No.1069 of 2018 in the matter of Nitin Shankar Deshpande Vs. Union of India & others.

5) In order to check the performance of effluent treatment plants of the industries, CPCC has inspected 109 industrial units from June to August, 2019. Out of these 109 industrial units, 50 Units have been found non compliant. Out of these 50 non complaint units, 16 industrial units have been issued order for disconnection of electric connection and show cause notices have been issued to 34 industrial units.

However, CPCC shall increase its surveillance by conducting surprise inspection and forming a Environment Protection Squad. Regular check on operation of effluent treatment plants of the electroplating industries may be made as these are the source of discharge of toxic effluent into sewerage system leading to Sukhna Choe and N-Choe further leading to River Ghaggar.

6) CPCC and Municipal Corporation, Chandigarh shall ensure as under:

- The remaining 2 outlets falling into Sukhna Choe should be closed by 31.12.2019.
- The remaining 9 outlets falling into N-choe should be closed by 31.12.2019.

With the closing of these outlets and diverting their sewage into nearby STPs, there shall be further improvement in the water quality of Sukhna Choe & N-Choe and subsequently into River Ghaggar.

7) CPCC and Municipal Corporation, Chandigarh shall comply with all the decisions taken / recommendations made by the Executive Committee during its meetings (monthly meeting) with the officers of U.T., Chandigarh.

8) Water quality of Sukhna choe, as monitored by CPCC during the month April 2019 to June 2019, indicate that there is improvement in water quality of Sukhna choe w.r.t. parameters BOD, COD & TSS but no improvement has been observed w.r.t. F. Coliform parameter.

Similarly, water quality of N-choe, as monitored by CPCC during the month April to June 2019, indicates that there is improvement in the water quality w.r.t. parameters BOD, COD & TSS. However, there is no improvement in the water quality of N-Choe w.r.t. F.Coli parameters.

Therefore, the Executive Committee recommends that Municipal Corporation, Chandigarh shall make adequate arrangements for disinfectant dosing in STPs so that the value of F.Coliform may be reduced to the prescribed norms.

9) CPCC is monitoring the ground water quality of various areas of Chandigarh falling into catchment area of Sukhna Choe and N-Choe. Ground water samples of 7 locations were monitored in the month of July, 2019 and their analysis results indicate that there is no contamination in groundwater sources of Chandigarh area w.r.t. organic, inorganic, heavy metal and F.Coliform.

CPCC shall continue to monitor the ground water quality of various locations in the catchment area of Sukhna choe and N-Choe.

10) District Level Special Task Force (DLSTF) has inspected 15 industrial units, out of which 5 units were found non compliant and show cause notices have been issued to these units.

DLSTF shall continue to inspect industrial units falling in catchment area of Sukhna-Choe and N-Choe and action against the violating industries may be recommended to CPCC. It shall also hold monthly meeting with District Level Officers and monitor all the activities relating to control of pollution into Sukhna Choe and N-Choe and subsequently, in River Ghaggar. Monthly action taken report shall be submitted to the Executive Committee.

11) Department of Health & Family Welfare, Chandigarh is regularly carrying out Health Check-up Camps in Chandigarh wherein free medicines are distributed and free laboratory tests are conducted as per the convenience of the patients. In these camps, intensive information and awareness generation activities are carried out in the form of health talks, distribution of pamphlets and display of IEC material in the camps.

The Dept. of Health & Family Welfare shall continue to hold such Health Check up Camps on monthly basis.

12) CPCC and Municipal Corporation Chandigarh shall ensure that OCEMS and CCTV cameras on all the existing STPs may be installed within the time schedule as mentioned in the Action Plan.

13.3 State of Haryana

Conclusion and recommendations

1. The Executive Committee had visited the following 5 industries of Pehowa area, Distt. Kurukshetra (Haryana) on 29.4.2019 : -

i) M/s Sainsons Paper Industries Pvt. Ltd., Plot No. 5, Vill-Bakhli, Tehsil Pehowa, District- Kurukshetra, Haryana.

ii) District-Kurukshetra;

iii) M/s Shiv Paper Board Mill, Arunai Road, Vill-Dhanirampura, Tehsil-Pehowa, District-Kurukshetra;

iv) M/s Kailash Paper Board Mill, Arunai Road, Vill-Saraswati Khera, Tehsil-Pehowa, District-Kurukshetra

v) M/s Sunrise Paper Board Mill, Vill-Guldhera, Tehsil-Pehowa, District-Kurukshetra

The recommendations made in case of each industry were sent to Chairman, Haryana State Pollution Control Board, Panchkula vide No. CEC/2019/123, dated 21.5.2019. These recommendations have been mentioned at pages 4 to 6 of this report. Chairman, Haryana State Pollution Control Board, Panchkula shall submit the action taken report on the recommendations made by the Executive Committee.

2. In the State of Haryana, there are 62 existing STPs having total treatment capacity of 503.6 MLD. HSPCB has carried out performance of 27 STPs out of total 62 STPs during the month June 2019 to August 2019. In the month of June, 2019, performance of 19 STPs was checked, out of which 18 STPs were found compliant. In the month of July, 2019, 5 STPs were monitored and all were found compliant. In the month of Aug, 2019, 8 STPs were monitored out of which 5 STPs were found compliant.

It is mention here that HSPCB is not regularly monitoring the all the STPs of the State. Therefore, the Executive Committee recommends that HSPCB shall ensure to check the performance of all the existing STPs on monthly basis and action against the non compliant STPs may be taken under the provisions of the Water Act, 1974.

3. There is proposal to install 14 STPs to treat 91.25 MLD of sewage. The construction works of these STPs has been started and are likely to be completed by 31.3.2020.

4. Proposed STPs, STPs under construction and the existing STPs shall be installed/upgraded to achieve the standards as directed by the Hon'bie NGT in OA No.1069 of 2018 in the matter of Nitin Shankar Deshpande Vs. Union of India & others.

5. HSPCB has inspected 6 industries during the period June 2019 to August 2019 and all these industries were found violating the norms. Out of these 6 industries, the closure orders

have been recommended against 4 industries and re-sampling to be carried out in case of 2 industries.

It is mentioned here that the number of inspection made by HSPCB is very less. It has to increase its surveillance by surprise checking or through Environment Project Squad and shall ensure that every industry located in the catchment area of River Ghaggar should be visited at least once in a quarter.

6. The irrigation department, State of Haryana has prepared a pilot project for installation of solar / grid powered micro irrigation infrastructure on STPs for utilization of treated sewage for irrigation, which was completed on 31.01.2019 and irrigation facility was created for 76 hectares in Pehowa Block. Regular irrigation schemes shall be started in the next coming crop season. Similarly, with a view to utilize the treated sewage of the towns for irrigation, a project costing of Rs. 235.94 Cr. has been prepared. In the first phase, treated sewage of STPs of Fatehabad, Sirsa, Hisar and Jind District costing Rs. 87 Crore has been planned.

The Department of Irrigation, State of Haryana shall install and commission irrigation schemes to utilize the treated sewage of all existing STPs by 31.03.2021.

Similarly, the irrigation schemes for utilization of treated sewage of the towns for which STPs are either under construction or in the planning stage shall be installed and commissioned by 31.3.2021.

7. For the treatment of sewage of the villages having discharge more than 300 KLD, presently, the Deptt. of Rural Development & Panchayat, Haryana has no proposal to install the STPs for the villages.

The Executive Committee recommends that HSPCB shall take up the matter with Deptt. of Rural Development & Panchayat to prepare proposal to install STPs for the villages having discharged more than 300 KLD under Phase-I. Later on, the villages having sewage discharge less than 300 KLD may be taken in Phase-II. The irrigation schemes for utilization of treated sewage of these villages may be prepared by 31.12.2019.

8. The Deptt. of Urban Local Body, HSPCB and other concerned departments shall comply with the decisions taken / recommendations made during the meeting taken by the Executive Committee and action taken report be submitted to the Committee well in time.

9. The Ground Water Quality of the various locations in the catchment area of River Ghaggar, as analyzed by HSPCB during the month July, 2019, indicates that out of total 34 locations, contamination has been observed at 4 locations. HSPCB shall cap these locations and a display Board mentioning that "**water is not fit for drinking**" may be placed at the contaminated sources.

10. In 8 districts (Panchkula, Ambala, Kurukshetra, Kaithal, Jind, Fatehabad, Hisar and Sirsa) located in the catchment area of River Ghaggar, 21 Health Check up Camps have been organized.

- Out of these 21 Health Check up Camps, 14 camps have been organized in district Kaithal, where 565 patients were examined in different villages.

- Out of remaining 7 camps, 3 camps have been organized in district Ambala, 2 camps in Fatehabad, where, 54 patients were examined and in district Sirsa 2 Health Check up Camps were organized, where, 84 patients were examined.

The department of Health shall ensure that regular health check up camps may be organized for the localities/areas falling in the catchment area of river Ghaggar.

13.4 State of Himachal Pradesh:

Conclusions and recommendations

1. Presently, no STPs is in operation in Parwanoo and Kala Amb area of Himachal Pradesh, which are located in the catchment area of River Ghaggar. Sukhna Nallah at Parwanoo and River Markanda at Kala Amb fall in the catchment area of River Ghaggar.

For installation of STPs in Parwanoo town, 02 STPs each of capacity 1 MLD have been proposed and these shall be installed and commissioned by 31.03.2021.

For treatment of sewage and industrial effluent of Kala Amb area, one CETP cum STP of capacity 5 MLD, costing Rs. 23 Crores has been proposed for which DPR has been prepared. The said CETP cum STP shall be installed & commissioned by 31.03.2021.

2. One STP of capacity 1 MLD for the villages Trilokpur and Kheri, falling in the catchment area of River Markanda, shall be installed and commissioned by 31.03.2021.

3. All the STPs should have a provision of disinfection for ensuring control of fecal coliform as well as sludge digesters for converting sludge into manure.

4. Necessary measures shall be taken by Urban Development as well as Irrigation & PH Department to ensure that the generated sewage in the catchment of river Kaushalya, River Markanda is intercepted and diverted to the existing STPs/proposed STPs so that natural drains are restored and no sewage drain outfalls exists in future.

5. Proposed STPs for Parwanoo area, villages Trilokpur and Kheri and STP cum CETP for Kala Amb area shall be installed to achieve the standards as directed by the Hon'ble NGT in OA No.1069 of 2018 in the matter of Nitin Shankar Deshpande Vs. Union of India & others.

6. All the treated sewage shall be utilized for flushing (in residential apartments, office, malls/commercial complexes),

gardening, construction activity, irrigation purposes etc., and proposals shall be finalized in this regard by the State of Himachal Pradesh.

7. Dedicated drainage/sewerage network for carrying industrial effluent from industrial area of Kala Amb to the proposed CETP shall be laid or constructed and commissioned by 31.03.2021.

8. Real Time Water Quality Monitoring System (RTWQMS) has been installed on River Kaushalya and its data transfer system shall be connected to HPPCB server and CPCB server.

9. RTWQMS shall be installed on River Markanda by 30.09.2019 and data transfer system shall be connected to HPPCB server and CPCB server.

10. HPPCB has inspected 69 industrial units located in the catchment area of Sukhna Nallah during the months June, 2019 to Aug, 2019. Out of these 69 units, 3 industries have been found violating the norms. Out of these 3 units, power connection of 1 unit has been disconnected and re-sampling of remaining 2 units shall be carried out.

Similarly, HPPCB has inspected 101 industrial units located in the catchment area of River Markanda during the months June, 2019 to Aug, 2019. Out of these 101 units, 3 industries have been found violating the norms. Out of these 3 units, environmental compensation amounting to Rs. 18750/- has been imposed 1 unit. Power connection of remaining 2 units has been disconnected and also environmental compensation of Rs. 3,20,000/- has been imposed on these 2 units.

No industry has been inspected by District Level Special Task Force (DLSTF) so far. Therefore, HPPCB and District Level Special Task Force shall continue to visit the industries located in the catchment area of River Markanda and Sukhna Nallah on monthly basis and reports be submitted to HPPCB for initiating legal action under the provisions of the Water Act, 1974 against the violating industries.

11. HPPCB has claimed that M/s Ruchira Paper Ltd (Pulp and paper manufacturing unit) has installed OCEMS and data is being displayed on CPCB and HPPCB server. The State Board is also collecting monthly effluent samples from the final outlet of the industry. However, nothing has been mentioned about matching of the analysis results.

Therefore, HPPCB shall ensure that on each visit of the industry, the analysis results of effluent samples of the industry, analysed in the laboratory, should be matched with the analysis results displayed on OCEMS. In case any major difference is found, appropriate action in the matter may be taken.

12. 5 cleanliness drives in the catchment area of Sukhna Nallah and 1 cleanliness drive in Kala Amb area have been carried out. In the cleanliness drive conducted in Kala Amb area, about 400 participants from various industries, schools and Government offices collected more

than 15 MT solid waste from various streams. Also, a plantation campaign was carried out in Sirmour town in which 500 plants were planted.

HPPCB shall continue to conduct such cleanliness drive in Kala Amb and Parwanoo area on regular basis.

13. It has been reported by HPPCB that no contamination of groundwater has been observed in the catchment area of river Markanda and Sukhna Nallah. However, HPPCB shall carry out groundwater sampling to check the ground water quality of the point sources located on River Markanda and Sukhna Nallah on quarterly basis and wherever the ground water quality is found unfit for drinking purpose, such water sources be capped and a display board mentioning that the '**water is not fit for drinking purpose**' may be placed.

14. 8 health camps have been organized in the catchment area of river Markanda and 8 multi specialty health camps were organized in Kala Amb area and 1600 patients were benefitted.

Department of Health shall organize regular health camps in the localities / villages falling in the catchment area of River Markanda and Sukhna Nallah.

15. Integrated solid waste management facility at Parwanoo shall be developed in a scientific manner in accordance with the SWM Rules, 2016 as amended and also as per guidelines of CPCB by 31.03.2021. Necessary fencing or wire mesh system shall be installed along Sukhna Nallah and Markanda River at Solid Waste littering hot spot.

16. HPPCB shall peruse the matter of E-Flow Regulation with Government of Himachal Pradesh for River Kaushalya and River Markanda as well as watershed management in the catchment of river Kaushalya and River Markanda.

17. HPPCB shall encourage only roof top rainwater harvesting by the industries.

18. HPPCB and other departments of the State of Himachal Pradesh shall comply with all the decisions taken / recommendations made in the meetings of the Executive Committee and action taken report be submitted to the Committee well in time.

Analysis and discussion

17. River Rejuvenation monitoring may generally involve following components:

- a. Environmental Flow
- b. Quality of the River and groundwater
- c. Sewage Treatment Plants and Online Monitoring
- d. Use of treated Waste Water

- e. Septage and Faecal Sludge Management
- f. Industrial Pollution and CETPs
- g. Solid Waste Management and issues of Legacy Waste in areas falling in catchment of river Ghaggar
- h. Creating public awareness through Information, Education and Communication (IEC)

It is desirable that henceforth, the Committee, as far as possible, gives report in terms of the above heads for facility of consideration.

18. The report of the Committee shows that the authorities have 'miles to go' to achieve the water quality standard. Strenuous efforts are required to ensure that no untreated sewage or trade effluents are discharged in water bodies and also no solid waste is dumped in the water bodies which requires robust environmental governance. This can be ignored by the authorities only at their own peril. A welfare State cannot afford to show apathy to degradation water quality and failure of waste management mechanism. This needs to be attended at highest level with promptitude and accountability of officers entrusted the job has to be ensured. Lack of funds cannot be pleaded as the issue is linked to the right to life. Funds may be generated from persons adding to pollution or otherwise. The conclusions of the Committee with reference to concerned State/UT need to be attended and acted upon expeditiously in accordance with law.
17. Action plans have been prepared by the concerned States with reference to some of the above points in terms of orders of this Tribunal in O.A. 673/2018. Vide order dated 08.04.2019, in the said matter, the Tribunal directed that the action plans have to be executed latest by 31.03.2021.
18. As noticed in the order dated 07.08.2018, the main concern for remedying the pollution of rivers is preventing discharge of untreated sewage or effluents or dumping of garbage to enforce the statutory

provisions and to improve and maintain the water quality conforming to the prescribed standards within a targeted timeline. In this regard, it is also necessary to ensure that discharge of any untreated waste water is stopped as doing so is in violation of Section 25 of the Water (Prevention and Control of Pollution) Act, 1974. To give effect to this mandate of law, in pursuance of order of the Hon'ble Supreme Court in Paryavaran Suraksha case, (2017) 5 SCC 326, this Tribunal vide order dated 28.08.2019 in O.A. No. 593/2017 directed all the local bodies and concerned departments of the States to ensure 100% treatment of sewage, failing which compensation will be liable to be recovered from the defaulting States/UTs with effect from 01.04.2020.

Accordingly, all the concerned States/UT relevant for River Ghaggar must ensure installation of STPs within the planned timelines subject to the rider that where the timelines proposal goes beyond 31.12.2020, the timeline will be treated to be 31.12.2020. Wherever timeline already laid down by the State/UT is exceeded, compensation will be payable @ Rs 10lakh/month per STP till commissioning of STPs. This scale of compensation will also apply, in respect of STPs for which timeline for construction of STP is beyond 31.12.2020, from 01.01.2021.

19. The other main source of pollution of the river is discharge of untreated effluents which is an offence under Section 25 of the Water Act. Such discharge has to be stopped forthwith and coercive measures adopted wherever it is found. Let the concerned SPCBs/PCC take steps in terms of observations of the Committee after considering the response of the alleged polluter. If the

Committee observes that SPCBs/PCC has not taken necessary and adequate action, report be given to this Tribunal.

20. Apart from the issue of installation/ upgradation of STPs and action to be taken for discharge of untreated effluents in terms of paras 18 and 19 above, the Committee has also made recommendations on the subject of e-flow, quality of river and ground water, use of treated waste water, IEC activities and organizing health check ups. The Committee has also given data with regard to drains directly discharging sewage and sullage into the river reflected in the water quality shown by the samples taken. It is necessary wherever feasible that all such drains are duly tapped and connected to the existing and proposed STPs and till then in-situ remediation is ensured so that no untreated sewage or industrial effluent is discharged directly into the river. Let steps be taken by concerned States/UTs in terms of the said recommendations.

One of the major sources affecting water quality of the rivers is unscientific dumping of solid waste. Let the local bodies in the catchment areas of the river and its tributaries ensure all necessary steps are taken to prevent such dumping. The Committee may oversee this aspect and give its report.

Clarification about future functioning of the Committee

21. We consider it necessary to clarify the procedure for functioning of the Committee henceforth. The Committees may consider all relevant issues and give its reports preferably once in two months to this Tribunal with a copy to all the concerned Chief Secretaries and SPCBs/PCC. The concerned Chief Secretaries/SPCBs/PCC may look into the said report and give their response to this Tribunal within

two weeks thereafter. The response may include the action taken by the statutory bodies or other authorities. Since the Committee constituted by this Tribunal is a Fact Finding/Executing/ Monitoring Committee and has to give status report to this Tribunal, its functioning may not be viewed as giving final directions to the regulatory bodies. However, the State regulatory body may take into account the observations of the Committee in their functioning and act their own after considering the response of the alleged polluter. The Committee will be at liberty to point out to this Tribunal that action taken by the regulatory authority was not adequate. These observations are consistent with the Orders of this Tribunal dated 21.10.2019 in O.A. No. 670 of 2018 with regard to the procedure and functioning of a similar Committee in the State of UP.

Order about incidental issues

22. We may also deal with an incidental issue in view of two letters received from the Monitoring Committee. Letter dated 04.09.2019 seeks clarification about honorarium to be paid to the Justice Jasbir Singh, former Judge, Punjab and Haryana High Court and Ms. Urvashi Gulati, former Chief Secretary, Haryana. It is made clear that the State of Punjab will pay honorarium to Justice Jasbir Singh out of the funds available with Punjab State PCB and State of Haryana will pay honorarium to Ms. Urvashi Gulati out of the funds available with Haryana State PCB. The second letter dated 16.10.2019 is for honorarium to be paid to Dr. Babu Ram, former Member Secretary, Punjab State PCB who is assisting the Committee for river Gaggar, river Satluj as well as for solid waste management. He is being paid @ Rs. 54,580/- which is inadequate. The same may be increased to Rs. 75,000/- per month, to be paid by the State of

Haryana out of the funds available with the Haryana State PCB. Dr. Babu Ram will act as Technical Expert to the Committees henceforth.

Directions

23. Accordingly, following directions are issued:-

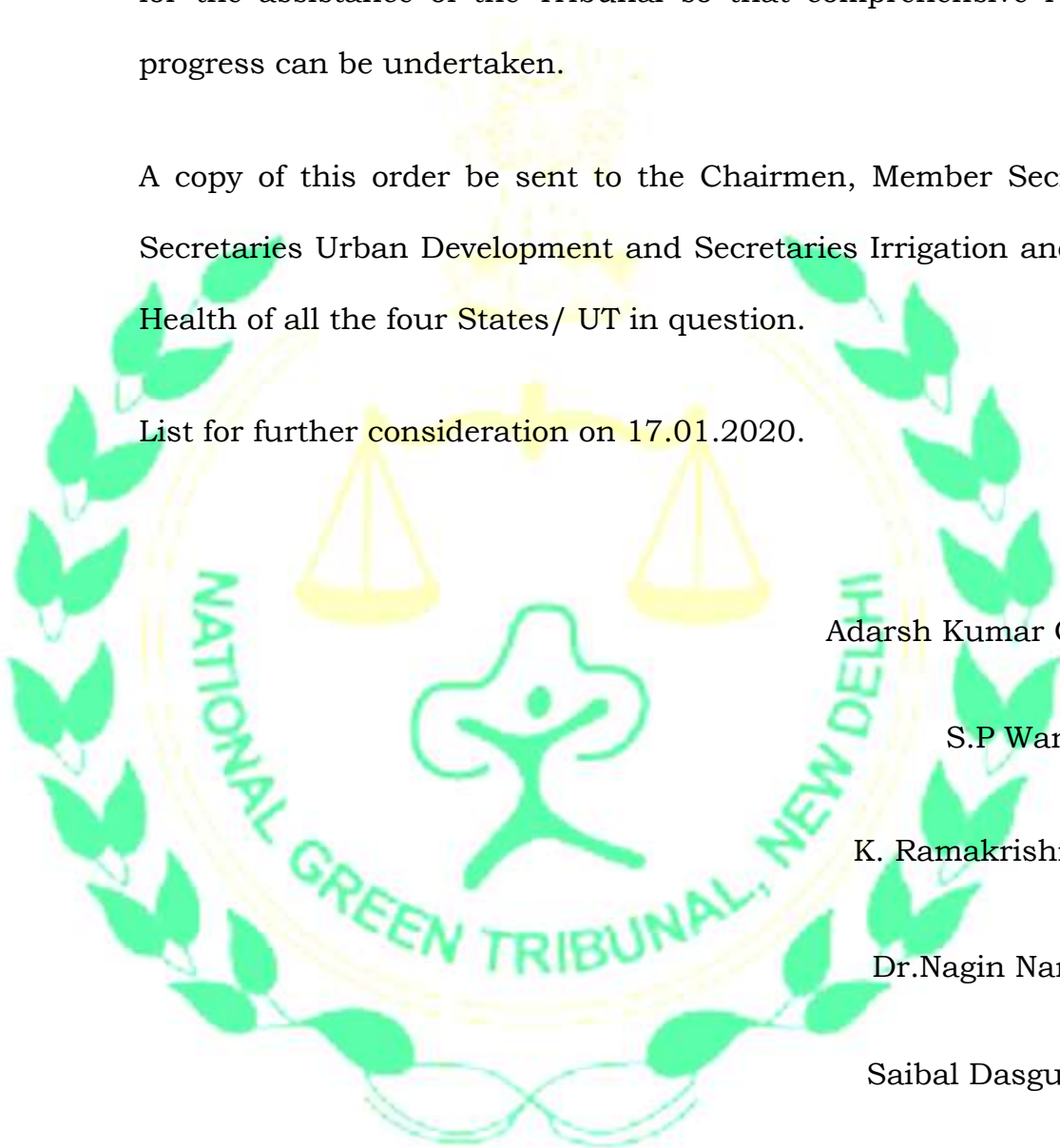
- (i) All the concerned States/UT relevant for River Ghaggar must ensure installation of STPs within the planned timelines subject to the rider that where the timelines goes beyond 31.12.2020, the timeline will be treated to be 31.12.2020. Wherever timeline already laid down by the State/UT is exceeded, compensation will be payable @ Rs 10lakh/month per STP till commissioning of STPs. This scale of compensation will also apply, in respect of STPs for which timeline for construction of STP is beyond 31.12.2020, from 01.01.2021. The STPs must conform to the laid down standards and connected to the sewerage network with a view to achieve the object of setting up of such STPs.
- (ii) Let the concerned SPCBs/PCC take steps in terms of observations of the Committee after considering the response of the alleged polluters. If the Committee observes that SPCBs/PCC has not taken necessary and adequate action, report be given to this Tribunal.
- (iii) Local bodies in the catchment area may ensure that solid waste is not dumped into the river or its tributaries which aspect may be monitored by the Committee also.
- (iv) Future functioning of the Committee will be in terms of clarification as per para 21 above. Incidental issues stands disposed of in terms of para 22 above.
- (v) Let steps be taken by concerned States/UTs in terms of the recommendations and for compliance of direction for connecting the

drains to the STPs wherever feasible and till then in-situ remediation in terms of para 20 above.

- (vi) The Chairmen, Member Secretaries of SPCBs/PCC, Secretaries Urban Development and Secretaries Irrigation and Public Health of the four States/ UT and nodal officer of CPCB may remain present in person for the assistance of the Tribunal so that comprehensive review of progress can be undertaken.

A copy of this order be sent to the Chairmen, Member Secretaries, Secretaries Urban Development and Secretaries Irrigation and Public Health of all the four States/ UT in question.

List for further consideration on 17.01.2020.



Adarsh Kumar Goel, CP

S.P Wangdi, JM

K. Ramakrishnan, JM

Dr.Nagin Nanda, EM

Saibal Dasgupta, EM

November 22, 2019
Original Application No.138/2016 (TNHRC)
(Case No.559/19/11/14)
WITH
Original Application No.139/2016 (TNHRC)
(Case No.600/19/11/14)
A