BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
EASTERN ZONE BENCH AT KOLKATA
IA No. 63 OF 2026
IN
ORIGINAL APPLICATION NO. 129 OF 2026

IN THE MATTER OF:-

PRATIK SHARMA …APPLICANT

VERSUS

STATE OF JHARKHAND & OTHERS …RESPONDENTS

INDEX

FILED BY

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Place:- New Delhi/Dated:15.05.2026

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL

EASTERN ZONE BENCH AT KOLKATA

IA No. _____OF 2026

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INTERLOCUTORY APPLICATION (IA) SEEKING PERMISSION TO PLACE ADDITIONAL DOCUMENTS ON RECORD.

MOST RESPECTFULLY SHOWETH:

1. That the accompanying Original Application has been filed before the Hon'ble Tribunal under Sections 14, 15 and 20 of the National Green Tribunal Act, 2010 highlighting a substantial question relating to environment i.e widespread pollution in the water of river Subarnrekha. Recently, on 01,04,2026 (Wednesday) when the local community members reached the banks of river Subarnrekha near Babudih Lal Bhatta, Jamshedpur huge number of fishes were found dead in the Subarnrekha river and there was foul smell everywhere which also became a concern of Public Health.

2. That the Applicant in paragraph 12 of the Original Application has referred to an article published in daily newspaper "Dainik Bhaskar" dated 1st April 2026 quoting that more than 4 quintal fishes died in river Subarnrekha at Jamshedpur.

   Copy of the daily newspaper "Dainik Bhaskar" dated 1st April 2026 is annexed herewith as **ANNEXURE-A8**

3. That the Applicant in paragraph 12 of the Original Application has again referred to an article published in the daily newspaper "Dainik

Bhaskar" dated 4th April 2026 which is covering the reasons for death of more than 6 quintals of fishes.

Copy of the daily newspaper "Dainik Bhaskar" dated 4st April 2026 is annexed herewith as **ANNEXURE-A9.**

4. That the Applicant in paragraph 13 of the Original Application has referred to the daily newspaper article published in "Prabhat Khabar" dated 11th April 2026 reported that water of river Subarnrekha and its tributary Kharkhai is highly polluted and even not fit for bathing purpose based on a detailed investigation undertaken by the SPCB, Jharkhand.

Copy of the daily newspaper "Prabhat Khabar" dated 11th April 2026 is annexed herewith as **ANNEXURE-A10.**

5. That the Applicant in paragraph 16 has cited the issuance of directions by this Hon'ble Tribunal, among others, for ensuring water quality and e-flow in the rivers, vide order/judgement dated 10.12.2015 and 13.07.2017 in Original Application (OA) 200 of 2014 and vide order dated 20.09.2018 in OA No. 673 of 2018.

Copy of the Order dated 10.12.2015 in Original Application (OA) 200 of 2014 passed by this Hon'ble Tribunal is annexed herewith as **ANNEXURE-A11**

Copy of Order dated 13.07.2017 in Original Application (OA) 200 of 2014 passed by this Hon'ble Tribunal is annexed herewith as **ANNEXURE-A12.**

Copy of the Order dated 20.09.2018 in OA No. 673 of 2018 passed by this Hon'ble Tribunal is annexed herewith as **ANNEXURE-A13**

PRAYER

It is ,therefore, prayed that the abovementioned Annexures-A8 to A13 may very kindly be permitted to be taken on record as additional documents in the interest of Justice.

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
EASTERN ZONE BENCH AT KOLKATA

IA NO. _____OF 2026

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ORIGINAL APPLICATION NO. OF 2026

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STATE OF JHARKHAND & OTHERS
...RESPONDENTS

AFFIDAVIT

I, Pratik Sharma, aged about 32 years, son of Shri Kamlesh Sharma, resident of H.No. 73, Dimna Road, Jamshedpur, Near Food Canvas, Mango, East Singhbhum, Jharkhand-831012,do hereby solemnly affirm and declare as under:-

1. That I am the Applicant in the abovementioned Original Application and therefore competent to swear the present Affidavit.
2. That the abovementioned Interlocutory Application (IA) for permission to place additional documents on record has been drafted by my counsel on my instructions and the contents of the same are true and correct to my knowledge.

Pratik Sharma 15.05.2026
DEPONENT

15/5/2026

Jitendra Kumar Singh
Jamshedpur
Reg. No.47207/25

IDENTIFIED BY ME AND SIGNED
PUT / LTI IN MY PRESENCE

Advocate

VERIFICATION: Verified today on this 15.5.2026 at Jamshedpur do hereby verify and declare that the facts mentioned above are true and correct nothing material has been concealed therefrom and no part of it is false.

Tarik Sharma 15.05.2026

DEPONENT

Annexure A-8

दैनिक भास्कर

जमशेदपुर 01-04-2026

प्रदूषण: सुवर्णरेखा नदी में 4 क्विंटल से अधिक मछलियां मरी

सिटी रिपोर्टर | जमशेदपुर

जमशेदपुर शहर से होकर गुजरने वाली प्रदूषित सुवर्णरेखा नदी में बीती रात 4 क्विंटल से अधिक मछलियों की मौत हो गई। नदी किनारे भुइंयाडीह और एग्रीको स्लम बस्ती के लोगों ने बड़ी मात्रा में मरी हुई मछलियां निकालकर बाजार में बेच दी।

आशंका है कि मरी हुई मछलियों की वास्तविक संख्या इससे भी अधिक हो सकती है। सुबह जब बस्ती के लोग शौच के लिए नदी किनारे पहुंचे, तब उनकी नजर बड़ी संख्या में किनारे पर जमा मरी हुई मछलियों पर पड़ी। मछलियों का वजन करीब 250 ग्राम से डेढ़ किलोग्राम तक था। -शेष पेज 9 पर

नदी किनारे जमा हुई मृत मछली

फोटो: सुदर्शन शर्मा

क्या कहते हैं जिम्मेदार

सुवर्णरेखा बहुद्देशीय परियोजना के चीफ इंजीनियर राम निवास प्रसाद ने कहा कि नदी का पानी पहले से ही प्रदूषित है। चांडिल डैम से छोड़ा गया पानी करीब 30 किलोमीटर बहने के बाद खरकई नदी से मिलता है, जहां आदित्यपुर औद्योगिक क्षेत्र का प्रदूषित पानी भी इसमें शामिल हो जाता है। इससे प्रदूषण बढ़ जाता है और मछलियों की मौत होती है। जिला मत्स्य पदाधिकारी अलका पन्ना ने कहा कि यदि मछलियों की मौत केवल ऑक्सीजन की कमी से हुई है तो इनके सेवन से स्वास्थ्य पर विशेष असर नहीं पड़ेगा। लेकिन यदि केमिकल या प्रदूषण इसकी वजह है, तो ऐसी मछलियों का सेवन हानिकारक हो सकता है।

Annexure A-9

दैनिक भास्कर

जमशेदपुर 04-04-2026

प्रदूषण बोर्ड की जांच रिपोर्ट • भुइयांडीह से एग्रिको तक नदी का बहाव लगभग ठहरा

सुवर्णरेखा में ऑक्सीजन की कमी से मरी थीं 6 क्विंटल मछलियां

सिटी रिपोर्टर | जमशेदपुर

भुइयांडीह से एग्रिको तक सुवर्णरेखा नदी में बड़ी संख्या में मछलियों की मौत ने इलाके में हड़कंप मचा दिया था। अब प्रदूषण नियंत्रण बोर्ड की जांच रिपोर्ट में खुलासा हुआ है कि इस घटना की मुख्य वजह पानी में ऑक्सीजन की कमी है।

जांच रिपोर्ट में बताया गया है- नदी के पानी में घुलित ऑक्सीजन (डीओ) का स्तर 4 मिलीग्राम/लीटर से भी कम था, जबकि यह जलीय जीवों के लिए न्यूनतम सुरक्षित सीमा मानी जाती है। ऑक्सीजन की कमी के कारण मछलियों की मौत हो गई। बोर्ड के अधिकारियों द्वारा दो दिनों में छह क्विंटल से अधिक मछलियों के मरने की संभावना जताई जा रही है। फिलहाल मृत मछलियों को हटाने के बाद नदी की स्थिति में आंशिक सुधार हुआ है, लेकिन खतरा बना हुआ है।

प्रदूषण बोर्ड की जांच में ये कारण गिनाए

- पानी में घुलित ऑक्सीजन का स्तर तय मानक से काफी कम
- बस्तियों के नालों से सीधे नदी में गिरता गंदा पानी
- प्रभावित क्षेत्र में नदी का बहाव लगभग ठहरा हुआ है
- बारिश के बाद नालों से भारी मात्रा में गंदगी का प्रवेश

भास्कर नॉलेज

पानी में 4 मिलीग्राम से कम ऑक्सीजन घातक

मछलियों के जीवित रहने के लिए पानी में कम से कम 4 मिलीग्राम / लीटर ऑक्सीजन जरूरी होती है। इससे कम स्तर होने पर उन्हें सांस लेने में दिक्कत होती है और मौत होने लगती है। जांच में कई स्थानों पर ऑक्सीजन स्तर 3 मिलीग्राम/लीटर से भी कम पाया गया, जो इस घटना का प्रमुख कारण बना।

मछलियों के मृत मिलने के बाद सुवर्णरेखा नदी के पानी की जांच की गई। जहां घटना हुई, वहां ऑक्सीजन स्तर तय मानक से कम पाया गया। गंदे पानी का मिलना इसकी प्रमुख वजह हो सकती है। अन्य तत्वों की जांच जारी है। –जीतेंद्र कुमार सिंह, क्षेत्रीय पदाधिकारी, प्रदूषण नियंत्रण बोर्ड

Annexure A-10

प्रभात खबर

सिटी

जमशेदपुर, शनिवार
11.04.2026

सुवर्णरेखा-खरकई का पानी प्रदूषित, कई जगहों पर नहाने लायक भी नहीं

ब्रजेश सिंह, जमशेदपुर

मछलियां मरने के बाद झारखंड प्रदूषण बोर्ड ने करायी थी दोनों नदियों के पानी की जांच, 7 अप्रैल को आयी रिपोर्ट

कोल्हान की लाइफलाइन मानी जाने वाली सुवर्णरेखा और खरकई नदी का पानी दिनोंदिन प्रदूषित होते जा रहा है. कई जगहों पर पीने लायक तो दूर, नहाने लायक भी नहीं है. मानगो के डाउन स्ट्रीम लालभट्ठा घाट तक आते-आते पानी जहरीला हो जा रहा है. इसका खुलासा तब हुआ, जब मछलियों की मौत के बाद झारखंड प्रदूषण बोर्ड ने पानी की जांच की. सात अप्रैल को आयी रिपोर्ट में कई चौंकाने वाले तथ्य सामने आये हैं.

इसमें पाया गया कि एक अप्रैल को स्वर्णरेखा नदी के डाउन स्ट्रीम लाल भट्ठा घाट के पास पीएच लेवल 8.2 था, जबकि मानक के मुताबिक 7 से ज्यादा नहीं चाहिए था. वहीं, डीओ (डिजॉल्व्ड ऑक्सीजन) की मात्रा सिर्फ 1.6 था, जो कम से कम 5 होना चाहिए. इसी तरह बीओडी (बायोलॉजिकल ऑक्सीजन डिमांड) यानी रासायनिक ऑक्सीजन डिमांड की मात्रा 11 एमजी था, जो तय मानक से काफी ज्यादा है.

- मानगो डाउनस्ट्रीम में पीएच लेवल अधिक, ऑक्सीजन कम, बीओडी भी मानक के पार
- झारखंड प्रदूषण बोर्ड ने लिये थे कोल्हान के कुल 14 स्थानों से पानी के सैंपल
- पीएच लेवल : 8.2. होना चाहिए : 7
- डीओ (डिजॉल्व्ड ऑक्सीजन : 1.6 होना चाहिए : 5
- बीओडी (बायोलॉजिकल ऑक्सीजन डिजॉल्व्ड) : 11 एमजी, होने चाहिए : 8

सुवर्णरेखा नदी.

मार्च में पीएच लेवल 9.2 पहुंचा, ऑक्सीजन की मात्रा भी घटी : झारखंड प्रदूषण बोर्ड ने खरकई और सुवर्णरेखा नदी के पानी की जांच मार्च में भी करायी थी. जांच में पाया गया कि पीएच लेवल 9.2 था, जबकि मानक के मुताबिक पीएच लेवल 7 होना चाहिए. पानी में ऑक्सीजन की मात्रा 1.5 से लेकर 3 एमजी तक था, जबकि यह कम से कम 5 होना चाहिए. बीओडी 3 के आसपास होना चाहिए जबकि 9 से 11.5 एमजी तक पहुंच गया. जनवरी के बाद से नदी की हालत खराब होते गयी. ऐसे में इन दोनों नदियों का पानी पीने लायक नहीं है. इसका इस्तेमाल स्नान और इंडस्ट्रियल उपयोग के लिए ही किया जा सकता है.

डिमना से बेहतर है चांडिल डैम का पानी : जांच में डिमना डैम से बेहतर पानी की क्वॉलिटी चांडिल डैम की पायी गयी. चांडिल डैम के पानी का पीएच लेवल 7.8 एमजी, डीओ की मात्रा 7.4 था. बीओडी की मात्रा नहीं

क्या कहता है प्रदूषण बोर्ड

छानियों की जांच के बाद दोनों नदियों के पानी की जांच की गयी थी. इसमें प्रदूषण लेवल काफी ज्यादा पाया गया. यह हिंग का विषय है. नगर निकायों को कहा गया है कि वे एसटीपी स्थापित करें. बोर्ड ने कार्रवाई के लिए सरकार से सिफारिश की है.

जीतेंद्र सिंह, क्षेत्रीय प्रदूषण पदाधिकारी

क्या कहते हैं विशेषज्ञ

नदी को लेकर आज तक कोई ठोस नीति नहीं बनी. इसी वजह से यह हाल है. सेंसिटिव और सरकार को साथ मिलकर आगे आना होगा तब जाकर सुवर्णरेखा और खरकई नदी निर्मल हो सकेगी है.

दिनेश मिश्र, नदी के विशेषज्ञ (लोअर नदी को लेकर अनशनरत रहा चुके हैं)

क्या कहते हैं चिकित्सक

दाद खाज होने से किडनी और लीवर के अलावा पेट की समस्या हो सकती है. चर्म रोग की परेशानी तो सामान्य है. हालांकि जो ऐसे पानी को उबालकर खाने लिए करते इस्तेमाल नहीं करना चाहिए.

डॉ बलराम झा, अधीक्षक, एमजीएम अस्पताल

जनवरी में बेहतर थी नदी की स्थिति

जनवरी में भी सुवर्णरेखा और खरकई नदी के जल की क्वॉलिटी की जांच झारखंड राज्य प्रदूषण नियंत्रण बोर्ड ने की थी. उस समय मानगो की सुवर्णरेखा के डाउन स्ट्रीम में पीएच लेवल 7.3 पाया गया था, जबकि ऑक्सीजन की मात्रा 5.5 एमजी तथा बीओडी 2.2 था. इसी तरह खरकई नदी के पानी का पीएच लेवल 7.2, डीओ की मात्रा 5.1 एमजी और बीओडी 2.6 था. खरकई के सुवर्णरेखा में मिलने के बाद पीएच लेवल 7.6 पाया गया, जबकि डीओ की मात्रा 5.9 एमजी तथा बीओडी 1.8 था. सुवर्णरेखा नदी के जल की क्वॉलिटी खरकई का पानी मिलने के पहले ज्यादा बेहतर पाया गया था, लेकिन अप्रैल आते-आते पानी का स्तर खराब होते चला गया.

14 स्थानों से लिये गये थे पानी के सैंपल

झारखंड प्रदूषण बोर्ड ने कोल्हान के कुल 14 स्थानों से पानी के सैंपल लिये थे. इसमें सोयलखारी नदी मनोहरपुर, चांडिल रोड ब्रिज, डिमना डैम, घाटशिला रोड ब्रिज, कांड्रुवा नदी मनोहरपुर, चांडिल रोड ब्रिज, सुवर्णरेखा नदी के खरकई नदी से मिलने के पहले और बाद के स्थान, मानगो के डाउन स्ट्रीम, गालूडीह बराज, घाटशिला एचसीएल, बहरागोड़ा रोड ब्रिज शामिल है.

टाटा कमांड एरिया में बने 16 एसटीपी, गैर कमांड एरिया में एक भी नहीं

नगर निकाय क्षेत्रों में 39 जगहों पर नाले से खरकई और सुवर्णरेखा नदी में गंदा पानी छोड़े जाते हैं. कमीय सात साल पहले एनजीटी ने हर नाले पर सीवरेज ट्रीटमेंट प्लांट (एसटीपी) लगाने और ट्रीटमेंट के बाद ही नदी में पानी छोड़ने का आदेश दिया था. लेकिन नगर निकायों ने अबतक इसे स्थापित नहीं किया है. कोल्हान में निजी कंपनियों ने 16 एसटीपी लगाये हैं. इनमें टाटा स्टील ने पांच, टाटा मोटर्स ने एक, एचसीएल ने एक, यूसिल ने दो, एसीसी ने एक, लाफार्ज ने एक, रामकृष्णा फोर्जिंग कंपनी ने एक, मेटलमा ने एक, टीजीएस ने एक, टाटा कमिंस ने एक और टाटा पिगमेंट के प्लांट शामिल है. टाटा स्टील यूआइएसएल तीन और प्लांट लगा रहा है. लेकिन दुर्भाग्य की बात है कि जमशेदपुर ऑफिस, मानगो नगर निगम और जुगसलाई नगर परिषद ने एक भी एसटीपी प्लांट आजतक नहीं लगाया.

Annexure A-11

BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH
NEW DELHI
.....

ORIGINAL APPLICATION NO. 10 OF 2015
(M.A. NO. 27 OF 2015, M.A. NO. 744 OF 2015 &
M.A. NO. 1094 OF 2015)

IN THE MATTER OF:

Indian Council for Enviro-Legal Action
5, Anand Lok, August Kranti Marg,
New Delhi-49.

..... Applicant

Versus

1. National Ganga River Basin Authority (NGBRA)
   (Through its vice Chairperson)
   Union Minister of Water Resources & Ganga Rejuvenation
   Shram Shakti Bhavan, Rafi Marg, New Delhi-110001

2. Chief Secretary, State of Uttarakhand,
   Secretariat Compound
   Subhash Road, Dehradun, 248001 (Uttarakhand)

3. Central Pollution Control Board
   (Through its member Secretary)
   Parivesh Bhawan CBD-cum-Office Complex,
   East Arjun Nagar, New Delhi-110032

4. Ministry of Environment and Forests,
   Paryavaran Bhawan,
   CGO Complex Lodhi Road,
   New Delhi – 110003

5. Uttarakhand Environment Protection and Pollution
   Control Board.

AND

ORIGINAL APPLICATION NO. 200 OF 2014
(C.W.P. NO. 3727 OF 1985)

IN THE MATTER OF:

M.C. Mehta

……Applicant

Versus

Union of India
Through the Secretary Ministry of Environment and Forests
Paryavaran Bhawan, CGO Complex
Lodhi Road, New Delhi – 110003 & Ors.

…….Respondent

COUNSEL FOR APPLICANT:
Mr. M.C. Mehta and Mr. Katyani, Mr. Rahul Shukla, Advs.

COUNSEL FOR RESPONDENTS:
Mr. Ardhendumauli Kumar Prasad, Mr. Jigdal G. Chankapa and Ms. Priyanaka Swami, Advocates for Respondent No. 1.
Mr. Rahul Verma, Advocate for Respondent No. 2
Mr. Raj Kumar, Advocate with Mr. S.L. Gundli, SLO, CPCB for Respondent No.3
Mr. Gaurav Dhingra, Advocate for Respondent No. 4
Ms. Panchajanya Batra Singh, Advocate for Respondent No.5
Mr. Mukesh Verma, Advocate and Mr. R.S. Rana, RO & Mr. Ankur Kansal, RO. Mr. I.K. Kapila, Advocate for U.K. & U.P. Jal Nigam, Mr. Y.K. Mishra, GM and Mr. K.K. Rastogi, PM for UK Pey Jal Nigam Mr. Sunil Prakash Sharma, Advocate for Nagar Nigam, Haridwar Mr. B.V. Niren, Advocate for CGWA for Respondent No.6

(IN O.A. NO. 200 OF 2014)

Ms. Panchajanya Batra Singh, Advocate for MoEF & CC for Respondent No. 1
Mr. Pradeep Misra and Mr. Daleep Kumar Dhyani, Advocates for UPPCB Respondent No. 2
Mr. Raj Kumar, Advocate with Mr. S.L. Gundli, SLO, CPCB Mr. Mukesh Verma, Advocate and Mr. R.S. Rana, RO & Mr. Ankur Kansal, RO for Respondent No. 3
Ms. Savitri Pandey, Advocate for State of U.P. with Ms. Azma Parveen, Advs. Mr. I.K. Kapila, Advocate for U.K. & U.P. Jal Nigam, Mr. Y.K. Mishra, GM and Mr. K.K. Rastogi, PM for UK Pey Jal Nigam Mr. B.V. Niren, Advocate for CGWA for Respondent No. 5
Mr. Devashish Bharuka and Ms. Anu Tyagi and Ms. Arpita Bishmoi, Advs. Mr. B.V. Niren, Advocate for CGWA Mr. Rudreshwar Singh, Mr. Gautam Singh and Mr. Divya Singh, Advs. For State of Bihar and BPCB Mr. Jayesh Gaurav, Advocate for JSPCB Ms. Yogmaya Agnihotri, Advocate for CECB Mr. Ishwar Singh, Advocate for NMCG Mr. Rajul Shrivastava and Ms. Sucheta Yadav, Advocate for Respondent No. 18

JUDGMENT

PRESENT:

Hon'ble Mr. Justice Swatanter Kumar (Chairperson)
Hon'ble Mr. Justice M.S. Nambiar (Judicial Member)
Hon'ble Dr. Devendra Kumar Agrawal (Expert Member)
Hon'ble Mr. Bikram Singh Sajwan (Expert Member)

Reserved on: 5thNovember, 2015
Pronounced on: 10th December, 2015

1. Whether the judgment is allowed to be published on the net?
2. Whether the judgment is allowed to be published in the NGT Reporter?

JUSTICE SWATANTER KUMAR, (CHAIRPERSON)

These two cases, i.e., Original Application No. 10 of 2015 and Original Application No. 200 of 2014 are the lead cases before the Tribunal in relation to cleaning of river Ganga. The Original Application No. 10 of 2015 primarily relates to pollution being caused by throwing of waste, particularly untreated or partially treated sewage being inducted into the river Ganga. The Original Application No. 200 of 2014 relates to general cleaning of Ganga which flows nearly 2,525 Kms. in 5 different states, primarily in Uttarakhand, Uttar Pradesh, part of Jharkhand, Bihar and West Bengal. From Haridwar onwards the natural flow of river Ganga reduces from 31,000 Cusecs to about 4,000 Cusecs near Kanpur. On the one hand, there is tremendous decrease in volume of natural flow of the river, while on the other, there is simultaneous increase in pollutants being put into river Ganga, primarily including sewage and trade effluents of Seriously Polluting Industries (for short, "SPI") as well as other industries which leads to increase in pollution load tremendously. As

per the report of Central Pollution Control Board (for short, "CPCB"), the trade effluents inducted into river Ganga in the area falling in the State of Uttar Pradesh are about 555 MLD while the untreated or treated sewage induction into the river is 3811MLD. In the State of Uttarakhand alone, sewage induction into the river is 142.99 MLD whereas contribution from trade effluent from Grossly Polluting Industries (for short, "GPI") is 7 MLD and treated and/or untreated effluent from other industries is 67 MLD.

This is an indicator of the extent of pollution to which the most holy river of the country is being subjected to.

2. The Original Application No. 200 of 2014 is an Application which came before us upon transfer and was originally registered with the Hon'ble Supreme Court of India vide Civil Writ Petition No. 3727 of 1985. We may refer to the concern of the Hon'ble Supreme Court of India and pious hope that the Court expressed in relation to cleaning of river Ganga and the responsibility that it bestowed upon this Tribunal. The relevant portion of the order dated 29th October, 2014 passed by the Hon'ble Supreme Court of India reads as under:

> *"Statutory Authorities that are charged with the duty to prevent pollution need to monitor and take action where they find any breach of the law. Failure of the authority to do so may also have to be noted for such action as may be required under law. This may call for a closer monitoring of the performance of all concerned. Time constrains unfortunately do not allow us to do that on a continuing basis no matter we have over the past thirty years devoted enough time and energy in that direction. We are comforted by the thought that the National Green Tribunal has been established under the National Green Tribunal Act, 2010. The Tribunal, it is evident from the provisions of the Act, has the power to take stock of the situation and pass necessary orders on the subject. It has the*

legislative mandate to undertake effective and speedy adjudication and disposal of issues touching preservation of environment by prevention of pollution. It is in the above backdrop that we consider it more appropriate to refer the issue relating to enforcement of the provisions of the statutes touching environment and its preservation arising out of discharge of industrial effluents into river Ganga to the National Green Tribunal. We are confident that the Tribunal which has several experts as its members and the advantage of assistance from agencies from outside will spare no efforts to effectively address all the questions arising out of industrial effluents being discharged into the river. This will include discharge not only from the grossly polluting industries referred to in the earlier part of this order but also discharge from "highly polluting units" also.

We accordingly request the Tribunal to look into all relevant aspects and to pass appropriate directions against all those found to be violating the law. We will highly appreciate if the Tribunal submits an interim report to us every six months only to give us an idea as to the progress made and the difficulties, if any, besetting the exercise to enable us to remove such of the difficulties as can be removed within judicially manageable dimensions."

3. Thereafter, the Tribunal adopted the mechanism of "Stakeholder Consultative Process in Adjudication" in order to achieve fast and implementable resolution to this serious and challenging environmental issue facing the country. Secretaries from Government of India, Chief Secretaries of the respective States, concerned Member Secretaries of Pollution Control Boards, Uttarakhand Pey Jal Nigam, Uttar Pradesh Jal Nigam, Urban Development Secretaries from the States, representatives from various Associations of Industries (Big or Small) and even the persons having least stakes were required to participate in the consultative meetings. Various mechanism and remedial steps for preventing and controlling pollution of river Ganga were discussed at length. The purpose of these meetings was

primarily to know the intent of the executives and political will of the representative States who were required to take steps in that direction.

4. With some emphasis we must notice that river Ganga is not only a sacred river for the people of India, but it also provides life line to large number of cities which are located on its bank. On the one hand, there is tremendous decrease in natural flow of the river while on the other it is a source of irrigation and drinking water for larger section of population in cities and villages along river Ganga. The Prime Minister of the country, considering cleaning of river Ganga as a paramount national project, provided Rs. 20,000/- Crores for the coming 5 years. This being the object and aim of the Government, we see no reason why there is delay in its execution. There should not be any deficiencies or impediments resulting from any source whatsoever. India is a country of federal structure with greater role of the Central Government. The Constitution of India mandates, the Central and the State Governments, to provide both, clean and decent environment and clean drinking water for the people of India. The Hon'ble Supreme Court of India has extended the dimension of Article 21 of the Constitution of India by declaring the right to a decent and clean environment as a Fundamental Right. The framers of the Constitution even prescribed duty upon the citizens to make every effort to keep the environment clean and to protect its forests, rivers, water-bodies and to have compassion for the living creatures. That is the constitutional scheme in relation to protection of environment with particular reference to rivers and water streams.

5. A time has come when all, including this Tribunal, must not hesitate to pass appropriate orders and directions in relation to cleaning of river Ganga, which is not only the need of hour, but also an indispensable necessity in the interest of environment and public health.

In the above backdrop, the Tribunal in its previous orders and in the consultative meetings held with the stakeholders, has decided to deal with cleaning of river Ganga in phases. It was decided to dissect the entire 2,525 Kms stretch of river Ganga into 4 different phases. The first phase would be from Gaumukh in Uttarakhand to beyond Kanpur in the State of Uttar Pradesh. We have further divided this phase into two segments. First segment is from Gomukh to Haridwar and second segment will be beyond Haridwar to Kanpur. The Second phase would be from outer Kanpur in the State of Uttar Pradesh to the border of the State of Uttar Pradesh, while the third phase would be from Mokama Ghat on the border of Uttar Pradesh to the Border of Jharkhand, and the final phase would be from the end of Jharkhand border to West Bengal upto Bay of Bengal, where the river Ganga joins Bay of Bengal.

Thus, in this judgment, we would primarily be dealing with the prevention and control of pollution of River Ganga in first segment of Phase-1 and restoration of the river and its bio-diversity to its pristine form. It is an admitted position before us that from Gaumukh to Haridwar the main source of pollution is by discharge of untreated sewage into the river. The industrial or trade effluent discharge into River Ganga is quite minimal in this segment. However, another

source of pollution is indiscriminate dumping of construction and demolition waste and municipal solid waste and any other waste into the river directly. As River Ganga is a holy river, with religious sentiments attached to it and is even worshipped by majority of the people while also providing a lifeline to larger section of population in the country, therefore, another important aspect of this segment is regulation of religious activities to ensure that flow of the river is not obstructed and the holy river is not exposed to intolerable pollution from that activity.

6. With some concerns, we must notice here that various studies carried out have demonstrated that Ganga is able to reduce its biochemical oxygen demand level much faster than other rivers (Refer: *D.S. Bhargava, Purification Power of the Ganges unmatched. L.S.T. Bull. 34, pp. 52, 1982*). Organic materials usually exhaust a river's available oxygen and starts decomposing. But in the Ganges, it is interesting to know how an unknown substance acts on organic materials and bacteria and kills them. Ganga's self-purifying quality leads to oxygen levels 25 times higher than in any other river in the world. It is also stated that in the study conducted by Malaria Research Centre in New Delhi, it was observed that the water from upper ambits of Ganga did not host mosquito breeding, and also prevented mosquito breeding in any water it was added to.

In our considered view, appropriate directions of varied dimensions and of serious consequences in accordance with law have to be passed by the Tribunal to protect degradation of the river ecology

any further and to restore it to its original status in terms of water quality, river flow, purity and its bio-diversity.

7. We have already indicated that the Tribunal had not only adopted consultative process of stakeholders in adjudicatory process but had also ventured into details and enquiries to be answered by the learned Counsels appearing for the respective parties who were duly instructed by responsible officers of the respective departments to place the data before the Tribunal which would provide adequate information to enable to the Tribunal to pass appropriate directions which could be executed without difficulties at the ground level. We may refer to some of the factual aspects which the learned Counsels, particularly appearing for the Government Departments, had stated before the Tribunal during the course of hearing.

8. Vide order dated 26th August, 2014, the Tribunal had directed the Uttarakhand Environment Protection and Pollution Control Board (for short, "UKPCB"), CPCB and Officers of the Irrigation Department of State of Uttarakhand to conduct a joint inspection of the hotels, ashrams, and industries which are discharging sewage and/or trade effluents treated or otherwise, into River Ganga and/or its tributaries. Joint inspection team had inspected 106 industries and had filed a report before the Tribunal. Most of these industries were discharging their effluents directly into River Ganga or river Sukhi and Begam Nalla which eventually joined River Ganga at one point or the other. Only three industries were found to be connected to Common Effluent Treatment Plants (for short, "CETPs"). Some of the units are stated to have constructed their own Effluent Treatment Plants (for short "ETP")

but still there is no definite data on record to show that they are performing within the prescribed parameters. There is no exact information available as to the size of the ETP installed by the units, their efficiencies and parameters of the trade effluents generated by the industries. The finally treated effluent generated from CETP is also disposed of into Sukhi river for which the UKPCB has issued a notice requiring them to maintain zero liquid discharge conditions in terms of the order issued. Some of these industries are generating very heavy effluent ranging between 4500 to 6000 KLD, while others are discharging comparatively less effluents. Unfortunately, there is no comprehensive data available either with UKPCB or with any other government department which provides the quantum and quality of the trade effluents as well as what industrial activities the industries are carrying, in these areas with exactitude. There is certainly a need for proper supervision and regulation of the industrial activity carried out in this belt as well as need to ensure that the effluent discharged by the industries and/or CETPs in no case is in excess of the prescribed parameters which certainly is not the status as of now. Furthermore, the UKPCB and the public authorities of the State have to examine if the water generated from the Sewage Treatment Plant (for short "STP") or CETPs could be recycled for agriculture, horticulture and even for industrial purposes rather than directly putting it into river, resulting in contamination.

9. The Learned Counsel appearing for Uttarkhand Pey Jal Nigam upon instructions from Mr. K.K. Rastogi, Project Manager, submitted that the total volume of sewage discharged from Gaumukh to

Haridwar is 142.99 MLD and there are 17 towns situated on the banks of river Ganga in this zone. Out of these 17 towns, only 5 have been provided with STPs. The city of Haridwar and Rishikesh are the biggest contributors of treated/untreated sewage into the river Ganga, which is approximately 98 MLD. At Rishikesh, sewage discharge is approximately more than 13 MLD and the lowest discharge in this belt is from Kirti Nagar which is approximately 0.035 MLD. Enroute, the other town with large sewage discharge is Srinagar with 5.5 MLD.

10. This data has been provided to the Tribunal, firstly on project basis and secondly on per capita water consumption basis, taking 80% of the per capita water consumption as sewage generation. The study in relation to Haridwar is based upon 135 Litres per capita water supply while it is actually 170 Litres per day water supply as per the City Development Plan of Haridwar. It is admitted before us, that the project report for STP is not based upon any physical measurement of the sewage generated. Interestingly, this data is also not supported by the study carried out by CPCB which had been placed before the Tribunal in the last consultative meeting.

11. It is unfortunate and regrettable that projects are being prepared for cleaning river Ganga without any data based upon physical verifications. However, we will not permit this to be an impediment in way of the Tribunal to proceed with this matter further, in accordance with law.

12. The Learned Counsel further informed us that out of the 7 STPs which have been installed in this entire belt, 3 STPs are located at

Haridwar out of which 2 are at Jagjeetpur and 1 is at Sarai, and 1 STP each at Swarg Ashram, Srinagar, Rishikesh, and Uttarkashi. It is further informed that the three STPs at Haridwar are of the capacity of 18 MLD, 18 MLD and 27 MLD respectively. The STP of 27 MLD capacity gets an input of 27 MLD which is adjacent to another STP of 18 MLD capacity at Jagjeetpur. Thus, the total capacity of these two STPs is 45 MLD, while the load which is being received at the end is 85 MLD. So, 40 MLD sewage is straight away being by-passed untreated into river Ganga and 45 MLD is processed through these two STPs from Jagjeetpur.

13. However, the CPCB in the joint inspection report has submitted that this is not 40 MLD, but it is 55 MLD sewage that is discharged into Ganga, which is stated to be based upon actual measurement by the team.

These plants are being operated without consent of the UKPCB presently and even when it was run by the Uttarakhand Pey Jal Nigam, which was earlier responsible for operating these plants they were being run without consent. Officers stated that they have applied for 'consent to operate' from the UKPCB. However, the Counsel of UKPCB submitted that these plants have not applied for the consent. According to the officer of Uttarakhand Jal Sansthan, they are maintaining and running the plant appropriately and discharging the treated sewage as per the prescribed parameters. Even this is disputed by the Learned Counsel appearing for UKPCB, who submits that they have also filed the inspection report on record. According to the Learned Counsel, certain deficiencies were also

pointed out in the report. As per the analysis report, individual working of the STPs was by and large as per the prescribed parameters, however, the collective discharge/ maximum discharge into the river was found to be much in excess to the prescribed value. For instance, the BOD was found to be 70 mg/l or 36 mg/l as against the prescribed standard value of 30 mg/l. As far as the COD is concerned, it was found to be 280 mg/l as against the prescribed standard value of 250 mg/l. The Total Suspended Solids (for short "TSS") was found to be 112 mg/l and 140 mg/l as against the prescribed standard value of 100 mg/l. Two different values were found on analysis by two different laboratories. The third STP plant of 18 MLD is working in Haridwar at Sarai Village. It receives sewage to the extent of 13 to 14 MLD and is functioning properly and in fact remains underutilized as of now.

14. The Tribunal had also passed orders on 10th March, 2015 and 9th April, 2015 directing constitution of a joint inspection team of Ministry of Environment, Forest and Climate Change (for short "MoEF"), CPCB, UKPCB and other named officers. They were expected to inspect large hotels, ashrams and functioning of the CETPs and STPs as per the list prepared. The joint inspection team conducted inspections at Rishikesh and Haridwar. In relation to hotels, in addition to what we have already noticed, it was also stated that none of these hotels have obtained Central Ground Water Authority (for short, "CGWA") clearance and even the STPs, wherever constructed by the hotels, were found to be poorly operated and maintained. Similar were the observations of the Committee in relation to Ashrams. In some of the

hotels and Ashrams like Radisson Blue and Godwin Hotel, the TSS and BOD concentration at the outlet were found to be not meeting the general standards.

SEWAGE TREATMENT PLANT (STP)

15. In relation to the sewage management at Haridwar, the Uttarakhand Pey Jal Nigam stated that 89 km stretch of river Ganga flows after its confluence at Devprayag, before entering State of U.P. Nearly 22 drains fall into the river Ganga in Haridwar alone out of which 17 have been trapped and diverted while for remaining 5 the DPR for interception and diversion has been submitted for which sanction and release of funds is presently pending with the concerned Ministry for clearance. It was for construction of a total 40 MLD STP plant at Jageetpur in Haridwar. The 3 drains release their discharge in river Bhagirathi which are located from Gaumukh to upstream of Devprayag. These drains have been trapped and the sewage is diverted to an STP. It is also stated that there are 68 drains in the area releasing discharge into River Bhagirathi till Upstream of Devprayag. Out of these, only 7 drains are trapped and their effluent is diverted to STP. There are another 72 drains in the area falling from downstream Devprayag to the boundary of State of Uttarakhand out of which 48 drains are trapped and discharge is diverted to STP. 8 drains out of the above mentioned drains are stated to be carrying water without pollutants. The land has already been allotted by the concerned department of the Government for establishment of 40 MLD STP in Jageetpur. This was in addition to the 45 MLD Plants already established. This plant was a subject matter of discussion and

conclusion before the Empowered Committee of National Ganga River Basin Authority (for short, "NGRBA)" held on 5th May, 2015. In that meeting the available treatment capacity at Jagjeetpur, Haridwar was taken to be 45 MLD (18+27) and the treatment plant was receiving 80 MLD of sewage which is likely to increase with the passage of time and additional sewage treatment plant of 40 MLD was proposed. It was recorded in the minutes as follows:

T-04/2012-13/01,:i7/NMCG-ESC
National Mission for Clean Ganga
Ministry of Water Resources, River Development & Ganga Rejuvenation
Government of India
3rd Floor, Rear Wing
DoorsancharSadan, 9, CGO Complex
Lodi Road, New Delhi – 110003
Dated 14th May, 2015

OFFICE MEMORANDUM

Subject: Minutes of the 11th meeting Of Empowered Steering Committee (ESC) of the National Ganga river Basin Authority (NGRBA) held on 5th May 2015

To

A copy of the minutes of the 116 meeting of the Empowered Steering Committee (ESC) of the National Ganga River Basin Authority (NGRBA) as held on 5th May, 2015 under the Chairmanship of Secretary (WR,RD&GR) is forwarded herewith for kind information /necessary action.

Fuel: As stated

(PuskalUpadhyay)
Additional Mission Director &
Director Finance, NMCG
Contact No 011-24361074

1. Secretary, Ministry of Water Resources, Shram Shalt: Bh.awan. New Delhi.
2. Secretary, Ministry of Environment and Forests, ParyavaranBhawan. New Delhi.
3. Secretary, Department Of Expenditure. Ministry of Finance, North Block, New Delhi.
4. . Secretary, Ministry of Urban Development, NirmanBhawan, New Delhi.
5. Secretary, Ministry of Power, Sham Shakti Bhawan. New Delhi.
6. Secretary, Department of Science and Technology, Technology Bhawan, New Delhi.

7. Secretary, Planning Commission. YojnaBhawan, New Delhi.
8. Chief Secretary. Uttarakhand, Uttranchal Secretariat, Dehradun,
9. Chief Secretary, Uttar Pradesh, ShastriBhawan, Lucknow.
10. Chief Secretary , Bihar, Main Secretariat, Patna.
11. Chief Secretary Jharkhand, Project Bhawan, Ranchi.
12. Chief Secretary, West Bengal, Writers Building, Kolkata.
13. Chairman, Central Pollution Control Board, Arjun Nagar, New Delhi.
14. Chairman. Central Water Commission. Sewa Bhawan, New Delhi.
15. Joint Secretary& Financial Advisor, MoWR, RD & GR, Shram Shakti Bhawan, New Delhi.

Copy in: The .Joint Secretary and Mission Director, MoWR, Rd & GR and NMCG

Internal Circulation: PPS to Secretary (WR.RD&GR) / PPS to JS&FA\ (WRRD&GR) / PS to MD-NMCG /PS to AMD & Dir(F) NMCG/All NMCG Staff

Summary of 11th meeting of the Empowered Steering Cornmittee (ESC) of NGRBA held on Sth of May 2015 in Committee Hall, MoWR,RD&GR.

The 11' meeting of the Empowered Steering Committee (ESC) of the NGRBA was held on 5th of May, 2015 at 15 00 hours under the Chairmanship of Secretary (WR,RD&GR). List of participant is enclosed at Annexure-l.

At the outset, the Mission Director, NMCG welcomed the Chairman and members of the ESC. Mission Director, NMCG informed the members of ESC in brief about the proposals listed for consideration in the 1 ESC meeting.

Proposals for Considerations:

1. Additional 40 MLD STP at Jagjeetpur, Haridwar
2. DPR for Development of Chandi Ghat at Haridwar
3. MWW scheme at Chamoli —Gopeshwar, Uttarakhand
4. Municipal Waste Water project of Joshimath Town, Uttarakhand
5. MWW scheme at Srinagar Garhwal
6. Sewer Network in District E of Aliahabad — Part 2 (Additional Work) in Uttar Pradesh
7. Rehabilitation/ Up gradation of Existing STPs at Dinapur (District 1) 80 MLD and Bhagwanpur (District 3) 8 MLD of Varanasi Town in Uttar Pradesh

8. Sewerage Treatment Plant for ASSI-BHU Sewerage District at Ramana, Varanasi, Uttar Pradesh
9. Sewerage Scheme & STP for Arrah Town, Distt: Bhojpur, Bihar
10. Sewerage Scheme for Chhapra City, Dist.: Saran, Bihar
11. A Programme to Conserve Ganga River Dolphin (Platanistagaigeticogangetica) in Ganga and its tributaries in the state of West Bengal
12. Rehabilitation & Up-gradation of existing 182 mldRithala Phase-I Sewage Treatment Plant (STP) in Delhi
13, Rehabilitation and Up-gradation of existing Kondli-Phase-I (45 mid), Phase-II (114 mid) & Phase-Ill (45 mid) Sewage Treatment Plants (STPs) in Delhi
14. Waiving off two conditions of Muni-ki-Reti Dhalwala sewerage and STP project
15, Swachch Ganga Cities and Ghats
16. Involving ULBs in Mission Clean Ganga Activities

Agenda Item No.1: Additional 40 MLD STP at Jagjeetpur, Haridwar

The available treatment capacity at Jagjeetpur Haridwar is 45 MLD (18+27). However, at present the treatment plant receives around 80 mid of sewage and this is expected to increase to 85 mld by 2016. Thus to take care of the treatment gap of 40 mId, an additional sewage treatment plant of 40 MLD is proposed at lagjeetpur in order to take care of the additional pollution load prior to proposed ArdhKumbh meta in January 2016.

- During discussion, representatives for Uttarakhand explained that this is neither an up radiation nor a rehabilitation project but rather a standalone project with construction f new 40 mid STP. The Third Party Appraisal (1 PA) agency, IIT-Roorkee supported the project and mentioned that the land is available for the project and all other aspects are agreeable. Regarding Operation and Maintenance (O&M), state representatives of Uttarakhand requested for 10 years central support and proposed 5 years support from state However during discussion it came out that at present the project considered only 5 years O&M and therefore without having proper calculation of 10 years O&M it is difficult for ESC to recommend It was finally agreed that at present the project will be considered based upon 5 years O&M only.
    - The Joint Secretary and Financial advisor (JS&FA), MoWR,RD&GR mentioned that infrastructure projects taken up in 11' ESC are

proposed under Namami Gange with 70:30 cost sharing between center and state. The 70.30 cost sharing is approved by cabinet only for World Bank funded NGRBA programme and cabinet note for Namami Gange has been properly -with 100% central sector scheme. Regarding this concern, Secretary, MoWR, RD&GR mentioned that projects proposed under Namami Gange need to follow the cost sharing pattern in accordance with the cabinet approval for Namami Gange. That was agreed by all.

• Regarding fixing of STP cost and comparison; IIT-Roorkee mentioned that for designing an STP two aspects are looked into namely (i) availability of land and (ii) parameters of treated sewage outflow. It was mentioned that the present STP has been designed with treated sewage quality: BOD of 10mg/I, Total Suspended Solid (TSS) of 10mg/I and Fecal Coliform (PC) of 1000MPN/100m1. Land is available with the state government.

• IIT mentioned that CPHEEO manual on sewerage and Sewage Treatment System (2013) considered as guideline while designing the projects

Regarding discharge standards, CPCB mentioned that MoEF is expected to revise the discharge standard for Fecal Coliform for treated waste water as <100MPN/100m1and suggested to consider such standard in the project. CPCB was directed to provide a written confirmation on the revised standard

• During discussion with Advisor MoEF, IIT-Roorkee mentioned that;

- life cycle cost has been appraised and considered in the project;

Performance monitoring of the existing STP done and it is noted that more waste water is coming to the STP than its capacity;

• JS&MD mentioned that the prime target is to arrest arid treat the waste water getting discharged into river Ganga Therefore, irrespective of whether there is a sewerage network or not, Interception and Diversion (I&D) works are required.

• As far availability of power supply is concerned, IIT Roorkee mentioned that there is provision of power back up available in the SIP,

• Regarding effective monitoring, IIT mentioned that SCADA system is effective while monitoring of effluent quality and can be monitored from remote location through central server.

• Regarding, payment to STP operator it was discussed that some guideline related to monitoring, penalty clause to be developed to ensure proper performance. Chief Secretary, Uttarakhand and Principal Secretary, West Ben I mentioned that at

present 10% of the project cost is generally kept as a performance guarantee from the operator and this may be considered while developing the guideline.
Secretary, MoWR, RD&GR then mentioned that a Technical Sub Committee (TSC) may be formed with representatives from respective states, NMCG, CPCB, TPA, Finance and legal back ground persons. The committee will look into the following aspects:
• Adequacy of fool proof online monitoring mechanism;
• Adequate penalty for tackling fraudulent practices;
• Mechanism to ensure no cost cutting in O&M;
• Provision of persecution for deliberately releasing waste water below standards under EP Act 1986_;
• Standardization of cost and water quality parameters

Based on the discussions, the Empowered Steering Committee recommended that the proposal be considered for according administrative approval and expenditure sanction (AA&ES) by the competent authority at an indicative. cost of Rs 71.40 Crores including 5 years O&M cost of Rs 21.42 Crores to be implemented within 15 months with the conditions (0 Treated Water quality to follow BOD<10mg/1, TSS< 10mg/I and Faecal Coliform<100mg/100ml; (ii) Centre will support 5 years O&M; beyond 5 years State need to support the O&M cost; (iii) Cost sharing between Center and State will be as per approval of the cabinet (iv) Land will be provided by State"

16. Thus, it is expected of the State of Uttarakhand to implement this project with all due care and caution as noticed by the Committee and in light of this Judgment of the Tribunal.

7 STP's have already been constructed and commissioned along the river Ganga in some parts of State of Utarakhand, by the Uttarakhand Jal Sansthan. Out of these 1 STP at Uttarakashi is under repair because of the extensive damage suffered during the floods in June 2013. The Nigam proposes to lay down sewage system at all places including Haridwar for which the year of completion is 2028. As far as

Haridwar is concerned, the sewage from entire area is proposed to be treated at 4 STP locations from 7 contributory zones. The respondents propose to meet the entire requirement of Haridwar by 2018 as they would augment the existing STP of 45 MLD at Jagjeetpur to 85 MLD by construction of 40 MLD STP at Jagjeetpur for which the DPR has already been submitted. Once that is constructed, the entire sewage would be treated. As per the above details, during the chamber deliberations it was commonly agreed that construction of sewerage system in all the towns upstream Rishikesh would be unduly expensive, impractical and would not meet the requisite requirement as there would be unnecessary digging and destruction of the hills. Thus, it was considered appropriate to have Bio Digester tanks to commonly meet the ends of a small sector. Further, it will not be useful to install STP's everywhere and STPs should be provided and constructed where the load of sewage will fully justify the construction of such a plant and will not unnecessarily interfere with the environment and ecology of the area. Thus, we will issue clear directions in that regard to all authorities including, National Mission for Clean Ganga (for short "NMCG") to clear this project immediately. State of Utarakhand should submit a plan in relation to all the cities for ensuring that there is no untreated sewage to be put into river Ganga and proper system should be brought in place to recycle or distribute the effluent taken from the outlet of these plants for permissible activities like agriculture, horticulture, industrial purposes and such other allied purposes.

17. Rishikesh has a 6 MLD Plant which is being maintained by Jal Sansthan and is receiving about 27 MLD of sewage. This means that 21 MLD of sewage at Rishikesh is being directly thrown into river Ganga without any treatment. This plant, according to the officials, is not working properly because of heavy load and as sewage coming from the extension point does not meet the requisite parameters. This would obviously mean that the entire sewage is being put into river Ganga without any treatment.

18. Srinagar has a STP of 3.5 MLD and is receiving sewage of about 1 MLD every day. The Srinagar town is partly having sewer line and approximately 1.5 MLD is being directly put into the river Ganga at Srinagar, through Nallah. According to the officials of the Jal Sansthan as well as Uttarakhand Pey Jal Nigam, only 20% area of Srinagar town is covered by sewer line. In Srinagar, there are 2938 numbers of Septic Tanks. In the village Chauras, which falls in District Tehri, but is opposite to Srinagar on the other bank of river Ganga, there is no STP. There is a huge Garhwal University Campus located in village Chauras, which may have its own STP. However, there is large number of houses besides the University Campus.

19. At Kirti Nagar there is a proposal to set up a STP of 0.035 MLD. The population there is presently 1,500 and is expected to be 2,235 in the year 2028. The STP of about 2.48 MLD was established at Uttarkashi. However, in the recent past natural calamity occurred and the said STP has been destroyed. It requires major mechanical work, which is underway. Presently, it is not known what is the quantity of sewage discharged and the existing population at Uttarkashi. The

official submitted that the capacity of STP at Swarg Ashram is about 3 MLD which receives the sewage of about 2.5 MLD and it is being maintained by the Jal Sansthan. In Swarg Ashram there are mostly Ashrams and some of them are connected to the sewer line while others are not. Such Ashrams that are not connected to sewer line have their own Septic Tanks. Uttarakhand Jal Sansthan had served notice upon others to get them connected to the sewer line. Similarly the residential portion of that city, has also been partially connected to sewer line and some may have their own septic tank. Still there are ashrams and houses which are neither connected to sewer line nor have their own septic tanks. There is a drain - natural nalla, which has not been trapped. It is possible that people discharge their sewage into that nalla which directly goes to river Ganga.

20. The Learned Counsel appearing for the Uttarkhand Pey Jal Nigam submits that in the State there is a coordination body - State Programme Management Group created under NGRBA, Uttarakhand, notified by the State to monitor activities of prevention and control that are required to be taken in relation to river Ganga.

21. It is mandatory in the State of Uttarakhand that every house is either connected to the sewer line network or has its own septic tank. However, the officer is unable to submit whether there are houses without either of them. The officer, Mr. D. K. Singh, Superintendent Engineer, has been there for five years. There are 6 vehicles in the organisation under him. He submits that on the request of the owner of the house or the ashrams, septic tanks are emptied into the manhole of STP or such effluent is brought to the STP. Nearly 36,000

litres of sewage is brought in trucks to the STP plant and it is treated at the plant.

22. Once the septic tanks are full, the owners have fixed a pipeline, from where the over flow goes into the drain. That drain carries it to river Ganga. This drain is not trapped by Uttarakhand Jal Sansthan. About Sant Seva Ashram Ghat Nalla, it is confirmed by the Nigam that it is presently not trapped. The Officer of the Nigam does not know on what basis the discharge from the drain has been measured.

23. The Officer of the Uttarakhand Pey Jal Nigam brings to our notice that there are 20 drains which are natural as well as manmade at Muni-Ki-Reti which have not been trapped and they carry storm water and sewage. They all go to the river Ganga. There are 28 Ashrams, 59 Hotels, 15 small industries and 4 major buildings. Part of the area of Muni-ki-Reti is having sewer line and the other part is not. The part which is having sewer line, brings its sewage to Oxidation Pond at Lakkad Ghat from where it is ultimately sent to STP. It is not measured as to how much sewage is deposited in the Oxidation Pond.

24. Learned counsel appearing for the UKPCB has submitted that all the STPs in the State of Uttarakhand are operating without obtaining consent of the Board. Although the STPs at Rishikesh are operating within the prescribed parameters, however, they are discharging excess sewage into the river Ganga. According to the UKPCB, the information provided by the Uttarakhand Pey Jal Nigam is not correct. The STP at Lakkad Ghat is having capacity of 6 MLD. They are

actually receiving total load from that area to the tune of 15 MLD, which means that 9 MLD is being directly put into the river Ganga.

25. Dev Prayag has a population of nearly 2500. Complete sewer line has been laid. The construction of the bio-digester plant is about to be completed and the plant would become operational by December, 2015. Thereafter, there will not be any untreated release from that area into river Ganga at all. Separate small bio-digester plant is proposed at Devprayag to cover the remaining area and the same will be commissioned by March, 2016.

It is not known whether all the hydro projects falling on this belt have their own STPs for treating sewage and other domestic discharge from the residential and commercial complexes of the hydro projects.

26. In relation to collection and disposal of municipal solid waste it is stated that the respective Local Bodies would be in a better position to disclose complete information in this regard. However, according to the Officer of the Jal Sansthan in Rudraprayag, the municipal solid waste was being dumped on the river bank. According to the Officer of the Nigam it is stated that municipal solid waste at Srinagar and Joshimath was being collected in walled cabins. But he was not aware what steps are taken once the walled cabin was full.

27. Learned counsel appearing for the UKPCB submits that there are 15057 Hotels, Ashrams and Dharamshalas, at Haridwar and Rishikesh. Out of these, there are 399 Hotels, 637 Dharamshalas while the remaining are Ashrams. Out of these 399 hotels, only 9 have obtained consent of the UKPCB and the rest 390 Hotels are

operating without the consent. The Board has not only issued individual Notices on these Hotels but also issued Public Notices and even Corrigendum. As per this notice, all Hotels, Ashrams and Dharamshalas were required to obtain the consent of the UKPCB by 28th October, 2015. According to the Learned counsel appearing for the UKPCB, no Application has been received till date for grant of consent. Obviously, all the Dharamshalas and Ashrams are operating without consent of the UKPCB.

It is further brought to the notice of the Tribunal that out of 399 hotels, 364 hotels are stated to be connected to the sewer line, 3 have their own septic tanks and 2 are connected with CETP. There are 30 Hotels which are neither connected to sewer line nor have their own septic tanks.

28. We are further informed that there are 33 Hotels, 92 Ashrams and Dharamshalas in Rishikesh. All these Hotels, Ashrams and Dharamshalas are operating without consent of the UKPCB. Out of the above, 30 Hotels are connected to the sewer line and 3 have septic tanks. 84 Ashrams and Dharamshalas are connected to sewer line and 8 have their own septic tanks.

29. The sewage received from septic tanks is being thrown into the master manhole. However, no record thereof has been maintained. Similarly, the private operator, who empties the septic tank, also throws sewage at the same point. At Haridwar, the Jal Santhan has sludge bed and the sludge collected is being used as manure. He is, however, unable to give its extent or quantum. The sludge bed is

beyond the STP plant. The land belongs to the Government. It is a part of the STP plant. It cannot be informed as to what is the capacity of the sludge Bed.

30. The UKPCB has also placed before the Tribunal the documents to show that it has made efforts to bring to the notice of the public and particularly the Hotels and Ashrams which are operating without consent of the UKPCB and are polluting the River Ganga that they should take the remedial steps and precautions as well as obtain consent of the UKPCB within the specified time. A public notice was issued on 15th September, 2015 after passing of an order by the Tribunal. Since then it has been widely published that if there is default in compliance to the public notice, action in terms of Section 33(A) of the Water (Prevention and Control of Pollution) Act, 1974 (for short "Water Act") would be taken. Even in the public notice no specific averment was made as to the consequence that would fall from non-compliance of the conditions of the public notice. The Tribunal therefore further directed the UKPCB to issue corrigendum to the said public notice bringing it to the notice of the public at large that such Hotel/Ashrams and other activities would be liable to be closed and the UKPCB would take appropriate action under the provisions of the Water Act. Even after so much of publicity and persuasion of the authority, as is evident from the above narrated facts, only 9 hotels are operating with the consent of the UKPCB, the rest of them have not even cared to apply for the consent. Thus, it is necessary that UKPCB should act in accordance with law and the Uttarakhand administration must fully cooperate with the UKPCB and

provide full support if necessary to ensure full implementation of the provisions of the Act and this Judgment.

31. Learned counsel appearing for the UKPCB submits that nearly 10 Kms. away from Haridwar – the State Infrastructure and Industrial Development Corporation of Uttarakhand Ltd (for short "SIIDCUL") is located. There are 473 industries located in this area. Out of which, 61 industries are seriously polluting industries. Out of which 9 industries have obtained consent of UKPCB. The remaining 36 industries have applied for obtaining the consent of UKPCB, which is pending for consideration while 15 industries have not applied and 6 are operating without consent of UKPCB and one industry has been refused 'consent to operate'. Show cause notices have been issued to 6 industries and in the case of 4 other industries, closure orders have been passed. 1 industry at Rishikesh is a seriously polluting industry to whom consent to operate has been granted. No other industries are located on the bank of river Ganga. There are no industries on the river bank of Bhagirathi. The regular STP at Tapovan would also become operative by December, 2015.

32. The CETP, SIIDCUL (having capacity of 4.5 MLD), operated by SKUEM Water Projects Pvt. Limited was receiving wastewater from industrial and domestic sources. The analysis of the effluents collected from CETP and Lagoon was found to be not meeting the prescribed standards for discharge of such pollutants, including TSS and BOD. ETPs of industries particularly Hero Motocorp, ALPS industries, ITC (food unit), Rockmen industries, Aman Metals Finishers and BHEL were found not performing satisfactorily. They

were violating the prescribed norms generally and more particularly in relation to pH, zinc, hexavalent chromium and Iron respectively. Waste water from oxidation pond of BHEL was not meeting the prescribed standards of pH. The value of TSS, COD and BOD at outlet was found to be high as compared to the prescribed standards. After a detailed inspection and analysis, the Committee submitted the following conclusions in their inspection report:

> **"5.0 Conclusions**
> • No permission should be granted for establishment of any new Hotels, Ashrams, big commercial, and residential complexes etc including expansion of existing such establishments along the banks of River Ganga.
> • All existing Hotels, Ashrams, big commercial and residential complexes should either be connected to the STP/CETP for treatment of their sewage and wastewater generated from other sources or they should install their own STP of capacities on the basis of 100% occupancy and to absorb any sudden/floating population of pilgrims in a time bound manner.
> • The capacity of 5 (five) STPs installed by Jal Sansthan and presently in operation were found highly inadequate to treat the generated sewage and wastewater. It was also observed that most of the nallah/drains in these cities are trapped but the trapped sewage and wastewater is finding its way directly to the River Ganga by way of discharge of surplus sewage/wastewater in downstream locations like Jagjeetpur. It is recommended that 'Jai Sansthan should come out with a comprehensive plan for not only the treatment of the sewage and wastewater presently generated but also considering the likely generation of it in coming 20-25 years. Rishikesh and Haridwar being the holy cities, it attracts millions of pilgrims during various auspicious occasions of the year and as such, while finalising the capacity of the STP/CETPs this except should also be considered. Proper collection, transportation and adequate operation and maintenance of STPs should be also ensured for the existing as well as for upcoming plants.
> • Jal Sansthan should explore the possibility of use of treated wastewater for irrigation purpose in collaboration/assistance with State Irrigation Department instead of discharging the same into River Ganga. The Jal Sansthan should analyze the potential of the dried sludge generated from STPs as manure and

should encourage its use in agricultural land as soil conditioner.

• Responsibility of operation and maintenance of all units of CETP should be given to one agency. The units not having complete effluent treatment facility should be connected with CETP in a time bound manner. The zero discharge should be achieved by installing appropriate system for recycling of the treated wastewater by the member industries either for process use/other ancillary use.

• Installation of adventure and rafting camps on the flood plains of the River Ganga and its tributaries should be discouraged even without toilet facility. Such away from the flood plains should be allowed based on the environmental carrying capacity of that area and subject to use of mobile sewage treatment plants at these camps and the tie up of the with STP/CETP for treatment of accumulated sludge.

• It was also noted that there are no sufficient number of public toilets to cater to the need of the floating population of pilgrims during peak seasons resulting in adoption of the practice of open defecation along the banks of the River Ganga and its tributaries. • Management of Municipal solid waste should be done strictly as per Management & handling Rules, 2000 notified by Ministry of Environment and Forests, Govt. of India. Both at Rishikesh and Haridwar.

• Industries like BHEL and IDPL should ensure proper collection, transportation and adequate treatment of sewage and wastewater generated especially from domestic sources.

• To improve non-compliance of rules and regulation by ashrams, adventure and rafting camp owners, residential complexes and hotels awareness programme by the concerned departments should be initiated.'

In furtherance to the order of the Tribunal, the inspecting team noticed that some of the STPs/ETPs were not functioning efficiently at all. All of them were not meeting the prescribed standards. It was also noticed that people at large were not even aware of the orders passed by the Tribunal particularly prohibiting carrying on of commercial activities. The inspection conducted by the joint inspection team on 10th March, 2015 had also pointed out that the directions issued by

the Tribunal had not been complied with. We may usefully refer to the relevant part of the report:

'Summary of Hon'ble NGT's order and action taken for compliance:

Sl. No.	Hon'ble NGT's Order	Action taken for Compliance
1.	Hon'ble NGT directed for constitution of joint inspection team of a representative, of MoEF (Scientist), Scientist from CPCB, New Delhi and the Member Secretary of the Uttarakhand Pollution Control Board.	A joint team was constituted comprising of the following members:-. • Shri Vinod Singhal, Member Secretary, Uttarakhand Environment Protection and Pollution Control Board, Dehradun. • Dr. S.C. Katriyar, Scientist 'D', MoEF & CC, Regional Office, Dehradun. • Shri N.C. Durgapal, Scientist 'D', CPCB, Delhi.
2.	To inspect some of the large Hotels/Ashrams as indicated in the list submitted before the Tribunal and report if all of them are discharging their domestic and effluent discharge into sewer linewhich was connected to the CETP or STPs as stated the list.	**Rishikesh** i. Out of 5 (five) hotels inspected, 2 (two) hotels were discharging their wastewater and effluent into sewer line which was connected to STPs, while 2 (two) hotels was having septic tank and soak pit and remaining 1 (one) hotel was having STP and treated/untreated wastewater was in used for horticulture. ii. Out of 7 (seven) Ashrams inspected, 5 (five) were discharging their domestic and effluent into sewer line which was connected to STPs, while 1 (one) was discharging about 95% of its domestic and effluent into sewer line which was connected to STPs and about 5% into septic tank. 1 (one) Ashram was having septic tank and soak pit only. iii. 1 (one) residential complex inspected. Sewer line was laid for discharge to STP at

		Tapovan, which is yet to be commissioned. Seepage from septic tank was observed that was joining irrigation canal. **Haridwar** i. Out of 5 (five) hotels inspected, 1 (one) was discharging their wastewater and effluent into sewer line which was connected to CETP, while 3 (three) hotels were discharging their partially treated/untreated wastewater and effluent into open drain and remaining 1 (one) hotel was having STP was discharging its treated wastewater into irrigation canal. ii. Out of 5 (five) Ashrams inspected, all were discharging their domestic and effluent into sewer line which was connected to STPs.
3.	Whether all the Ashrams using the bore wells have permission from the Central Ground Water Authority or not and whether they are paying water cess in accordance with law or not.	None of the establishments having bore wells i.e. hotels, ashrams, adventure & rafting camps and industries in Rishikesh and Haridwar had not obtained permission from Central Ground Water Authority (CGWA) except ITC Limited (Food Unit), Haridwar. None of the establishments i.e. hotels, ashrams and adventure & rafting camps were not paying water cess except the industries inspected in Rishikesh and Haridwar.
4.	It was also directed that jointinspection team shall inspect the CETPs and STPs as mentioned in the list and collect samples from inlet and outlet of effluent/water from these STPs, analyze	The joint team inspected all the CETP and STPs (one CETP al-\d five STPs) and samples were collected from both inlet and outlet of effluent/water which was analyzed at PCRI (BHEL), Haridwar and the report is placed before the Hon'ble NGT.

<table>
<tr><td></td><td>the same and place report before the Tribunal.</td><td></td></tr>
<tr><td>5.</td><td>To conduct surprise inspection of most of these industries and report to the Tribunal if their STPs and ETPs are functional and are treating their trade effluent to the required level or not.</td><td>Surprise inspection of 9 (nine) industries (1 in Rishikesh and 8 in Haridwar) was carried out.
<table>
<tr><th>Name of ETP/STP</th><th>Status</th><th>Meeting the Prescribed Standards</th></tr>
<tr><td>BPT, IDPL, Rishikesh</td><td>Not functional due to power failure</td><td>-</td></tr>
<tr><td>ETP, BHEL, Haridwar</td><td>Batch Process, not –functional</td><td>No</td></tr>
<tr><td>Oxidation Pond (STP), BHEL, Haridwar</td><td>No proper and complete functioning</td><td>No</td></tr>
<tr><td>ETP, Hero Motocorp, Haridwar</td><td>Functional</td><td>No</td></tr>
<tr><td>STP, Hero Motocorp, Haridwar</td><td>Functional</td><td>Yes</td></tr>
<tr><td>ETP, Patanjali Food and Herbal Park, Haridwar</td><td>Functional</td><td>No</td></tr>
<tr><td>ETP, Alps Industries, Haridwar</td><td>Functional</td><td>To CETP</td></tr>
<tr><td>ETP, Akum Drugs and Pharmaceuticals, Haridwar</td><td>Functional</td><td>To CETP</td></tr>
<tr><td>ETP, ITC Industries Food Unit, Haridwar (500 KLD)</td><td>Under maintenance</td><td>-</td></tr>
<tr><td>ETP, ITC Industries Food Unit, Haridwar (500 KLD)</td><td>Functional</td><td>No</td></tr>
<tr><td>ETP, Rockman Industries, Haridwar</td><td>Batch Process, functional</td><td>To CETP</td></tr>
<tr><td>ETP, Aman Metal Finishers, Haridwar</td><td>Batch Process, not functional</td><td>No</td></tr>
</table></td></tr>
<tr><td>6.</td><td>It was also observed by the Hon'ble Tribunal that water quality of river in upstream of Rishikesh and till Rishikesh is of the Category 'A' and after Rishikesh, at Haridwar it becomes Category 'B' and by the time it reaches Maleshwari, the water deteriorates to Category 'D'. The</td><td>The water quality of the river deteriorates at Misserpur significantly as sampling location was on downstream of the point where river receives treated/untreated sewage and wastewater of Haridwar on its right bank from Jagjeetpur drain. It was noted that wastewater of the drain was not completely mixed with the river water here as river flow on right blank was less as compared to rest and the</td></tr>
</table>

	Pollution Control Board and expert committee was directed to provide the reason for this high pollution.	distance from the discharge point was about 500 (five hundred) meters upstream from the sampling point. Colour variation in the river (black and green) caused by improper mixing was also visible at Misserpur. The discharge of this drain was measured during peak generation hours (10 AM) and was found to be >116 MLD (that included treated wastewater of STPs 27 MLD+18 MLD along with surplus untreated sewage/wastewater).
7.	The Hon'ble Tribunal directed the inspecting team With regards to camps on river banks, The Hon'ble Tribunal has issued direction that there should be no toilets on the flood plain of river Ganga. Dry pits that are existing shall be cleaned and it will be ensured that no dry pits are on the river bed.	The camp owners were not aware about the ruling of Hon'ble National Green Tribunal that existing dry pits should be cleaned and no dry pits would be permitted on river bed.

From the inspection report it also becomes quite evident that most of the hotels and industries are extracting ground water without permission of the CGWA as well as with no means or mechanism for recharging of ground water.

33. The inspection report dated 10th March, 2015 depicts an entirely different scenario than what was earlier sought to be projected by the UKPCB and the industries. It is stated that there are nearly 565 industrial units out of which only 9 have installed their ETP and 39 had installed their septic tanks being small industries. Six industries have been issued notices for closure on 12th October, 2015 which are stated to be lying closed now. The CETP at SIDCUL is catering to 365

industries and has a capacity of 4.5 MLD while the present intake is 1.7 MLD domestic and 1.30 MLD industrial discharge.

34. As already noticed, the CETP at SIIDCUL is found to be deficient and does not conform to the prescribed standards. The operating agency SKUEM had said that responsibility of operation and maintenance of tertiary treatment to achieve zero liquid discharge, is given to the respective industries who have failed to do the needful. The net result is pollution of River Ganga.

35. Having dealt with industrial and domestic sources of pollution of River Ganga, now we may deal with other major sources of river pollution resulting from municipal, construction and demolition waste and other wastes. It is hardly in dispute before us that the handling of municipal and other waste in the entire State of Uttarakhand is not anywhere near to the Municipal Solid Wastes (Management and Handling) Rules, 2000 (for short 'MSW Rules'). We have noticed in the earlier part of the judgment, which is based upon the information that has been provided to the Tribunal by the Field Officers from respective departments of the State Government that there are towns with higher as well as lower population density which are located on the banks of River Ganga in Segment A of Phase-1. While districts like Haridwar, Rishikesh fall under the first category, there are cities like Srinagar, Devprayag, Swarg Ashram, Uttar Kashi and Kashipur which fall in the latter category. The Committee constituted in furtherance to the order dated 10th March, 2015 in its report had also dealt with the municipal solid waste management in various places of the State. It is stated therein that the municipal solid waste management site on left bank of

Kharsod River that joins River Ganga at Rishikesh - Badrinath bypass road had been inspected. The site is being operated by Nagar Panchayat. Firstly, it was noticed that the site was not developed in accordance with MSW Rules, it receives un-segregated waste from M/s. Clean Himalayan Society and open burning of garbage including plastic was noticed. Huge quantity of waste was found to be stored in open. The waste was not segregated properly. Non-biodegradable waste was found piled up at the site. Large scale municipal solid waste had also been thrown on green areas and there was open burning of solid waste. The Committee annexed the photographs showing the above activities. Firstly, there are no plans for dealing with disposal of municipal solid waste and secondly, the sites for dumping of municipal solid waste have been found to be in complete violation to the prescribed MSW Rules. The UKPCB on queries took up the stand that it had viewed this activity very seriously. According to the UKPCB, it had issued notices to Corporation and other public authorities who were responsible for dealing with municipal solid waste from time to time. The notices were issued for the first time on 12th February, 2004 followed by notices dated 4th June, 2004, 9th June, 2007, 20th November, 2009 and 26th December, 2011. Despite issuance of such notices, the public authorities concerned have failed to take steps in accordance with law. Not only this, a complaint had also been filed before the Judicial Magistrate, Dehradun against dumping of municipal solid waste in violation to the MSW Rules in regard to Haridwar. We may notice that various cases even in relation to Uttarakhand have come up before the Tribunal where the people are complaining against the indiscriminate dumping of municipal solid

waste in complete violation of the MSW Rules. Two instances of serious violations that have come up before the Tribunal are in relation to Rishikesh and Haridwar. This certainly, needs immediate attention of all concerned, particularly the local authorities, UKPCB and the department of environment. Though, we are of the considered view that the UKPCB could have, and in fact, should have exercised its powers and performed the functions that it is required to perform under the law to ensure that the dual adverse impact of this menace, i.e., pollution of water and public health, could be avoided. Mere issuance of notices or filing of complaint is not the real solution to the problem. UKPCB should have taken punitive action against all the defaulting bodies and could have issued directions under Section 5 of the Environment (Protection) Act, 1986 (for short "Act of 1986"). We would certainly be dealing with this aspect particularly when challenge to site selection, environmental clearance which was granted for the establishment of a plant and municipal waste site at Haridwar has been dealt with by the Tribunal in case of *Gram Sarai Vikas Samiti v. MoEF and Ors.* Appeal No. 166/2015. It is stated on behalf of the State that they are contemplating to have four municipal solid waste plants and environmental clearance has been granted in that regard on 18th May, 2015. They are to be located at Haridwar, Rishikesh and Rudraprayag. The Uttarakhand Urban Development Department and Haridwar Nagar Nigam are responsible for establishment and operationalization of these plants. It was also stated that the government has placed order for construction and establishment of a MSW plant with capacity of 550 MT at Roorkee which would resolve this issue.

36. Keeping in view the above, we would pass certain specific directions in relation to collection, transportation, dealing and disposal of the MSW in various parts of the Uttarakhand.

We may also notice here that there are residential complexes of 21 hydro projects in the State of Uttarakhand. They have their residential colonies/administrative complexes, out of which 8 have their septic tanks while 3 have their STPs. Remaining 10 projects are still under construction and definite information in regard to establishment of the STP of these plants is not available. Consequently, the existing hydropower projects which have septic tank must provide for a mechanism for carrying the sewage to the STP plant and ensure its disposal in accordance with the MSW Rules, while, the proposed 10 Hydroelectric Projects (for short, "HEPs") which are under construction should be directed by UKPCB, well in time, to construct their STPs as a condition precedent to operationalise them. Also a stand had been taken by the State and the UKPCB that there should be economic use of water and providing excess water also leads to wastage of water on the one hand while on the other hand, it leads to generation of polluted water. For instance presently, in Haridwar per capita water being provided is at 170 litres per individual, while the required is 135 litres per individual. Another major issue that was raised by the parties appearing before us was in relation to Panchayat giving permission for construction on/or near the river bed. It was contended on behalf of the applicant that in order to protect the river from encroachments and pollution which is purely a manmade contribution, 200 metres particularly from middle of the river should

be treated as prohibited zone; 300 meter thereafter should be regulatory zone. According to the official respondents, there is no need for declaring any area as prohibited or even regulated as in the hills people have to raise construction of their houses and projects close to the river bed, to facilitate the availability of water and geographical conditions would not justify imposition of any such limitation.

37. Miscellaneous Application No. 1094 of 14 and 27 of 2015 had been filed in Original Application No. 10 of 2015, to contend that there were serious encroachments and construction activities were going on not only within 500 meters but even at the flood plain of the river. Reference has also been made to the fact that in U.S.A the sensitive areas are protected by such demarcation and area within 500 meter of the flood plain has been identified as 'no construction zone'. It is also the contention raised before the Tribunal that the natural calamity in Uttarakhand has largely contributed to huge loss of property and human beings which particularly was immense on the river bank and other ecologically fragile areas. It is submitted that while invoking 'Precautionary Principle' and the 'Doctrine of Public Trust', the Tribunal should put restrictions and Panchayat should not be permitted to grant permissions for indiscriminate construction in these areas. Invocation of the 'Precautionary Principle' is even more necessary keeping in view the impacts of Global Warming on these areas. The Tribunal had prohibited constructions on the flood plains vide order dated 2nd July, 2015. Such restrictions are stated to be necessary even to protect rare or endangered species of Wildlife and Biodiversity, both terrestrial and aquatic.

Use of plastic in different forms results in generation of waste which in the absence of a proper collection and handling mechanism ultimately is a serious pollutant of environment, particularly, the water bodies. The Tribunal while dealing with maintenance of Ghats in Haridwar in environmentally sound manner and in accordance with MSW Rules in the case of *Indian Council for Environment Legal Action v. Union of India & Ors.* O.A. No. 10/2015 had prohibited use of plastic in and around the Ghats and in fact in the entire city of Haridwar. These directions need to be expanded to entire State as plastic, if not disposed of properly, is very harmful to the environment. People throw such plastic anywhere and everywhere, which results in blockages of drains, blocking access to the sewage system and if it is thrown on land it pollutes the environment on the one hand while on the other the animals eat it and face dire consequences. If it is burnt, as has been noticed in the cases afore-referred, then it generates gases and emissions which are carcinogenic and even cause other health hazard. It is also true that the plastic use has been banned in other States, particularly, the hill stations and it has proven to be quite fruitful. It is not difficult to replace plastic products by biodegradable materials. For instance, and instead of using plastic bags, jute bags could be used, instead of using plastic plates, spoons, glass which are non-disposable, paper boards manufactured, disposables and other such items could be used. Banning of plastic would go a long way for providing a solution to the environmental degradation.

38. It can hardly be disputed that major part of the State of Uttarakhand is eco-sensitive and geologically fragile. What is the load

bearing capacity of the area has not been a matter of any scientific and data based study placed on the record of the Tribunal. Indiscriminate, unauthorised construction and development will be opposed to the geographical and ecological characteristics of the State, particularly, when such construction activity, projects and development is carried out in the flood plain or at the heights and slopes which are ecologically sensitive. Such development would be completely opposed to the expected norms of Sustainable Development which finds a statutory expression in the provisions of Section 20 of the National Green Tribunal Act, 2010 (for short, "NGT Act"). Every area has to be developed keeping in mind the limitation expressed by nature itself and environmental and ecological status of that State. In the mountain region, a proper forest cover is the back-bone of healthy eco-system services. They provide for productive livelihood resources. As of now, dense forest, survive on only half of the Uttarakhand's forest land. Therefore, there should be priority to extend the forest cover, to reinforce its eco-system services and ecology of the area.

39. The Ministry of Environment, Forests and Climate Change (For short 'MoEF') had issued a Notification dated 18th December, 2012 declaring Gangotari Glacier as one of the largest Glaciers surrounded by three peaks of Shivling Thalaya Sagar, Meru and Bhagirathi,. Bhagirathi originates from Gangotari Glacier below Chaukhamba Peak in an area called Gaumukh at an alleviation of 3892 meters and falls in Uttarakashi district of Garhwal Himalaya, in Uttarakhand provinces before meeting Alakhnanda River at Devprayag. The River Bhagirathi is rich in aquatic flora and fauna including migratory species. Noticing

that number of hydro-projects have been commissioned or are proposed to be constructed on different rivers of the State and there is also continuous pressure of human and cattle population on the rivers, eco-system and environment, it was felt that there is increased threat of irreparable damage to the mountain, eco-sensitive area and the flow and characteristics of the rivers. Thus, it was decided that for the maintenance of the environment, river flow and the river load bearing capacity of the entire stretch of about 100 kms of the river Bhagirathi, it shall be declared as eco-sensitive zone from ecological and environmental point of view. Thus, the Notification was issued on 1st July, 2011 in terms of sub-rule 3 of Rule 5 of the Rules of 1986 inviting objections. The objections were considered and the Central Government issued a final Notification. Entire water shed of about 100 km stretch of River Bhagirathi from Gaumukh to Uttarkashi covering an area of 4179.59 sq. km was declared as eco-sensitive zone. In terms of this Notification, the State Government was expected to prepare a Zonal Master Plan for the eco-sensitive area and get its approval from MoEF. The Zonal Plan besides regulating the activity was also to provide for restoring of denuded areas, conservation of existing water bodies, management of catchment areas, water shed management, and soil moisture conservation amongst others. Under the Notification, emphasis have been laid on protection of eco-sensitive area. It was provided that even change of land use that could be permitted would restrict itself to activities such as agriculture, horticulture, tea garden parks to green uses under the zonal plan. Specific care has to be taken for development and protection of hill slopes. No development on existing steep hill slopes or slopes with a

high degree of erosion could be permitted. Places in the eco-sensitive zone where cutting of hill causes ecological damage and destabilizes slope stability in the adjacent areas should not be permitted. Tourism Master Plan is to be prepared by the Department of Tourism of the State in consonance with the terms of the Notification and submit it for approval of the MoEF. This requirement gets more significant for the reason that even the activities like camping and rafting should be strictly regulated. Identification of sites of valuable natural heritages, scenic beauty and confluence points of river water flow discharge has to be maintained. The Notification also spelt out the prohibited activities in the eco-sensitive zone, for instance, river valley projects as stated, extraction of river water for industrial purposes, mining, commercial felling of trees, use of plastic carrying bags and other specified items. Regulated activities were also prescribed but it was to be ensured that there was no noise or air pollution or discharge of effluent from these activities. The Monitoring Committee had also been constituted under the Notification to monitor the compliance of the provisions of the Notification.

40. Despite issuance of the Notification of such a vast ramification, nothing has been done either by the State or by MoEF to ensure compliance to the terms of Notification. The Notification was issued on 18th December, 2012 and we are 3 years hence, without any improvement in the environment and ecology of the area. On the contrary, there has been indiscriminate development, encroachment on the river bed and carrying on of the non-forest activity in the forest area. The object appears to be economic benefit at the cost of

degradation of environment and ecology which to a large extent is irreversible, and therefore opposed to the Principle of Sustainable Development. The natural resources are held by the State for the benefit and utilization of the public at large. There is an implied obligation upon the State to ensure that these natural resources are not destroyed or degraded and are utilized for public good and in direct proportionality to the conservation thereof. (Refer: *M.C. Mehta v. Kamal Nath* (1997) 1 SCC 388). If the resources are permitted to be exploited without due care and protection and without ensuring inter-generation equity then it will be a patent disregard to the Doctrine of Public Trust. All activities by the State itself or through other modes like public and private sector should be carried out in a way that there is no irreversible damage to the ecology, environment, rivers and its biodiversity. Uttarakhand is a State of rivers and mountains, its characteristics; and the geographical location of the State completely brings it within the ambit of eco-sensitive area. We certainly do not wish to even observe that no development is to be carried out in this area. The MoEF Notification declaring 100 km of Bhagirathi River Basin area as eco-sensitive zone has put the entire area under different categories, some activities which are required to be regulated in some areas, whereas some other activities at some places which are to be free of environmental restrictions. Furthermore, it has even taken into account the tourism activity. It is unfortunate that State of Uttarakhand has opted not to submit either the Zonal Plan or the Management Plan in relation to the eco-sensitive area and tourism activity respectively. Sufficient time has lapsed within which everything could have been well regulated. Even if the State has

certain reservations, which was half-heartedly contended on the part of the State, even then it could have discussed the matter with the authorities under the MoEF, finalised the said plans and made them effective long back and would have given appropriate results by promoting Sustainable Development. We will be issuing directions in this regard in relation to submission of plans, limitation on development activity, particularly on the flood plain and the precautions that the State should take during the interregnum.

GHATS

41. We have already observed that Holy River Ganga has great respect and value in relation to religion. We also noticed that there was a point of time when water of River Ganga remained unpolluted/unaffected and in no way generated mosquitoes and other allied microbes and pathogens for spreading diseases. There are specific ghats like Chandi Ghat, Laxman Jhula and Har ki paudi Ghat where everyday pooja of Gangaji and Aarati is performed. If these Ghats are not maintained hygienically and preventive and precautionary steps are not taken, particularly, the commercial activity is not regulated appropriately, then they would give rise to serious environmental issues particularly with reference to pollution of River Ganga. Thus, the Government, UKPCB, Public authorities and every individual citizen of Haridwar, as well as pilgrims visiting Haridwar are responsible for keeping the Ghats absolutely clean and river Ganga free of pollution, when constitutional obligation is placed upon the State in terms of Articles 21 and 48A and similar constitutional duties imposed upon the citizens under Article 51 A(g)

to do all within their power to keep the environment pollution free and maintain wholesomeness of the river. Ganga being one of the most worshipped rivers of the Country, it adds a further dimension to the Constitutional duties of the citizen. Thus, these ghats have to be kept free of pollution activities. The public authorities must regulate such activities, ensure that no plastic in any form except for collecting the holy water in plastic cans is used. There should be proper bins for collecting the bio degradable matter and other waste with a well structured mechanism for collection and disposal of municipal waste and other wastes from these ghats. We may refer at this stage that in Original Application No. 10 of 2015, the Tribunal had passed a detailed order in this respect on 2nd July, 2015. All the directions contained in the said order shall *mutas mutandi* apply in the present Judgment as well. Similar directions also need to be issued in relation to the Ghats located at the river banks of Ganga at Rishikesh.

Wherever possible, special Ghats by creating channels for diverting the flow of Ganga into a channel/lagoon where cremation/immersion of ashes should be permitted and the same water after cascading/passing through oxidation ponds be released back into the Ganges.

THE FINANCIAL ASPECTS, ITS LIMITATIONS AND OPTIONS

42. We have already noticed that different projects in relation to providing bio-digesters, STPs, sewerage line and disposal of sewerage through STPs and industrial waste through CETPs have been prepared. Some of them with their financial implications have already been submitted to the State of Uttarakhand and in turn to the NMCG,

Ministry of Water Resources, Government of India. The DPR in relation to establishment of the 40 MLD STP plant at Haridwar, Jagjeetpur in fact was even approved in the meeting of the Empowered Steering Committee on 5th May, 2015. This project practically has been sanctioned by all the concerned authorities and only the funds are to be provided by NMCG for its implementation. This is a project of huge financial involvement and it is expected that the same would be dealt with expeditiousness and the work is to be commenced at Haridwar. At least at that point, it must be ensured that the untreated sewerage is not directly put into River Ganga at the holy place of Haridwar. Similarly, other projects are pending at different levels for consideration of the concerned authorities. We are informed that more than Rs. 6855.44 crores has already been spent on cleaning of River Ganga, besides the other expenses that have been incurred on River Ganga.

43. The Ministry of Water Resources, River Development and Ganga Rejuvenation issued a Notification on 24th September, 2014 under which the NGRBA was constituted for taking measures for effective abatement of pollution and rejuvenation of River Ganga. It is possibly the highest authority that could be constituted in the Indian Democracy. Under it, as we have noticed, different protocol and hierarchy was created to achieve its object. We have specifically noticed that in preamble of this Notification, it was stated that the river Ganga has been facing serious threat due to discharge of sewage, trade effluents and other pollutants on account of rapid urbanisation and industrialisation. It was also stated that River Ganga has unique

importance ascribed to it for the reasons that are geographically, historically, socio-culturally and economically giving it the status of National River. This Notification was to perform various functions keeping in view its object in mind. The jurisdiction of the authority extends to the States through which River Ganga flows namely, Uttarakhand, Uttar Pradesh, Bihar, Jharkhand, West Bengal and such other states where major tributaries were flowing. Comprehensive management plan for the States on the national level are required to be prepared. The State Authorities were constituted by separate Notification.

The NGRBA had in 2011 itself issued implementation mechanism as to how at the National and the State level, the projects are to be executed under the scheme in relation to projects, for municipal waste water treatment, for industrial pollution and solid waste management projects in terms of their eligibility, appraisal and sanctioning criteria. It is clear that the apex body looking after cleaning of Ganga is the NGRBA, while NMCG is the implementing agency for the Project termed as 'Namami Gange'. This body is expected to prepare the programmes in relation to cleaning of River Ganga at the National and the State levels. At the State level, the agency in-charge is the State Project Management Group (for short 'SPMG') which either executes or gets the projects executed through different specified agencies. The 'Namami Gange' project now has a budget outlay of Rs. 20,000/- crores for next five years, as per the documents placed on record. It is evident that this is a significant fourfold increase over the expenditure in the past 30 years. There is major shift in implementation as the government is focusing on involving people living on the banks of river

to attain sustainable results. Drawing lessons from previous implementation, the program also focuses on involving the States and grassroots level Institutions such as Urban Local Bodies and Panchayati Raj Institutions in the implementation. The programme is expected to be implemented through NMCG and its State counterpart organizations i.e., SPMGs and a three-tier mechanism is proposed to be made operational for monitoring the project: (a) High level task force chaired by Cabinet Secretary assisted by NMCG Mission Directorate at national level, (b) State level committee chaired by Chief Secretary assisted by SPMG at state level and (c) District level committee chaired by the District Magistrate. In order to ramp up progress, the Centre will now take over 100% funding of various activities/projects under this program. Taking a leaf from the unsatisfactory results of the earlier Ganga Action Plans, the Centre now plans to provide for operation and maintenance of the assets for a minimum period of 10 years and adopt a Public Private Partnership/Special Purpose Vehicle approach for pollution hotspots. Under this program, besides cleaning of River Ganga a budget of Rs. 2037 crores for 2014-15, Rs. 100 crores for ghat development and beautification of the river front at Kedarnath and Rs. 4200 crores for Jan Marg Vikas project for Ganga in Uttar Pradesh has been provided. The budget for 2015 – 16 is Rs. 4173 crores jointly for water resources and Namami Gange program.

Besides the above and even as per the previous orders, the projects were being cleared under different heads like the projects which were being finalised by funds/loans provided by other two Agencies like JICA (Japan International Cooperation Agency) and

World Bank, etc. There were different kinds of funding one could be in the ratio of 70% : 30 % between the funding agency and Central Government while other was 100% funding by the Central Government. We were informed that the project at Haridwar is to be formally funded by the Centre while the plant at Muni-ke-Reti will be an Externally Aided Project (for short 'EAP') which is to be funded 70% by Centre with 30% contribution of the State. Further, this is a matter which is required to be examined by NMCG and the concerned State Government, i.e., Uttarakhand.

44. The Tribunal has been informed that since 2008, Rs. 328 crores has been sanctioned or approved for project in Uttarakhand in relation to cleaning River Ganga. Further, only Rs. 78 crores have been spent, that too, with hardly any appropriate and tangible results. In the case of Haridwar, DPR has been checked by the third party, approved and sanctioned and now it is only disbursement of the amount by the appropriate agency which remains. The STPs of different capacities are proposed to be constructed at Dev Prayag and Gangotri. Besides this, the works projected for ensuring no discharge of trade effluent or untreated sewage into River Ganga has also been placed on record. To provide decent and clean environment is not only the obligation of the Central Government but even the State Government is equally responsible. In any case, the water and sewer lines are a State subject. The State and its instrumentalities, and particularly public authorities constituted by the State like Uttarakhand Pey Jal Nigam and Uttarakhand Jal Sansthan are responsible for ensuring that there should be no indiscriminate discharge of effluent into water bodies

and in any case no untreated effluent or sewage should be discharged into Ganga. Thus, the State would not be justifiable in shifting the entire financial burden to the Centre. Certainly, if the Centre has its scheme for aid to the State Governments in discharge of these duties, the Centre should provide such aid. Even then the State Government cannot and should not shirk their responsibilities in providing such infrastructure and aiding the object of fulfilling its constitutional obligation.

45. An application being Original Application No. 299 of 2013 titled "*Krishan Kant Singh &Anr. Vs. National Ganga River Basin Authority*" had been filed before the Tribunal. This related to cleaning of River Ganga but with a particular reference to some specified industries including the Simbhaoli Sugar Mills. Judgment in this regard was pronounced by the Tribunal on 16th October, 2014. There were also number of other cases pending before the Tribunal in relation to pollution of River Ganga. As a result of orders passed in Original Application No. 299 of 2013, notices have been issued to various industries, particularly Tanneries, who were causing pollution of River Ganga by discharge of their trade effluents. Even when these cases were pending before the Tribunal, the Hon'ble Supreme Court of India vide its order dated 29th October, 2014 transferred Writ Petition No. 3727 of 1985 "*M.C. Mehta v. Union of India &Ors.*" The displeasure of the Hon'ble Supreme Court as well as its concerns for not taking appropriate steps for prevention and control of pollution as well as restoration of pristine form of the River Ganga is specifically noticed by the Hon'ble Supreme Court. This related to the issue of discharge of

industrial effluent into River Ganga as transferred to the National Green Tribunal. It will be useful to extract the relevant part of the above order of the Hon'ble Supreme Court:

> "We regret to say that the intervention and sustained effortsmade by us over the past 30 years notwithstanding no fruitfulresult has been achieved so far except the shutting down of some ofthe polluting units. This is largely because while orders havebeen passed by us their implementation remains in the hands ofstatutory authorities including the CPCB and the State PCBs which have done practically nothing to effectuate those orders or to take independent steps that would prevent pollution in the river. A total lack of monitoring by the statutory bodies has also contributed to the current state of affairs. The report of the Comptroller and Auditor General to the effect is a clear indictment of the statutory authorities and those at the helm of their affairs.
>
> There is no gainsaying that river Ganga has for the people of this country great significance not only in the spiritual or mythological sense but also in material terms for it sustains millions who are settled on its bank or eke out their living by tilling lands that are fertilized by its water. Despite the experience of the past we have not lost hope, for the Central Government appears to be resolute in its efforts to ensure that the Mission of cleaning the holy river is carried forward and accomplished. How far will the Government's renewed zeal make any difference on the ground is for anyone to guess. What is, however, clear is that if the mission has to succeed, all those concerned will have to rededicate themselves to the accomplishment of the cause that will not only cleanse the holy river but comfort millions of souls that are distressed by the fetid in what is believed to be so holy and pure that a dip in its water cleanses all sins. Statutory Authorities that are charged with the duty to prevent pollution need to monitor and take action where they find any breach of the law. Failure of the authority to do so may also have to be noted for such action as may be required under law. This may call for a closer monitoring of the performance of all concerned. Time constrains unfortunately do not allow us to do that on a continuing basis no matter we have over the past thirty years devoted enough time and energy in that direction. We are comforted by the thought that the National Green Tribunal has been established under the National Green Tribunal Act, 2010. The Tribunal, it is evident from the provisions of the Act, has the power to take stock of the situation and pass necessary

> orders on the subject. It has the legislative mandate to undertake effective and speedy adjudication and disposal of issues touching preservation of environment by prevention of pollution. It is in the above backdrop that we consider it more appropriate to refer the issue relating to enforcement of the provisions of the statutes touching environment and its preservation arising out of discharge of industrial effluents into river Ganga to the National Green Tribunal. We are confident that the Tribunal which has several experts as its members and the advantage of assistance from agencies from outside will spare no efforts to effectively address all the questions arising out of industrial effluents being discharged into the river. This will include discharge not only from the grossly polluting industries referred to in the earlier part of this order but also discharge from "highly polluting units" also. As regards the remainder of the matter concerning discharge of domestic sewage and other sources of pollution we will for the present retain the same with us.
>
> We accordingly request the Tribunal to look into all relevant aspects and to pass appropriate directions against all those found to be violating the law. We will highly appreciate if the Tribunal submits an interim report to us every six months only to give us an idea as to the progress made and the difficulties, if any, besetting the exercise to enable us to remove such of the difficulties as can be removed within judicially manageable dimensions. The Registry shall forward a copy of the order to the National Green Tribunal along with a copy of the writ petition and the affidavits filed in reply from time to time."

46. The above case of M.C. Mehta upon transfer was listed and numbered as Original Application No. 200 of 2014 with the National Green Tribunal. On 9th January, 2015, Indian Council for Enviro-Legal Action also filed an independent petition praying various reliefs including directions for closure of polluting industries and units and the commercial activities which are being carried on in the flood plain of river Ganga at Rishikesh and in the upper stretch of the holy river and for constitution of an Expert Committee to conduct study from the ecological, conservation and climate change angle for the protection of

the holy river and its Tributaries. All these matters were heard together including the various applications filed by the tannery industries in Jajmau, Kanpur and other industrial clusters.

47. In the judgment, we have already referred to the various orders that were passed by the Tribunal during the pendency of these cases. Some of the directions passed in these orders do require specific mention as they would have an impact upon the final judgment of the Tribunal. On 10th March, 2015, joint inspections of CETPs and STPs were directed to be conducted. It was further directed that the samples should be collected from inlet and outlet of these STPs and report is to be submitted to the Tribunal. It was noticed that the Ashrams are using bore-wells without permission from the CGWA and also do not have STPs installed in their respective premises. Most of the hotels were carrying on their activity and polluting the environment with impunity. Prior to this, vide order dated 30th October, 2014, the Tribunal had directed that meeting of the Secretary MoEF, Secretary Ministry of Water Resources, Chief Secretaries of all the concerned States would be held on 11th November, 2014 and list of polluting industries of River Ganga and its Tributaries was to be filed before the Tribunal along with classification of those industries. Policy was also to be framed for prevention and control of pollution of River Ganga and its tributaries. Vide order dated 17th November, 2014, the Tribunal while noticing that main pollutants of River Ganga were the discharge of untreated sewage and industrial effluents generated primarily from the industries located on either bank of river or from the industrial clusters which were connected to CETPs which were

hardly functioning as per prescribed norms, had directed appropriate measures to be taken for preventing and controlling the pollution. In this order, the Tribunal had constituted a Principal Committee with Secretary MoEF as the Chairperson and representatives of concerned Ministries of the States, the Implementation Committees were also constituted headed by the Chief Secretaries. The State Level Committees were headed by the Secretaries of the concerned Departments and with due representation to various departments and the concerned Pollution Control Boards. The Implementation Committee was responsible for implementation of orders of the Tribunal and they were to work through District Level Committees as well. The Principal Committee was to take policy decision and frame action plan that was required to be adopted and followed by the stakeholders. They were required to submit monthly reports. MoEF was required to issue clarification, on its definition of the expression 'zero liquid discharge units' as well as classification of the industries under red, orange and green category industries. In terms of this order, the concerned authorities were required to prepare a list, particularly keeping in mind that, industries which were operating without consent of UKPCB even if small, may be causing much pollution than the bigger units which were operating with consent. It came to light and in fact was undisputed that tannery industries at Kanpur, paper and pulp industries, sugar industries, distillery industries and the textile industries which were located particularly near to the River Ganga or its Tributaries were mainly responsible for causing industrial pollution of River Ganga. The Principal Committee had submitted interim reports to the Tribunal. It was primarily

recommended that the industries could be required to become 'zero liquid discharge' units and should install online monitoring systems particularly in relation to highly polluting industries falling in red category. The MoEF has during the hearing of cases, provided the following clarificatory definitions in relation to zero liquid discharge and categorisation of industries:

3.0 DEFINITION OF ZLD

Zero Liquid discharge refers to installation of facilities and system which will enable industrial effluent for absolute recycling of permeate and converting solute (dissolved organic and in-organic compounds/salts) into residue in the solid form by adopting method of concentration and thermal evaporation. ZLD will be recognized and certified based on two broad parameters that is, water consumption versus waste water re-used or recycled (permeate) and corresponding solids recovered (percent total dissolved / suspended solids in effluents).

Sector wise list of Seriously Polluting Industries (SPI) (As Proposed by IC and finalized by PC)

1. Distillery including Fermentation industry
2. Sugar
3. Tannery
4. Pulp and Paper (Paper manufacturing with or without pulping)
5. Slaughter Houses and meat processing industries.
6. Dyes and dye-Intermediates
7. Yarn/textile processing involving bleaching, dyeing, printing and scouring etc.
8. Thermal Power Plants
9. Milk Processing and Dairy Plants
10. Pesticides (Technical) (excluding formulation)
11. Pharmaceuticals (excluding formulation)
12. Petrochemicals (Manufacture of and not merely use of as raw material)
13. Aluminium Smelter
14. Chlor Alkali
15. Organic Chemicals manufacturing
16. Synthetic fibers including rayon, tyre cord, polyester filament yarn
17. Industry or process involving metal surface treatment or process such as pickling / electroplating / phosphating/anodizing/galvanizing etc.

18. Manufacturing of Pints, Varnishes, Pigments and intermediate (excluding blending/ mixing)
19. Automobiles Manufacturing (Integrated facilities)
20. Coal Washeries
21. Copper Smelter
22. Oil Refinery (Mineral Oil or Petrol Refineries)
23. Heavy engineering including Ship Building (with investment on Plant & Machineries more than 10 crores)
24. Hydrocyanic acid and its derivatives
25. Manufacturing of Lubricating oils, greases of petroleum based products
26. Coke making, liquefaction, coal tar distillation or fuel gas making
27. Zinc Smelter
28. Chlorine, fluorine, bromine, iodine and their compounds
29. Chlorates, perchlorates and peroxides
30. Basic Chemicals and electro chemicals and its derivatives including manufacture of acids
31. Food & Beverages (Alcoholic and non-alcoholic)
32. Photographic films and its chemicals
33. Industrial carbon including electrodes and graphite blocks, activate carbon, carbon black

48. On 9th April, 2014, it was further noticed that the inspecting team had placed before the Tribunal a tabulated statement of inspection. When original inspection reports were placed before the Tribunal, it came to light that the tabulated statement was factually incorrect and to some extent even improper. Notice to show cause was issued to some authorities and concerned officers. When the mater came up for hearing before the Tribunal on 15th June, 2015, it came to the surface that huge quantity of municipal solid waste was being indiscriminately dumped at Chandi Ghat, though, the Nigam had issued an order dated 29th May, 2015 prohibiting unauthorised dumping at this Ghat.

49. The Local Commissioner had filed his report and the matter was taken up for hearing on 2nd July, 2015. The report of the Local Commissioner depicted very sad state of affairs prevalent at the ghats in Haridwar and river banks at Haridwar and Rishikesh but more

particularly, the STP at Haridwar, Jagjeetpur. We may usefully reproduce the relevant part of the findings recorded by the Local Commissioner and the directions issued by the Tribunal vide its order dated 2nd July, 2015:

> "Vide our order dated 15th June, 2015 we have appointed a Local Commissioner to verify the conditions prevailing on the river bank of Ganga within the limits of Nagar Nigam, Hardiwar.
> Learned Local Commissioner has submitted his report. The Local Commissioner had conducted the inspection in the presence of the Officers of the Pollution Control Board, Nagar Nigam, Haridwar and Police etc. From the report submitted by the Local Commissioner before the Tribunal it is clear that the state of affairs prevailing on the river bank and flood plain of Ganga River is pathetic. Plastic waste and other municipal waste is being thrown directly into the river Ganga and its banks are full of such waste. There is no proper system for collection, segregation and disposal of Municipal solid waste in the entire city of Hardiwar. A drain which has been constructed to carry the sewage to the STP was completely blocked and choked by plastic and other waste. Cow dung and other waste thrown on the river bank of Ganga by the restaurants and other persons living around and carrying their business. Even the places of worships have been polluted by deposit of such waste. The river water is being polluted by the direct discharge of sewage waste and other elements into the river Ganga. We may refer to the following portions of the report of the Local Commissioner:
>
> 1. *"I also noticed that lot of garbage (Solid Waste) laying on the Ghat and I also saw that there were no Proper Dustbin on Ghat and only small Dustbin were there which were full with solid waste overflowing and spreading on road and goes into Holy River Ganga.*
> 2. *That there was no cleaning done by the Nagar Nigam Haridwar and when I asked the M.N.A that why no cleaning is done on Har Ki Pauri Ghat, she told me that this Ghat is not under the control of Nagar Nigam Haridwar. She told me that this Ghat is under control for cleanness by Sri Ganga Sabha who is cleaning this Ghat since memorial and when I asked about the Orders for Sri Ganga Sabha she refused to provide me and told me that she does not have any order from any authority for giving them permission to clean the Ghat resulting responsibility of cleaning is been shifted on Sri Ganga Sabha who*

are also not cleaning and as such Ghat is unattended by anyone and full off solid waste.

3. *That I also saw that all over the Ghat the old clothes of devotees, who have visited Haridwar are laying all over the Ghat and no authority are taking care of them I also saw that people were throwing solid waste into Holy River Ganga.*
4. *That I also saw Cattle like Cow and other Animals Pig etc, roaming on the Ghat of Holy River Ganga and even there was Cow Dung over the Ghat of Holy River Ganga.*
5. *That there is only one Drainage System in Nai Ghat which was built at the time of Kumbh Mela and when I asked them to open the Drainage System I was shocked to see that it was totally blocked from inside by the polythene and other polythene products and when I asked the M.N.A why this Drainage System is not clean she inform me that this Drainage System is under the control of Irrigation Department and Jal Nigam but I asked them to 5.*
6. *That I also visited few Restaurants and found that they were also not properly managing the solid waste and they were directly throwing on the Road side and they were also passing the waste water directly into Holy River Ganga, and when I asked to the M.N.A why all these things are happening right under your nose that she informed me and provided me the list of defaulter who are not paying the taxes to the Nagar Nigam due to which there is shortage of funds and lack of Staff.*
7. *That I also visited a parking space which is just on the Bank of Holy River Ganga which is also one of the source of solid waste as many Hawkers and unauthorized shops have come around the parking place this particular parking is made right on the Bank of Holy River Ganga and the land belong to Irrigation Department and all the revenue collected goes to the Irrigation Department from the parking.*
8. *Chandi Ghat is an open area in which Nagar Nigam throw it solid waste even though they have stated on 15th June 2015 that they will not throw any solid waste in Chandi Ghat when I asked them that why they are not obeying the Order of the Hon'ble Tribunal the M.N.A inform me that they have taking some place outside the boundaries of the Haridwar for dumping for solid waste but the villagers are not permitting them to dump the solid waste at that particular side so they are again throwing it solid waste in Chandi Ghat.*
9. *That Chandi Ghat is a place where Nagar Nigam is Continuously throwing solid waste and they have not installed any machinery for disposal for solid*

waste even the boundaries of the particular area where Nagar Nigam is throwing solid waste is not made and I have also seen that Animals like Cow, Buffalos are eating solid waste with mostly consist of polythene and polythene product and when heavy winds come they take away with them the polythene and it is scatters all around the area due to wind and open area and I also saw people are burning solid waste".

Photographs have been placed on record, where it is shown that huge quantity of plastic waste is lying on the banks and Ghats. There are hardly any proper dust bins which could help the public at large to throw the was taken into the dustbins. The cleanliness of ghats is a matter of great concern. The photographs also show cow dung and other waste spread over the ghats even near the Temples. There is no cleanliness much less environment protection.

The municipal solid waste is thrown anywhere and everywhere and no segregation and disposal is being carried out in accordance with The Municipal Solid Wastes(Management and Handling) Rules, 2000.

The photographs show that the drain was completely choked and huge quantity of plastic and other municipal solid waste were got removed by the Local Commissioner in his presence. We fail to understand how the Nagar Nigam is performing its functions. Even the drain carrying the sewage to the STP was totally choked and the entire sewage was being discharged by the unauthorized shops and houses on the river banks. To our utter surprise, toilets are being made near the bank that are most unhygienic and have no system provided for collection and disposal of the waste. Even DG sets have been installed at the banks of river Ganga. Houses and building located at the river bank and even the flood plain of the river, deposit huge quantity of plastic and other waste on the river banks which obviously in the rainy season would go into the river and cause serious water pollution in the area. Even animals are shown loitering on the banks and obviously they also evacuate on those banks. The vehicles are being washed on the river banks and thereby discharge even chemicals, oils and grease in to the river. These are the dimensions of the serious issue relating to the water and air pollution in the city of Haridwar particularly confined to the flood plain and the river banks of Ganga and the Ghats made for worshipping.

The Commissioner has further pointed out to the Tribunal that all the Authorities concerned expressed their inability to effectively control this menace for one reason or the other. However, no reasons worth

mentioning, except that they are helpless, were given to the Local Commissioner. We may notice that even before us today no plausible, much less a reasonable, explanation has been rendered by any of the public Authorities and Board and the Government for its failure to perform its statutory and public law obligations.

Surprisingly, on 15th June, 2015 the Learned counsel appearing for Nagar Nigam, upon instructions from the Officers present, had stated that the ghats and flood plain of river ganga have been cleaned and no apprehension need be entertained regarding throwing of municipal solid waste and getting washed away in the river Ganga. We are sorry to notice that the Officer present in the Court misled the counsel to make such statement which to his personal knowledge was incorrect. We have heard the Officer present and he tendered unconditional apology and submits that he would ensure that all the directions issued by the Tribunal would now be carried out without default and delay.

Learned counsel appearing for the Pollution Control Board and for other Authorities submit that they will also ensure that all the directions issued by the Tribunal would now be carried out without default and delay.

After hearing the Learned counsel appearing for parties and the Local Commissioner we pass the following directions:-

1. There shall be complete prohibition of use of the plastic in the entire city of Hardiwar and Rishikesh and particularly on the banks and flood plain of river Ganga. Plastic will not be used for any purpose whatsoever, that is for serving food, commodities, packaging or even carrying the plastic in that area.
2. Any person found using, bringing or in any way dealing with the plastic envelops or packaging materials and commodity of any kind sold by the shopkeepers in the plastic in that area would be liable to pay environmental compensation for degradation of environment and water pollution at the rate of Rs. 5000 per incident.

   The Nagar Nigam, Police Authorities and Pollution Control Board Officers posted in that area, particularly on the flood plains and Ghats of Ganga river would ensure that no plastic is used in any form whatsoever at that place and the person so doing would be liable to pay compensation on demand by the officials. In the event of default liberty is granted to the Nagar Nigam and said Authorities to file application before the Tribunal with complete particulars of the defaulting and

offending party.

4. The Nagar Nigam shall ensure that any kind of municipal solid waste or animal waste is not permitted to be deposited and/or thrown on the ghats and the river banks under any circumstances.
   A round the clock cleanliness activity shall be carried out.
5. The Nagar Nigam, Pollution Control Board and the Authorities shall within one week from today place appropriate size of dustbins near the shops, bathing ghats and roads and it would be mandatory for any person and shopkeepers to deposit the municipal solid waste into the dustbins. The waste shall be collected on daily basis and taken to the appropriate site and disposed of strictly in accordance with the Municipal Solid Wastes (Management and Handling) Rules, 2000.
6. All these three agencies would further be responsible for making appropriate site scientifically for storage of municipal solid waste. It shall be treated and the waste deposited shall be covered by layer of soil and disinfectant shall be spread regularly.
7. We are informed that the Environmental Clearance has been obtained by the Nagar Nigam for site at Sarai Village on 18th May, 2015. However there was oral observations by the Hon'ble High Court of Uttarakhand that waste should not be deposited at that site. However since subsequent to that observation Environmental Clearance has been granted, subject to the conditions stipulated in the order dated 18th May, 2015, the Nagar Nigam shall prepare that site in accordance with the Municipal Solid Wastes (Management and Handling) Rules, 2000 and shall deposit the waste at the site in a most scientific and appropriate manner. However, compliance of these directions would be subject to the orders that may be passed by the Hon'ble High Court of Uttarakhand. We are hopeful that Hon'ble High Court would be pleased to consider the subsequent development that the Environmental Clearance has been granted by the Expert Body and we see no reason to differ with the view taken in grant of Environmental Clearance for that site.
8. We are informed that the other site presently being used for dumping of municipal sold waste is at Chandi ghat which is a part of the flood plain. We, hereby, prohibit the Nagar Nigam from dumping municipal solid waste in the flood plain at the site at Chandi ghat. The site at Chandi ghat is located undisputedly within the flood plain and it would be

a serious environment hazard if the same is permitted to be used for dumping purpose as the dumped wastes as well as seepage there from and disinfectant used would ultimately flow into the river and cause serious pollution.

9. We further direct that no vehicles would be permitted to be washed within the flood plain and no toilets in that area be used by the public and no person running hotel, restaurant and shops or other commercial activity would throw any waste on the Ghats or into the river.
10. The Nagar Nigam shall ensure that the drain is cleaned in their presence and is kept clean and carry the sewage into the STP without any obstruction.
11. We direct the ghats to be maintained by Nagar Nigam and Police Authority properly and ensure environment hygiene and cleanliness and that no pollution is caused at the river Ganga from different activities on the Ghats.
12. All the shopkeepers would be personally responsible for throwing any municipal solid waste on the ghats and each one of them shall be liable to pay compensation as afore directed, in the event of default.
13. We direct the concerned Authorities to widely advertise both in print media and through public address system the order of the Tribunal in English and Hindi and inform the public visiting the Ghats to strictly adhere to the directions of this order.
14. We hereby direct the State of Uttarakhand and the Pollution Control Board to provide all necessary funds and help to all the concerned Agencies for carrying on these directions.
15. We further direct that nobody shall be permitted to wash clothes, utensils or other items on the ghats of the river Ganga.
16. We further direct that Nagar Nigam shall provide eco-toilets away from the flood plain of the river Ganga for use of general public. These toilets shall be cleaned and maintained in hygienic condition by the Nagar Nigam.
17. The use of the DG sets on the ghats or the flood plain is hereby strictly prohibited.
18. We grant one week time to the Authorities to take all necessary steps in terms of these directions and in the event default, the Chief Executive Officer of the Nagar Nigam, Member Secretary of Pollution Control Board, Deputy Commissioner and SSP, Haridwar, Secretary Environment, State of Uttarakhand and Secretary of Irrigation Department, State of Uttarakhand shall be

personally responsible for compliance of this order. List this matter on 21st July, 2015 for further directions."

50. The above directions had been necessitated to take urgent and immediate steps in the interest of prevention and control of pollution of River Ganga. The Hotels, Ashrams and Dharamshalas at Haridwar and Rishikesh both are operating without consent of UKPCB and permission from the competent authorities. The Hotels or Ashrams having more than 100 rooms do not have STPs and have not even taken cared to obtain consent of UKPCB. Lists before the Tribunal were filed, as already noticed, where it was found that majority of them are operating illegally and un-authorisedly and are causing pollution of the environment, particularly River Ganga.

51. Running of these Hotels, Dharamshalas and Ashrams in this manner cannot be permitted. Firstly, they have failed to take consent of the Board and secondly they do not have anti-pollution devices. The mere fact that they are putting the effluent into drains would be of no consequences and benefit to them. The result of indiscriminate discharge of their domestic waste, sewage and even trade effluent into drains is that 60% of such pollutants are being discharged directly into River Ganga even at Jagjeetpur.

52. On 29th January, 2015, the Tribunal had also passed directions requiring the concerned authorities to explain as to how many tannery industries were located in the clusters at Jajmau, number of drains, their status, how many drains carry sewage and trade effluent together, how many drains have been trapped and brought to the

CETPs/STPs, whether discharge of effluent was within the prescribed parameters or not and for what duration electricity was available to the CETPs. The answer of these questions was very disheartening, uncertain and indefinite. This clearly demonstrates that the concerned authorities, including the UKPCB were not discharging their functions appropriately and in accordance with law.

The fact which needs to be highlighted at this stage is that it was an admitted case before the Tribunal by all the authorities and the applicant that more than 60% of the effluent (mixed of sewage and trade effluents) at Jajmau was being directly released into River Ganga without any treatment. 40% effluent which was coming through the CETPs was not completely treated and brought within the prescribed standards, in fact, the CETP was not of requisite capacity, capable of treating contents of the discharged effluent as per prescribed parameters. The CETPs at Jajmau cannot treat chromium and other heavy metals which are most hazardous and polluting substances that are being used by the tannery industries at large. This is the state of affairs is prevalent in the industrial clusters which are stated to be partly or wholly connected to CETPs.

53. The joint inspection team which inspected Ashrams, industries and adventure tourism activity in its report of 16th February, 2015 had pointed out serious environmental concerns about each one of them. Firstly, it was reported that ashrams are located in the core zone of river Ganga in Rishikesh and Haridwar both. The industries were discharging the effluents through their CETPs or otherwise in Sukhi River which is a seasonal river joining River Ganga. For adventure

tourism, it was stated that rafting activity is carried on form Kaudiyala to Rishikesh and camps were being installed about 50 meters from River Ganga. The dry pit toilets were on the sand bed and they require shifting otherwise during the flood season they would cause serious pollution.

54. Report dated 11th May, 2015 was also filed on behalf of the Principal Committee stating that the number of seriously polluting industries in Uttarakhand is 298 in terms of the criteria finalised by the MoEF and CPCB. However, as per the State of Uttarakhand, number of such industries was only 74. Out of these, 20 were seriously polluting industries and were operating without consent of UKPCB.

DISCUSSION ON MEETINGS

55. Now, we would refer to the gist of the meetings that were held with different stakeholders including Secretary MoEF, Secretary Water Resources, Chief Secretaries of States of Uttarakhand, Uttar Pradesh, Bihar, Madhya Pradesh, Jharkhand and West Bengal.

In these meetings, Member Secretaries of the respective Boards, concerned Secretaries of the State Boards, Secretaries, CEOs, Executive Officers, Officer In charge of the Nigams, Jal Nigams, Pey Jal Nigams, Jal Sansthans, Corporations and Sewage Boards participated. Even the representatives from the associations like Sugar and Tannery Sector participated. In all, 10 meetings of the stake-holders were held on 10th October, 2014, 11th October, 2014, 2nd December, 2014, 12th December of 2014, 2nd February, 2015, 27th

March, 2015, 1st May, 2015, 6thMay, 2015, 10th September, 2015 and 10th October of 2015 respectively. In all these meetings the matters in relation to the pollution of river Ganga with direct emphasis of industrial pollution were discussed and deliberated at length. In the order dated 15th December, 2014, details of the industries located on the river bank of Ganga as well as its tributaries was required to be filed with comprehensive report in relation to 'Zero Liquid Discharge Unit'. It was brought on record that some industries have voluntarily closed their business while some others have been asked to close as they were found to be seriously polluting. The purpose of discussing various issues in these meetings was to assess the scope of directions which Tribunal should pass, difficulties or obstacles faced by authorities in implementation thereof and framing of an objective, policy and scheme for ensuring prevention and control of pollution of river Ganga from industrial effluents while fundamentally maintaining the Principle of Sustainable Development.

56. During the consultative meetings it was brought on record that in Kashipur and Haldwani, there are 28 industries carrying on various activities out of which 40 are non-compliant. There are 468 hotels out of which 10 have been closed and to 30 Show Cause Notice have been issued. All these hotels were not connected to STP and STP itself was not having the capacity to treat load of such effluent. In the Affidavit filed on 23rd August, 2015 it was stated that there are 20 towns, 16 small and 4 medium and colonies located on the bank of river Ganga. No study has been carried out as yet as to the requirements of the STPs and to ensure that no untreated sewage meets river Ganga. It

was commonly agreed position that plastic should be banned and commercial activity on Ghats should not be permitted. It was further stated that on river Ram Ganga, one of the main tributaries of river Ganga, paper and sugar industries were operating. In the meeting of 19th October, 2015 various issues were deliberated upon and it was stated that from Gaumukh to Rishikesh there is no STP. However, now different STPs were proposed at different stations. All stake holders were of the view that bio-digester mechanism should be adopted for hamlets and hotels which must have their own STPs or should appropriately contribute towards the general STP so that the sewage and other waste generated from these places could be appropriately treated. At Haridwar, the capacity of the existing STP was proposed to be enhanced to 85 MLD by constructing a new STP of 40 MLD. This STP is required to be ready within 6 months. The tender bid in relation to construction of the 40 MLD plant at Haridwar has also been finalised and the work is to be awarded after sanction is received. It was expected to generate 2 megawatt energy and area of collection was proposed to be 20 kms. There were nearly 162 seriously polluting industries in the Kumaon region and 136 in Garhwal region of Uttarakhand. Out of them 44 in Kumaon region and 38 in Garhwal region have not even applied for obtaining the consent of UKPCB or have not been granted consent. Show Cause Notice had been issued to 15 industries in Kumaon region and 4 industries had been directed to be closed. While in Garhwal region 19 industries were issued the Show Cause Notice and closure orders have been passed for 15 industries.

57. Some units were reported to be having no discharge. Two important features that are required to be noticed in the judgment are that the STPs that are proposed to be constructed now must be capable of treating Faecal Coliform Bacteria and should release the treated sewage water, which is strictly in conformity with the prescribed standards and meet the bathing standards. Every effort should be made for ensuring recycling of the treated sewage water. Such treated sewage water can safely be used for agriculture, horticulture and industrial purposes. The other is wherever necessary, cleaning of the river Ganga should be permitted to ensure removal of collected waste and sludge which may be containing industrial and other pollutant. At Roorkee a waste to energy plant is proposed, for which 10 acres of land has already been allotted. Open defecation and dumping of municipal solid waste on river bank is a very common problem prevalent in the entire Segment 'A'. Thus, even in Segment-A industrial, domestic and sewage effluents enter river Ganga. Appropriate directions in regard to all these aspects need to be passed.

58. After serious deliberations, keeping in view the extent of pollution, particularly, industrial pollution of river Ganga and the length of the river (2525 km) it was considered absolutely essential to divide the project of cleaning of river Ganga into different segments. One factor, which was commonly admitted and was quite evident from the records before Tribunal is that discharge into river Ganga is not exclusive in its nature and content. In some places the discharge is from sewage and at other places discharge is from industrial clusters but mostly the discharge consists both of sewage and industrial effluent together.

In light of this, it was unanimously resolved that the river Ganga should be divided into different segments for its restoration and thus, the Tribunal directed as under:

Ganga Phase-I-Segment-A: Gomukh to Haridwar

Ganga Phase-I-Segment-B: Haridwar to Kanpur

Ganga Phase-II : Kanpur Border to Uttar Pradesh Border

Ganga Phase-III: Uttar Pradesh Border to till Jharkhand Border

Ganga Phase-IV: Jharkhand Border to Bay of Bengal (West Bengal)

The solutions for prevention and control of pollution as well as restoration of river Ganga to its pristine form quality have to be multi-fold i.e. have treatment of sewage as well as industrial effluent. If only one was concentrated, the pollution shall still persist and cost of the project would be very high if at all places different STPs and/or CETPs are required to be installed and made operative. We have discussed other economic factors in this judgment separately.

59. From the above discussion, it is clear that implementation of directions either by the Supreme Court or by the Tribunal is a matter of serious concern. Somehow the authorities have not been able to implement the law and more particularly the specific directions issued by the Supreme Court and the Tribunal over the years. The remedial measures that are being taken are ineffective because of ill and faulty planning and implementation. Thus, the matter requires issuance of directions of diverse dimensions and of stringent character.

60. We may notice that there are towns, cities or colonies on the bank of river Ganga and its tributaries under Segment A of Phase-I and

they are Badrinath, Devprayag, Haridwar, Joshimath, Karnprayag, Kirti Nagar, Munsiyari, Nandaprayag, Rishikesh, Rudraprayag, Srinagar, Uttarkashi and BHEL. In most of these places the population is thin. It varies from 2000 to 20000, except in Haridwar, Rishikesh and BHEL where it is 228832, 17499 and 46945, respectively.

We may notice that except Haridwar and Rishikesh, the population of other cities / towns is small, however, what is important is to take into account the floating population which visits different places of pilgrimage along the banks of Ganga and its tributaries particularly during the summer months from May till October. Though snow melt during summer followed by monsoon provides large volumes of water flow in the river, with consequent dilution, it is important to take into account of the additional sewage load that gets generated due to inflow of vast population of tourists during summer months. Therefore, the capacity of STPs / other Sewage treatment facilities should not be decided merely on the basis of resident population in cities / towns but should include floating population and for this purpose they should first registered all authorized/ unauthorized hotels, pay guest houses, ashrams and dharamshalas in terms of their maximum capacity to arrive at the maximum load of sewage likely to be generated and it should be ensured that they are connected to the STP/ Bio-digesters. Another important consideration pertains to establishment of community toilets/ washrooms all along the pilgrimage route so as to discourage open defecation and/or disposal of untreated sewage.

61. Considering the topography, geology and terrain of Uttarakhand, it may be technically and financially not a viable alternative to provide for extensive sewerage network for conveying the sewage to the STPs. Also population being small in most towns and that too living in *Toks (hamlets),* the State has proposed installing Bio-digesters in decentralized manner.

Therefore setting up decentralized Bio-digesters / STPs of smaller capacities for different clusters of urban populations in towns / cities appears to be the correct approach. Bio digesters come in sizes with capacities of up to a population size of 300. This will minimize the need for extensive sewerage network and will also obviate the technical problems associated with laying a sewerage network in the hills. Bio-digesters have low energy consumption and require low maintenance, though it may involve extensive monitoring by the concerned agencies such as Jal Sansthan for which appropriate mechanism needs to be spelled out and role and responsibilities including penalties for default needs to be fixed. Role of village level institutions can be defined for this purpose.

62. The methodology of sewage estimation appears to be defective and consequently, the authorities are not able to correctly estimate the amount of sewage in each city / township with the result that the STPs/bio-digesters that get planned do not cater to the sewage generated in urban areas. There is variance between the amount of sewage generated in Uttrakhand in the figures quoted by UKPCB and CPCB. Although UKPCB reported a figure of 142 MLD the figure

reported by CPCB in the documents on record is 442 MLD. It was pointed out during the hearing that the sewage generated is calculated on the basis of 135 liters of water consumed per capita per day. Although in some cities, like Haridwar, the actual water supply is about 170 liters per capita per day.

63. Another important consideration while planning sewage system relates to having proper documentation of local drainage network. It has been the experience that the natural drains in populated areas carry sewage as well and hence trapping the mouth of the drain for treatment of sewage in STP/bio-digester before the discharge is allowed to mix with main river is essential. Uttarakhand Jal Nigam and Pey Jal Sansthan should carry out a total physical survey and prepare an inventory of all the drains which directly go into Ganga or its tributaries from all the towns/cities and settlements. All such major drains should be trapped before the waste water / sewage gets released into Ganga or its tributaries. Depending upon the volume of sewage site selection, the STP / Bio digesters should be installed.

64. The major pollutant affecting the quality of water till it reaches Haridwar is the presence of Faecal / total Coliform which is in the order of 4000 to 160000 MPN/100 ml. The other parameters like BOO, COD, TSS, etc., are non-existent due to absence of industry. In any case, large volumes of water in excess of 31,000 cusecs provide adequate dilution up to Haridwar. However, presence of Coliform is the major concern. The Bio-digesters technology may not be able to address the total / Faecal Coliform load and, therefore, the State Authorities (Jal Sansthan, Municipality) must reduce the total

Coliform load by bleaching/chlorination, and other methods before it is released into the river Ganges.

65. There is multiplicity of authorities within the State. Some STPs are maintained by the Jal Sansthan whereas others are maintained by the Municipalities or Pey Jal Nigam. Besides this the responsibilities of sewer networks are not with the same authority. It is, therefore, essential that a joint team of Jal Sansthan, Pey Jal Nigam, Municipal Body and UKPCB be created for each municipality / township which will be responsible for overseeing and monitoring the STPs and performance thereof.

A suggestion was made that Root Zone treatment or the Reed Bed technology be adopted for the Hills. This technology is also called Bio-Filtration or Bio- Remediation. While this is ideal, requiring no energy, however it may require more land, specialized knowledge of setting it up and selecting the right species of Reeds or other water plant like water lilies. But in cold climatic conditions of Uttarakhand, particularly, Devprayag upwards, whether enough microbial action, particularly during the winter, will be possible for sewage treatment in the open system/Root zone treatment is something that requires consideration. Also, even this treatment would require a two stage settling tanks, similar to Septic tank, before the grey water is released in to the Root Zone treatment system. Besides, the treatment plant which requires more land will have to be set up in decentralized way for smaller clusters. However, this should be tried out on an experimental basis, if at all, in foothills like Rishikesh, Haridwar or Dehradun at the first instance.

66. As per information available, 9 hydro projects are operational whereas another 11 are under construction and 33 projects are proposed. By the very nature of hydro projects, the labour camps during construction stage and residential cum office complex during operation stage is situated in close proximity to the river itself. Related consideration is the fact that hydro projects require huge manpower at the construction stage, therefore having stringent norms for STP/Bio-digester installation both during construction as well as operation phase is a necessity.

Considering the mountainous terrain, wherever feasible, taking advantage of the gradient available for flow of sewage in the drains in the hills, cascading and bio-remediation measures for treatment of waste water could be attempted wherever feasible.

67. The Uttarakhand Government has enacted "The Uttarakhand Flood Plain Zoning Act, 2012" (for short "Act of 2012")under which the team headed by Collector in each district is required to carry out a survey and identify flood plains for each district in respect of different River basins. There is nothing placed on record by the State of Uttarakhand to show that in pursuance of the above referred Act of 2012, they have carried out a survey and identified the flood plains for each of the rivers in the State. State Government of Uttarakhand, therefore, should be directed to undertake this exercise of carrying out survey and demarcating flood plains of each of the river within a period of 3 months. Till the demarcation of the flood plains for each of the river basins, particularly relating to Ganga or its tributaries, is

carried out, there shall be a total prohibition on undertaking any construction of permanent or semi-permanent nature within 100 meters of the distance from center of the river. This will, however, not apply to any constructions of road, bridges and culverts, which are essential or incidental to providing connectivity in the hills.

68. It is evident from the above details that River Ganga is being highly polluted and major sources of pollution are discharge of treated/untreated trade effluent, treated/untreated sewage and dumping of municipal solid waste and other wastes directly or indirectly into River Ganga. Mentioning of treated or untreated effluents or sewage is necessitated for the reasons that most of the STPs, if installed are not functioning or have been found to be malfunctioning. It may be due to heavy load of sewage and incapacity of the plants. Discharge of untreated sewage directly into River Ganga in segment-A is the main culprit of pollution. Even where the sewage is being treated through the STPs, the STPs do not have the mechanism for treating Coliforms. Similar is the situation with the industrial effluent which is directly discharged into river, untreated or treated, but not meeting the prescribed parameters, because of the ineffective working of the ETPs installed by the industries. There are hardly any CETP in this area and the ones which have been installed again are not performing to their optimum capacity and as per the prescribed standards. Indiscriminate dumping of municipal solid waste, construction and demolition waste either directly into River Ganga or on its banks should not be permitted. The wastes that are dumped on the banks of River Ganga in rainy season or whenever

there is higher river flow, gets washed away and pollutes river Ganga. Illegal, unauthorised and rampant mining in the river or river banks of Ganga is another contributory of polluting River Ganga as well as adversely affecting its biodiversity. The entire stretch of River Ganga from Gaumukh to Haridwar, Uttarakhand with Uttar Pradesh beyond Haridwar is eco-sensitive area, particularly in relation to the river bed. The unauthorised and un-sustainable construction activity temporary or permanent, on the river bed is also a matter of serious concern. Once the constructions are permitted to be raised in the flood plain of the River Ganga, it causes dual damage. Firstly, it adversely affects the river flood plain and bio-diversity of the river and secondly, it exposes environment and ecology to destruction leading to pollution of the river. We have already discussed in some detail as to how essential it is to construct and establish CETP or STP with appropriate infrastructure and mechanism, which is capable of treating the effluents of sewage that is generated and brought to such plants. The scheme of Uttarakhand authorities, which establish STPs in every city or town falling under Segment-A even after laying down the sewer pipeline, is not only impracticable but is also un-economical and would cause more damage to the eco-sensitive area of the State. Large scale digging, blasting for the purpose of laying down pipeline would expose the entire ecology to disaster making it prone to landslides, thus, disturbing not only the environment but day-to-day living of the people in the State as well. The treatment of sewage in such situation is expected to be catering to cluster of houses particularly when number of cities in the area is not densely populated. Setting up of de-centralised bio-digesters would be an appropriate solution and as

already noticed, they can be established and are available to small section of population like 300 or more. This would help in preventing untreated sewage directly entering the river. The State of Uttarakhand in various cities or towns is not even sure as to how many drains already exists and how many of them have already been intercepted and whether the sewage thereof is being treated appropriately. This, clearly invites directions from the Tribunal in that behalf. While ensuring treatment of the sewage and industrial effluents, it is even more advisable that least (not exceeding 25% of the generated effluents) should be permitted to enter the river and the rest could be utilised for industrial, agricultural or horticultural purposes. Wherever, collective septic tanks or bio-digesters are constructed, it is the duty of the State and the concerned authorities to ensure that there is proper system in place for extracting the sewage and taking it to the STP. The collection and transportation of sewage has to be dealt with utmost caution and effectiveness, so that it's direct dumping into river, its tributaries or even on land is entirely prevented.

Now, we may also notice the area of Uttarakhand being eco-sensitive, there is great need for protecting the river bed of Ganga. Rapid Impact Assessment has been carried out by the Wildlife Institute of India and the entire area from Gaumukh to Haridwar is part of sub-tropical broad leaf forests and is otherwise also, an eco-fragile area. It is so sensitive that undue pressure of development, industrial construction, Hydropower project activity opposed to sustainable development can result in serious disasters or natural calamities. Thus, there is persistent need for all concerned and

stakeholders to ensure that activities around the river are regulated and its pollution is completely prevented and controlled. Another Notification which has bearing on the subject before us is the Notification issued by the MoEF dated 1st February, 1989. This Notification was issued by MoEF under Section 3(2)(5) of the Act of 1986 and Rule-5(3)(d) of Environmental (Protection) Rules of 1986. Draft Notification was put in the public domain and objections were invited and after considering those objections, the final Notification was issued. The purpose was to impose restrictions on location of industries, mining operations and other development activities in the Doon Valley in Uttar Pradesh of which State of Uttarakhand was a part at that time. This Notification imposed restrictions on the activities as well as prohibited activities which could not be carried out in that area. Activities which were specifically permitted by the Central Government after examining the environmental impacts could be carried out. The industries were categorised into three different categories, green, red and orange. Under the green category, were the industries which may directly be eligible for consideration for issuance of NOC without referring it to the MoEF. Orange category included list of industries that can be permitted in the Doon Valley with prior environmental control arrangements. The red category included the list of industries that cannot be permitted in the Valley. Nearly 41 industries which were discharging more than 500 KLD per day effluent and had employed more than 500 persons, fuel coal consumption was more than 400 MT per day, had been specifically stated therein. MoEF declared that Gangotri Glacier is one of the largest glacier surrounded by Shivling, 'Thalay Sagar, Meru,

Bhagirathi-III peaks. River Bhagirathi originates from Gangotri Glacier below Chaukhamba peak in an area called Gaumukh at an elevation of 3892 meters. River Bhagirathi is rich in aquatic flora and fauna including migratory species and any hindrance in their migration due to construction of hydropower projects may adversely affect this unique ecosystem. Gaumukh to Uttarkashi over the river total area of 4179.59 sq. km covering the entire watershed of about 100 km stretch of river Bhagirathi was declared eco-sensitive zone from ecological and environmental point of view vide Notification dated 18th December, 2012. This Notification was issued by the MoEF under Section 3 of the Act of 1986 and Rule-5 of the Rules of 1986 after following the due procedure and dealing with objections. We have already noticed in some detail the subject matter of this Notification. It also prohibits activities within eco-sensitive zone, like river valley projects, obstruction of river water for any new industrial purposes, mine or minerals and stone quarry crushers, commercial, felling of trees, setting up of saw mills, commercial use of fire-wood, polluting industries, sewage of industrial effluents, use of plastic carry bags, hazardous wastes, processing units, besides stating the regulated and permitted activities. There are activities which will be permitted in eco-sensitive zone like rain water harvesting, organic farming, green technology, organic tourism, highly project for local houses, solar energy for local houses, local bio-resource based industries. Monitoring Committee constituted under the Notifications strictly regulates and monitors these activities. These Notifications have hardly found implementation on the ground level. The reality of the situation is that there is flagrant violation of these Notifications and

the authorities vested with duty of monitoring and controlling have not been able to perform their functions and duties effectively and in the interest of environment and ecology. By way of an example, out of the huge hotels, dharamshalas and ashrams only 9 have obtained consent of the Board. None of them have permission to extract ground water. Most of them do not have STPs. How the hotel/industries of this kind, which are merely throwing their waste into drains can be permitted to operate and continue to cause pollute indefinitely is a matter left to the imagination.

69. The MoEF also issued a Notification dated 17th June, 2005 in exercise of its powers, declaring that it was necessary and expedient to evolve water quality assessment and monitoring protocol to maintain uniformity in the procedure for water quality monitoring and mechanism that Notification shall propose. It was noticed that due to deterioration of the river water quality, health and livelihood of people living in the downstream are being severally affected and concerns were raised time and again. This Notification thus intended to achieve water quality monitoring to improve the water quality of the river.

70. Besides all this, the State of Uttarakhand enacted the Act of 2012 to provide for zoning of flood plain of the river in the State of Uttarakhand. Under this Act, the flood plain was defined to include water channel, flood channel and other area of nearly low and which is susceptible of flood by inundation. Flood plain zone was defined which is required to carry the flood of minimum probable floods, flood plain zoning restricting any human activity in the flood plain and the river where the plains are created by overflow of water from the channel or

rivers and streams. The Flood Plain Authority constituted under this Act, was expected to carry out surveys and delineation of flood plain area was to be done by issuance of Notification. It was to issue prohibitory or restrictive directions in relation to use of flood plain under chapter-5 of this Act of 2012. Not only this, where any permission to undertake any activity in the flood plain has been refused to any person or where as a result of prohibition or restriction imposed on any person under this Act, such person suffers any damage, he was entitled to the payment of compensation. The authorities were vested with powers to remove obstruction after prohibition. Under Section 25, any person who prevents the Flood Plain Zoning Authority in discharge of its functions any act imposed on such authority under this Act, he shall be deemed to have committed an offence under Section 86 of Indian Penal Code, 1860. The authorities were entitled to impose fines. This Act clearly demonstrates seriousness with which the State legislatures took the matters in regard to fixation of flood plain as well as its protection. However, legislative intent was not translated into any action. The State Government has failed despite lapse of three years in issuing requisite Notification under Section 12 of the Act of 2012. It has in fact not even carried out the appropriate survey and delineation of the flood plain. The State has in fact failed to act with expeditiousness despite the natural calamity of 2013. Surely, the need for such exercise should have received the utmost attention of the concerned authorities. We are unable to overlook this aspect, because it is this attitude of State Government that has compelled people to approach not only the Courts and Tribunals in the country but the highest

Court of the land, resulting in passing of the orders by the Hon'ble Supreme Court of India dated 29th October, 2014.

71. On appropriate analysis of the above Notifications, one aspect which becomes more than clear is that the Central Government or the State Governments are fully cautious of the eco-sensitive area, impacts of violating the flood plain and need for prevention and control of pollution and rejuvenation of River Ganga. It is a typical case of enough intent but complete absence of action for implementation. This would thus compel the Tribunal to pass directions within the framework of law and ensure their implementation even at the cost of punitive actions. The entire Bhagirathi area has been declared eco-sensitive and ecologically fragile. The failure on the part of the State Government to delineate protection of the flood plain thus attains serious dimensions. The applicant also relies upon the CAG reports, which clearly reveals the failure and mis-management and absence of accountability. Thus, the applicant suggests that there should be one central authority, restrictions on vehicular traffic, zoning of river valley, capping of nallas, proper measures for management of solid wastes, effluents and due check on expenditure. According to the applicant, the area of 200 meter from the flood plain should be prohibited zone, while beyond that upto 500 meters it should be regulated zone. According to the respondents, this would result in serious problems for development in the State. The State has a peculiar geographical condition and if 500 meter from the flood plain is determined as a prohibited zone it will be economically, socially, geographically, very prejudicial to the interest

of State. Such limitation would fall much beyond the dimensions of Principles of Sustainable Development. While the Tribunal would consider these conditions and their impacts, it would be inevitable for the Tribunal to issue directions in that regard.

72. It is not exactly gap in the legislation that would compel the Tribunal to issue such directions but it is the gap in the implementation of law that would guide the Tribunal to issue directions of specific content and nature. Lack of accountability, responsibility and vacuum in implementation and execution are the direct fields on which the Tribunal has to issue directions. In this regard we may refer to the judgment passed by the Tribunal in the case of *"Court on its Own MotionVs. State of Himachal Pradesh, through Addl. Chief Secretary(Forests) and Others"* Original Application No. 237(THC)/2013 (CWPIL No. 15 of 2010) decided on 06.02.2014 wherein the Tribunal while passing necessary directions observed the case of *Vineet Narain v. Union of India* (1998) 1 SCC 226, wherein the Supreme Court held as under:

> "There are ample powers conferred by Article 32 read with Article 142 to make orders which have the effect of law by virtue of Article 141 and there is mandate to all authorities to act in aid of the orders of this Court as provided in Article 144 of the Constitution. In a catena of decisions of this Court, this power has been recognised and exercised, if need be, by issuing necessary directions to fillthevacuum till such time the legislature steps in to cover the gap or the executive discharges its role. It is in the discharge of this duty that the IRC was constituted by the Government of India with a view to obtain its recommendations after an in-depth study of the problem in order to implement them by suitable executive directions till proper legislation is enacted. The report of the IRC has been given to the Government of India but because of certain difficulties in the present context, no further action by the executive has been possible. The study having been made by a Committee considered by

> the Government of India itself as an expert body, it is safe to act on the recommendations of the IRC to formulate the directions of this Court, to the extent they are of assistance. In the remaining area, on the basis of the study of the IRC and its recommendations, suitable directions can be formulated to fill the entire vacuum. This is the exercise we propose to perform in the present case since this exercise can no longer be delayed. It is essential and indeed the constitutional obligation of this Court under the aforesaid provisions to issue the necessary directions in this behalf. We now consider formulation of the needed directions in the performance of this obligation. The directions issued herein for strict compliance are to operate till such time as they are replaced by suitable legislation in this behalf."

73. In light of the above, now we have to consider what should be the prohibited and regulated area in the flood plain. We do find substance in the submission of the State that complete prohibition or absolutely restricted activity in 500 meter from the flood plain may not be an imposition in accordance with the Principle of Sustainable Development. This is a State with peculiar geographical and economical conditions. Although it is an eco-sensitive area with a fragile ecology but still it has to develop within such limitation. Eco friendly activities or tourism has to be encouraged. As far as hydropower projects are concerned, they are pending for adjudication before the Hon'ble Supreme Court of India, thus, we not wish to deal with that aspect at all. In the present case, we are primarily concerned with pollution of river Ganga which should be prevented and controlled while there should be rejuvenation of the river as well. For this, to have a prohibited and regulated area of the flood plain determined is absolutely essential. If every person would be permitted to carry on any activity or construction, even on the river bank it would be disastrous in all respects and definitely in terms of environment and ecology. There has to be reasonable restriction, the

Principle of Sustainable Development has an inbuilt element of reasonableness or doctrine of balancing. The public authorities of the State are expected to show greater sensitivity and enforcement capabilities than it has exhibited in the past.

74. At this stage, we may also refer to the google images of 'google earth' that have been filed on record. It shows that yellow line in that photograph indicates the middle of the river, the red lines show the area of 200 meter that should be prohibited, yellow lines towards the hills show the area beyond which it should be a regulated activity. The Google image also shows the area of the hill which has been made flat for the purpose of construction of various buildings, offices and tourism activity. On these Google images, it has also been shown that the camping activity is being carried on right in the river bed itself. All the camping activities are on the sandy area of the river which in our considered view has to be declared as prohibited area. It is not only that some stray camps are existing, but they are in huge number and cover large spaces of flood plain. The Google images reflect undesirable encroachment into flood plain and impermissible activity being carried on there. This would certainly add to pollution of the river primarily as well as to the ecology and bio-diversity of the river as well. Images also show that certain areas which were part of the flow of river have become occupied and vice-versa. This is not, what the intent of the law is and how the eco-sensitive areas of Uttarakhand deserve to be dealt with. Providing prohibitory or no-development zone and the regulatory zone is as essential as safety zone near the railway tracks. In fact the latter is of less priority and proprietary than the former. The need for

delineation of prohibited and regulated flood plain is a necessity in terms of law, environment and ecology. It demands greater precautions to be taken in light of the general impacts of global warming and climate change on such eco-sensitive areas. If this aspect is not determinatively declared and effectively implemented, then it may be too late in the day to protect ecology, environment and particularly River Ganga. While fixing such limits we are ensuring that the State development activities are not unduly hampered. Sustainable development on the one hand, accepts some reasonable and tolerable damage to the nature and on the other hand imposes equally effective limitations on development activities. If this plan is lost either way, the result would be unfortunate. Thus, for this reason, we direct that 100 meters from the river bank would be prohibited flood plain zone while 300 meter from the river bank would be regulated zone. On the prohibitory zone, no activity of any kind temporary or permanent including camps would be permitted while beyond 100 meter and within 300 meters the State would frame its policy of permissible and regulated activities, in light of the above Notification and Acts afore-referred.

It will be noticed at this stage that a writ petition (PIL) No. 25 of 2013 was filed before the Hon'ble High Court of Uttarakhand at Nainital titled "*Sanjay Vyas vs. State of Uttarakhand*" in relation to declaring prohibitory zone. The Hon'ble High Court of Uttarakhand noticed that in 1995 Hon'ble Supreme Court of India passed the judgment that no construction would be made within 100 meter on the river banks of flowing river. In the year 2000, Government of Uttar

Pradesh of which Uttarakhand was a part issued an order directing that no construction would be made within 100 meter from the bank of River Ganga. The restriction in government order came to be diluted for a class of people, but not for class of construction. The Hon'ble High Court of Uttarakhand while admitting the writ petition vide its order dated 26th August, 2013, directed the State of Uttarakhand through its Chief Secretary to ensure that henceforth no construction of permanent nature is permitted within 200 meter from the bank of any flowing river in the State. This order remained in force for a considerable time. However, the writ petition came to be finally dismissed vide order of the Hon'ble High Court of Uttarakhand dated 28th May, 2015 on the ground that the petitioner had no *locus-standi* for the case to be classified as a Public Interest Litigation. However, the Hon'ble High Court of Uttarakhand specifically granted liberty to any aggrieved party to approach the Hon'ble High Court of Uttarakhand seeking the appropriate relief. In the entire judgment dated 28th May, 2015, there was no specific direction contrary to the order of the Hon'ble High Court of Uttarakhand dated 26th August, 2013. In its order dated 20th September, 2013, the Hon'ble High Court of Uttarakhand had taken note of and had also directed that the State Government must look into all flowing river, their geographical conditions and come up with a policy. We may notice that at that time, the Act of 2012 had already come into force and was nearly more than a year old.

75. The Hon'ble Allahabad High Court in PIL No. 4003 of 2006 *"Re: Ganga Pollution vs. State of Uttar Pradesh & Ors."* by a detailed order

and after noticing the various attendant judgments and circumstances had directed as follows:

> "We thus direct that no construction shall be undertaken by the Allahabad Development Authority or by any private builders within 500 meters of highest flood level of river Ganges in city of Allahabad as well as part of river Yamuna adjoining the river Ganges (Sangam). The Allahabad Development Authority and the district administration shall ensure that no construction be made in the aforesaid area. We, however, give liberty to any aggrieved person to make appropriate application in this petition with regard to above restrictions, if he feels so aggrieved."

76. The Applicant had also relied on the case of "*People's Movement for Civic Action vs. North Goa Planning and Development Authority*" Writ Petition No. 257 of 2001, where the Hon'ble High Court of Bombay at Goa had passed an order directing that no development will be directed in an area having gradient of more than 25^0. Reference was made to the Goa Land Development and Building Construction Regulation and the draft Regulation made there-under. This was done to keep the river banks in such areas protected.

The above judgment of the High Courts are on their own facts and keeping in view the geographical and other circumstances, peculiar to those cases, we are of the view that these directions cannot be universally applied. Restrictions or declaring an area as 'no development zone' has to be in relation to the geographical location, environment and ecological conditions of an area. For instance, at Allahabad, River Ganga has a wide flow area and there is huge plain area near the river bank. Thus, the restrictions of 500 meters would certainly be reasonable while that by itself would not apply to an area

like Uttarakhand. 500 meters restrictions in Uttarakhand would certainly not be reasonable and appropriate.

77. Another contention very vehemently advanced on behalf of the applicant is that the previous projects taken whether at the State or national level have been proved ineffective. Huge sums of money have been spent on cleaning of Ganga but no part of Ganga has got ridden of either sewage, industrial effluents or dumping of other wastes. The levels of pollutants in river Ganga have enhanced with the passage of time. Further, according to the applicant, multiple authorities, non-co-ordination inter-se the authorities, no involvement of the statutory bodies and Boards which are responsible for prevention and control of pollution and execution, no accountability and absence of will to execute are the primary reasons which have led to the present stage of river Ganga. Also, earlier actions taken under Plan-1 of 1985 and Plan-2 of 1986 have not yielded any noticeable results.

78. This contention of the applicant cannot be said to be without substance. Of course, the authorities have chosen not to address this contention with any specific data or material on record. The authorities at the Centre and the State have chosen to take remedial steps to ensure that deficiencies in the earlier plans do not re-occur and render the current plan ineffective. In fact, in the report of the 'Namami Gange' project, a major shift in implementation is envisaged, while the government is focusing on involving people living at the banks of river to attain sustainable results. Drawing of lessons learnt from previous implementation, various authorities, people and bodies were sought to be involved to get better results, which implicitly

means that the performance of Plan-1 of 1985 and Plan-2 of 1986 have failed to yield required results. River Bhagirathi and River Alaknanda meet at Dev Prayag, which is the sangam of these two rivers which then becomes holy River Ganga.

The purpose of the judgment would not be fault finding, but to find out what appropriate directions are required to be issued and what steps and measures are required to be taken for ensuring implementation thereof within law and projected financial limitations. Of course, lack of finances per se is not a ground for denying a relief to the applicant in relation to environment, particularly wholesomeness of water and more particularly in relation to whole river Ganga. It is an integral part of the Article 21 of the Constitution of India and is enforcement of a legal right within the contemplation of Section 14 of the NGT Act. Besides that, it is also a substantial question of environment. The fields where the Tribunal would be called upon to issue directions are in relation to handling, treatment and disposal of sewage, trade effluent and industrial effluent particularly with regard to maintaining the sanctity of the flood plain while ensuring that no wastes including concrete, construction and demolition waste is dumped on the flood plain or in the river and no activities which can be a source of direct or indirect pollution in the flood plain are allowed. Other aspect of the directions would have to relate to regulation and management of the steps taken. Fixation of accountability and responsibility has to be well defined. It is a settled rule of law that the Tribunal should not pass judgments which would be un-executable or the directions that we propose to pass are the

only possible alternative to remedy the persistent pollution on river Ganga and to have the authorities responsible statutorily or otherwise to perform such functions. We expect that the proposal that State Government has put up before the Tribunal in relation to establishment of bio-digesters/STPs/CETPs has been prepared upon due consideration and physical survey. The Ministry of Water Resources, Central Government and NMCG should consider and approve the financing of these projects under the heads of exclusive responsibility of the Central Government and/or projects shared between the Centre and the State Government in the ratio of 70:30 of the costs which are funded through other sources. We leave this matter in the domain of the financial controlling authority to enable them to have an effective and appropriate financing mode for completing the project under Segment-A of Phase-1. We are of the considered view that it will be quite appropriate to rejuvenate river Bhagirathi, Alaknanda and River Ganga in its entirety and to their pristine past, rather than to spread the expenditure on the entire river simultaneously without any noticeable results. At the first instance, it will be necessary and result oriented that pollution of river Ganga from industrial effluent and sewage is firstly controlled in the State of Uttarakhand, from where the river Ganga originates.

79. But before we travel into the realm and result of consultative deliberations, let us concisely note the dimensions and scope of the project that is to be carried out by the respective authorities and in the present case by the State of Uttarkahand. In order to state comprehensively the outline of the project that has to be carried out in

furtherance to this judgment and with an intention to avoid ambiguity in execution, we would like to record the fine components of the project which emerged during the final meeting held on 26th November, 2015. In the meeting the entire State of Uttarakhand was represented; particularly, the agencies vested with the tasks of preventing and controlling the pollution as well as execution of the projects of public utilities and in which useful contribution were made by all concerned. Information was also supplied by various stakeholders of the State Government, Pollution Control Board and Jal Nigam, etc. in the consultative meetings held on 4th December, 2015 and 7th December, 2015.

80. Mr. Bhajan Singh, MD of Pey Jal Nigam has informed that there are 143 drains/nallas in the entire Segment – A of Phase 1 falling into all three rivers, i.e., Bhagirathi, Alaknanda and Ganga. Out of them, 8 are the drains/nallas which are carrying natural water and are absolutely non-polluting. 48 drains out of them are already trapped and are being treated at different STPs. However, these STPs are incapable of maintaining the current standards for treated sewage discharge, as well as they cannot treat Faecal Coliform Bacteria.

81. According to the Officials of the State of Uttarakhand and its public authorities, there are 77 drains which are to be trapped and the sewage thereof is to be treated. These drains are presently joining river Ganga and discharging the entire sewage into the river. The total sewage generated, as measured, is 149.31 MLD. Out of this, nearly 77.5 MLD is being treated while the remaining is released into river without treatment. There are 7 existing STPs in the State of

Uttarakhand. Out of which three are located at Haridwar. Two STPs at Jagjeetpur, Haridwar are of the capacity of 18 MLD and 27 MLD respectively. While third one is at Sarai Haridwar which is 18 MLD. There is one STP of 6 MLD at Rishikesh, one STP of 3 MLD at Swarg Ashram and one STP of 2 MLD at Uttarkashi (which is under repair) and one STP of 3.5 MLD at Srinagar.

According to the Member Secretary of UKPCB and Managing Director of Pey Jal Nigam, the existing STPs are performing as per old standards of 30 BOD and TSS respectively. The technology used there cannot satisfy the prescribed standards of 10 BOD and TSS respectively as they were never designed to give that performance. Furthermore, they also cannot treat Coliform which is presently being discharged directly into the river. Obviously, the State Government has not directed the Pey Jal Nigam to take up upgrading of these established STPs. As far as Coliform standards are concerned, earlier they were 500 Most Probable Number (for short 'MPN') which was reduced to 230 MPN and now they are proposed to be brought as low as 100 MPN.

Further, according to these officers, one STP having capacity of 2 MLD at Uttarkashi was destroyed in the calamity of 2013 and is under major repairs. All the 3 drains which used to carry sewage to the STP are discharging the untreated sewage directly into river Ganga now.

The STP of 6 MLD at Rishikesh is oxidation based technology and is performing to the prescribed norms. However, according to the

Member Secretary of the UKPCB, the STP does not meet the values of old prescribed standards.

The 3 MLD STP at Swargashram also falls in the same category to the extent that it is stated to meet old standards and cannot satisfy the current prescribed standards. According to the UKPCB, they have not been able to inspect this plant. Thus, they cannot offer any comment. The 3.5 MLD STP at Srinagar is also performing only as per the old standards. According to the Member Secretary, this plant is receiving sewage much in excess of its capacity. Though, the dispute in relation to this STP is both on quantum and quality of sewage and discharged sewage water, however, it cannot be disputed that all these existing plants cannot meet the current declared standards, compliance to which is essential for cleaning river Ganga. Furthermore, these plants are not of sufficient capacity to cater to the need of even the growing projected population in the next five years.

82. It is stated that the STPs at Srinagar, Swargashram, and Sarai Village are sufficient to cater generated sewage while at other places, the generation of sewage is more than the capacity of the plants. None of the STPs can meet the current declared standards and in any case cannot treat Faecal Coliform Bacteria may be with the exception of the STP at Sarai.

83. The Member Secretary, CPCB had also stated that the existing STPs are incapable of performing to the current declared standards unless they were upgraded to ensure that the existing STPs should treat Faecal and other Coliform Bacteria. It is necessary to provide

ozonisation and filtration process. This suggestion was appreciated by all the officers present in the meeting. The CPCB has still to submit a report on working, operation, management and analysis of input and output of the plants.

It was further pointed out that after physical inspection all 4 Cities/Towns namely, Uttarkashi, Rishikesh, Haridwar and Laksar, had 14 drains in these towns, flow of which is 444 MLD and BOD is 42 Tonnes per day. We may notice that these figures are substantially at variance with the figures provided by the State of Uttarakhand. However, if the load of 2 drains i.e. Rambha River and Laksar drain which is 152 MLD and 196 MLD respectively then the load given by both would tell.

According to the State of Uttarakhand, Laksar drain joins river Ban Ganga which finally joins river Ganga at downstream of Shukratal in Uttar Pradesh. The load of this drain is 86 MLD. It carries sewage which gets diluted because of flow of the river as well as because of recharging of the ground water. This drain also carries industrial effluent discharged from SIIDCUL by certain industries which are Grossly or Seriously Polluting. It is submitted that the BOD of the Laksar drain is 10. According to the Managing Director, Pey Jal Nigam, this is not polluting the river. The Member Secretary of the UKPCB submits that this drain carries effluents from sugar industries in excess of the prescribed parameters while in distillery industries there is a zero liquid discharge. According to him, the Grossly and Seriously Polluting industries are discharging effluent as per

prescribed standards. However, river is still getting polluted by industrial discharge.

84. Member Secretary, CPCB submits that the claim of Pey Jal Nigam that drain is carrying BOD or the river is carrying BOD of 10 is inconsequential as the parameters for river value BOD would be 3 or less. The flow of the Laksar drain is 196 MLD with BOD load of 35.87 tonnes per day. The Coliform level of this drain is 9,20,000 MPN as opposed to the value of 300/500 MPN at the relevant time. This drain also carries industrial as well as domestic effluents from habitation living around the drain. In the statement of Member Secretary, the Rambha river has a flow of 152 MLD. There, the BOD load is 0.15 metric tonne per day.

85. The Managing Director, Pey Jal Nigam has submitted that the total sewage discharge of the towns on the bank of river Ganga is 149.327 MLD per day while total sewage discharge into river Ganga and its Tributaries in the entire State of Uttarakhand is 235.72 MLD. Total treating capacity of effluent is 77.5 MLD.

The Member Secretary of UKPCB submits that there has been no change in the status even as of 4th December, 2015 and only 9 hotels had applied. According to him, the State Administration and police force have to co-operate then alone the order can be implemented effectively. Let the meeting of the concerned authorities be held and steps taken accordingly under the aegis of Executive Committee.

The two STPs at Jagjeetpur, Haridwar subject to the inspection show the following value upon analysis:

a. BOD of 27 MLD Plant is 2 mg/l and Coliform is 41000 Most Probable Number (MPN).

b. BOD of 18 MLD Plant is 4 mg/l and Coliform is 24000 MPN (less than 500, which has now been reduced to 300).

c. Both these plants cannot treat Coliform.

If these STPs are operated with efficiency and with proper operation and maintenance, they can show the results even of the current value i.e., BOD and TSS (less than 10) and Coliform could be reduced to the current value by filtration or ozonisation. Thus, they would fully become functional and even satisfy the current standards.

86. It was stated during the course of the meeting that the BOD is not a critical issue in river Ganga, as well as, DO which is primarily contributable to high flowing velocity of the river permitting oxygen into the water. The UKPCB having analysed the river water at different locations has stated that the water quality at some places is fine while at other places, it is polluted. The total Faecal Coliform Bacteria even rises to the extent of 1,60,000 MPN/100 ML.

The points near Ajeetpur are very critical and high pollutant and even bacteria are found. However, little downstream the water regains its quality.

Besides these factors, high discharge of untreated sewage into the river and open defecation are also contributory to water pollution in river Ganga.

This is the status with regard to the existing STPs. According to various authorities of the State as well as the UKPCB, the proposal is to construct and establish 15 other STPs and 24 bio-digesters at specified sites in the stated towns/cities. They will cover all the remaining 138 drains which would be trapped and sewage thereof would be treated in accordance with law. This plan has already been submitted to the NMCG with a total cost of Rs. 502 Crores. This cost does not cover the laying of sewer line network in the cities/towns.

PROPOSED STPs

It is submitted by the State of Uttarakhand that 15 STPs and 24 Bio-digesters in 12 different Towns/Cities have been proposed. All these towns fall on banks of river Ganga or its tributaries. The tabulated information in this regard is as follows:

Project submitted/To submitted to NMCG (under Namami Gange)

S. No.	Name of Town	River	Estimated Cost Rs. In Lacs	Submitted to NMCG on	STP Location	Capacity MLD	Types of STP
1.	Kirtinagar	Alaknanda	307.88	04.08.2015	Near RCC bridge	0.025	Bio-digester
					Near Mandir	0.01	Bio-digester
					Total Capacity	0.035	
2.	Srikot Gangnali	Alaknanda	926.44	05.10.2015	Taulia Nala	0.050	Bio-digester
					Junior High School Nala	0.075	Bio-digester
					Irish School Nala	0.075	Bio-digester
					Dungryu Nala	0.075	Bio-digester
					Medical College Nala	0.05	Bio-digester
					Total Capacity	0.325	
3.	Rudraprayag	Alaknanda	841.49	05.10.2015	Near Anoop Negi School Nala	0.050	Bio-digester
					Near Rudra Complex Nala	0.075	Bio-digester
					Near Bus Stand Nala	0.050	Bio-digester
					Near State Bank Nala	0.050	Bio-digester
					Near Masjid Nala		Bio-digester
					Near Steel Bridge Nala	0.100	Bio-digester
					Near syndicate Bank Nala		Bio-digester
					Balni Nala	0.025	Bio-digester
					Total Capacity	0.35	
4.	Nandprayag	Alaknanda	378.27	05.10.2015	Water Tank Nala 1	0.025	Bio-digester
					Water Tank Nala 2	0.025	Bio-digester
					Forest Office	0.025	Bio-digester

					Nala		
					Total Capacity	0.075	
5.	Kanrprayag	Alaknanda	769.19	05.10.2015	Near Police Chowki	0.025	Bio-digester
					Near SBI ATM Saraswati Sishu Mandir Nala	0.075	Bio-digester
					Near Subash Nagar	0.025	Bio-digester
					Near Nayapul	0.025	Bio-digester
					Near ward no. 1 nala ward no. 3	0.075	Bio-digester
					Total Capacity	0225	
6.	Srinagar	Alaknanda	1951.8	04.08.2015	Near ITI	1.000 (To be upgraded to 2.50 MLD)	Limited land 500 Sqm availability which is not sufficient for bio-digester type STP. For estimation purpose budgetary offer for Advocate MBBR considered. Technology , which fulfills treated effluent norms in limited available land shall be choosen at the time of bidding.
					Total capacity		
7.	Gopeshwar	Alaknanda	5350.34	04.08.2015	Chamoli	0.79	Limited land available in Hilly Terrain Chamoli – 200 Sqm., Vivekanand colony 800 Sqm, Pokhari bend – 2000, Deen Dayal 2500 sqm which is not sufficient/ suitable for bio-digester type STP. For estimation purpose budgetary offer of Advocate MBBR considered. Technology, which fulfills Treated effluent Norms in Limited available land shall be choosen at the time of bidding
					Vivekanad Colony	1.07	
					Vivekanad Colony	1.07	
					Pokhari Bend	1.87	
					Deen Dayal Upadhyay Park	1.14	
					Near Old suspension Bridge	0.028	Packaged Bio-digester type
					Total Capacity	5.168	

Project submitted/To submitted to NMCG (under Namami Gange)

S. No.	Name of Town	River	Estimated Cost Rs. In Lacs	Estimated Cost NMCG on	STP Location	Capacity MLD	Type of STP
8.	Joshimath	Alaknanda	4147.29	04.08.2015	Marwari	3.40	Limited Land 500 Sqm availability in hilly terrain, which is not sufficient/suitable for bio-digester type STP. For estimation purpose budgetary offer for Advocate MBBR considered. Technology, which fulfills treated effluent norms in Limited available land shall be choosen at the time of bidding
					Pokhari	1.25	
					Total Capacity	4.65	
9.	Badrinath	Alaknanda	2190.34	05.10.2015	Bamani Gaon I	0.52	At Bamni Gaon 250 Sqm and at near Bamni Jhila Pul 200 Sqm land available in hilly terrain which is not sufficient/suitable for bio-digester type STP. For Estimation purpose budgetary offer to Advocate MBBR considered. Technology, which fulfills treated effluent norms in Limited available land shall be choosen at the time of bidding.
					Near Bamni Jhula Pul	2.57	
					Total Capacity	3.09	
10	Haridwar (BHEL)	Ganga	26609.00	05.10.2015	Jagjeetpur	10	Open technology/STP
					Shivalik Nagar	14	Open technology/STP
					Total Capacity	24	
11	Muni-Ki-Reti Dhalwala	Ganga	6813.18	05.10.2015	Chor Pani	5	Open technology/STP
					Dhalwala	4.32	Open technology/STP
					Bus stand	0.225	Open technology/STP
					Khara Sarot	0.15	Open technology/STP
					Ganga Resort Nala	0.15	Open technology/STP
					Total capacity	9.845	
12.	Rishikesh (Ganga)		100.00 (Tentative cost	To be submitted Dec- 2015	Lakkarghat	27	Open technology/STP
	Total	50285.00			Total capacity	47.763	MLD

Total bio-digester Types STP 2.04 MLD (24 Nos.)

1. STPs/ Biodigestors Proposed shall meet current applicable standards.
2. From bio-digester sludge Generation is appx. 0.014 KG(14 gm) per kid which is fit to be used as manure & shall be handled by maintenance agency

Once these projects are executed, there will be no drain in the entire Segment – A of Phase 1 which will discharge untreated or partially treated sewage into the river Ganga.

In addition to the above, BHEL should be directed to have its own STP of appropriate size and capacity and the 4 MLD which is coming from SIIDCUL industrial complex will be taken care of. There will be no discharge directly or indirectly into the river Ganga which will be beyond the prescribed parameters henceforth.

87. The 40 MLD STP at Jagjeetpur, Haridwar which has already been sanctioned would take care of entire excessive sewage to the existing STPs. The following are the STPs which are under construction or have been sanctioned. First is 3.5 MLD STP at Tapovan which is likely to be commissioned by 01st January, 2016. Sewer line/network has already been laid down and just a small portion at the connecting end is required to be completed. This project has been prepared to meet the demand for coming 15 years. The plant would meet current prescribed standards of BOD etc. However Coliform cannot be treated to current standard of 100 MPN but is within 500 MPN. The plant can be upgraded to bring the Coliform to the prescribed limits by introducing the ozonization and/or filtration.

We are also informed that STP of 1.63 MLD at Devprayag is to be constructed. One STP is of 1.4 MLD, of which 98 per cent sewer work is completed. Two bio-digesters of 2.15 MLD and 0.075 MLD are also to be constructed. This project is likely to be completed by 31st March, 2016.

In the case of 1.0 MLD STP at Gangotri, Sewer network is already complete and the Project would be completed by 31st July, 2016.

88. We are informed that there are 298 Seriously Polluting Industries in the entire State of Uttarakhand. None of such industries is located at River Bhagirathi or Alakhnanda. They are located at the flood plain of the river downstream Rishikesh. Out of these, one industry, IDPL is located at Rishikesh, while 61 industries are located at Haridwar, other industries are located in the industrial area or otherwise. The details of these industries are as follows:

"STATUS OF SPIs AND GPIs IN STATE OF UTTRAKHAND

S.No	**CCA STATUS**	**SPI= 298**	**GPIs-71**	**REST=227**
1.	GRANTED	116	38	78
2.	IN PROCESS	84	15	69
3.	NOT APPLIED	69	10	59
4.	REJECTED	19	04	15
5.	NOT IN OPERATION	10	04	06
	TOTAL	298	71	227

OUT OF ABOVE:

SHOW CAUSE ISSUED BY BOARD	34	11	23
CLOSURE ISSUED BY BOARD	20	03	17

Out of approximate 4600 industries in the State of Uttrakhand registered with State Pollution Control Board, 780 are without CCA of the Board at present."

As already noticed, there are 298 Seriously Polluting Industries out of which 71 are Grossly Polluting Industries. 38 out of them have

obtained consent of UKPCB and are stated to be discharging their effluents as per prescribed parameters. These industries have their own ETPs and/or anti-pollution devices. Applications of 4 industries have been rejected by the UKPCB. 15 applications of the Grossly Polluting Industries who have applied for obtaining consent of UKPCB are stated to be the pending for consideration with UKPCB. 10 Grossly Polluting Industries have not even applied for obtaining consent of the UKPCB and are operating. 4 other are grossly polluting industries and are in fact persistent defaulters who have failed to rectify the defects despite specific directions from the Board.

Out of the remaining 227 Seriously Polluting Industries, 59 have not even applied for obtaining consent of UKPCB in accordance with law. Applications of 15 industries have been rejected. 6 other industries are lying closed. 78 industries have been granted 'consent to operate', while applications of 69 industries for obtaining consent of UKPCB are pending.

Thus, it is expected of UKPCB to deal with the applications which are pending with it expeditiously as well as to ensure that the industries which are persistent defaulters, operating without consent of UKPCB and/or have not even applied for consent of UKPCB should be closed forthwith. UKPCB should also ensure that the Seriously Polluting Industries which are stated to be closed are actually lying closed and should not be permitted to operate without consent of UKPCB. It has also been brought to the notice that there are 4000 to 5000 industries belonging to 220 different categories that include the industries like tailoring, carpentery, jams & chatnies, embroidery and

flour mills, etc. which according to the Government do not require to obtain consent of UKPCB.

Another fact that has been placed before us is that construction of another CETP at SIIDCUL, Panth Nagar had started nearly 7 years back which has not yet been finalised so far. This serves industrial clusters of 400 industries which include Seriously Polluting Industries as well. We see no reason as to why this project should not have been completed and made operational. The Supervisory Committee, therefore, should submit a report within one month from the date of pronouncement of this judgment to the Principal Committee in regard to basic need and possibility of operationalization of this CETP, but it must be ensured that untreated industrial effluents from the SIDCUL, Panth Nagar does not enter river Ganga or its Tributaries at all.

89. There are two CETPs operating in the entire State. One is located at Sitarganj, Haridwar which upon inspection has been found to be inoperative and incapable of treating effluent to the prescribed standards and Show Cause Notice has been issued to it by UKPCB. It is submitted that the operator has run away. While the other CETP at SIIDCUL, Haridwar is treating the effluent but it has not been able to attain zero liquid discharge despite directions of UKPCB for the last 7 years. The CETP at Haridwar is catering to more than 370 industries. There are 415 industries in SIIDCUL Haridwar. The CETP at Sitarganj is catering to 40 industries.

The Member Secretary of CPCB submitted that they have examined the CETP at SIDCUL, Haridwar. The parameters thereof are as follows:

1. BOD at outlet of the CETP is 57 mg/l as against the prescribed value of 10.
2. The effluent from outlet of the Lagoon measures 22 mg/l as against the prescribed value of 10.

It is commonly stated on behalf of the State that as of now there is no plan of constructing new CETPs in any part of the State to treat industrial effluents. This would require a definite study on the part of the authorities concerned to examine if enough CETPs are in existence to ensure that the entire generated industrial effluent is treated and brought within the non-polluting limits.

Seriously Polluting Industries which are persistent defaulter are as follows:

1. Multiwal Pulp and papers.
2. Multiwal Boards.
3. Shri Shayam Pulp.
4. M/s. Shri Shayam Board

Total Grossly Polluting Industries in the State are 71, out of which 44 are at Ram Ganga Basin and 5 are falling in the river Ganga. Remaining are on the area falling at Sitarganj. Out of this, 71 total Grossly Polluting Industries and 38 industries have obtained consent. These industries have been found compliant and non-polluting and even the joint inspection team has conducted inspection of these industries and they have been permitted to operate.

Applications for 'consent to operate' of 4 such industries have been rejected and they are lying closed. Power supply to these units

is stated to have been disconnected. The name of these industries are as follows:-

1. M/S Sagar Paper Mills Pvt. Ltd., 5th Km., Manglore-Jhadreda Road, Vill. - Mundet, Roorkee, Distt, Haridwar (Uttarakhand)
2. M/S P.N. Papers (P) Ltd., Vill. Bhanga, Sitarganj Road, Jaspur, Distt. US Nagar (Uttarakhand)
3. M/S P.N. Papers (P) Ltd., (Duplex Paper Unit) Vill. Bhanga, Sitarganj Road, Jaspur, Distt. US Nagar (Uttarakhand)
4. M/S Tex Zippers, C-11,12-Dev Bhoomi Industrial Estate, Bantakheri, R oorkee, Distt. Haridwar, (Uttarakhand).

15 Grossly polluting industries which have applied for obtaining consent of the Board and their application are under process are as follows:

1. M/S B.R. Papers Pvt. Ltd., Vill-Lalpur, P.O.Kunda, Kashipur, Distt. -U.S.Nagar, (Uttarakhand)
2. M/S Multiwal Duplex Pvt. Ltd., Vill. Gangapur Gosain, Kundeshwari Road, Kashipur, Distt. US Nagar (Uttarakhand)
3. M/S Khatima Fibres Limited, UPSIDC Industrial Area, Khatima-260308 Distt. US Nagar, (Uttarakhand)
4. M/S Vishwakarma Paper & Boards Ltd., 4.5 Km., Ramnagar Road, Kashipur- 244713 Distt. US Nagar (Uttarakhand)
5. M/S Gangotri Paper Mills Pvt. Ltd., Vill. Narsankala, Jhabreda Road, Roorkee, Distt. Haridwar (Uttarakhand)
6. M/S J.M.J. Paper Products Pvt. Ltd., Khasra No. 171 & 172, Vill.: Khempur, Shikarpur, Tehsil : Roorkee, Distt. Haridwar, (Uttarakhand) – 247667

7. M/S K.M. Papers, Khasra No. 168, Kuriya-Kichha Road, Rudrapur, Distt. US Nagar - 263153 (Uttarakhand)
8. M/S Doiwala Sugar Com. Ltd., Doiwala - 248 140 Distt. – Dehradun, (Uttarakhand)
9. M/S R.B.N.S. Sugar Mills Ltd., Laksar – 247 663 Distt. – Haridwar, (Uttarakhand)
10. M/S Uttam Suagr Ltd., Vill Libberheri, Parganra– Manglore, Tehsil – Roorkee, Distt. – Haridwar, (Uttarakhand)
11. M/S RBNS Sugar Ltd. (Distillery Unit), Laksar, Distt. Haridwar (Uttarakhand)
12. M/S Hero Motocorp, Plot No 3, Sector-10, IIE, Ranipur, Distt. Haridwar, (Uttarakhand)
13. M/S Kranti Automobiles Ltd., Plot No 10-11, Sector-8A, IIE, Ranipur, Distt. Haridwar (Uttarakhand)
14. M/S ALPS Industries Ltd., Plot No 1A, IIE, Ranipur, Distt. Haridwar (Uttarakhand)
15. M/S Hanung Toys and Textiles, Lakeshwari Ind Area, Lakeshwari, Bahgwanpur, Roorkee, Distt Haridwar, (Uttarakhand)

10 industries which have not applied for obtaining the consent of the Board are as follows:-

1. M/S Multiwal Pulp & Boards Mills (P) Ltd., 9th Km. Stone, Bazpur Road, Kashipur -244713
2. M/S Shree Shyam Pulp & Paper Board Mills Ltd., (Waste Paper Unit), 5th Km. Stone, Moradabad Road, Kashipur – 244713, Distt. US Nagar, (Uttarakhand)

3. M/S Kishan Sahakari Chinni Mills Ltd., Gadarpur, Distt. - US Nagar, (Uttarakhand)
4. M/S Kichha Sugar Com. Ltd., Kichha - 244 714 Distt. - US Nagar, (Uttarakhand)
5. M/S The Kishan Sahakari Chinni Mills Ltd., Nadehi – 244 717, Distt. - US Nagar (Uttarakhand)
6. M/S Bazpur Cooperative Sugar Factory, (Sugar Unit), Bazpur (US Nagar), (Uttarakhand)
7. M/S The Kishan Sahakari Chinni Mills Ltd., Sitarganj, Distt. - US Nagar, (Uttarakhand)
8. M/S Lakshmi Sugar Mills Com. Ltd., Iqbalpur – 262 405 Distt. – Haridwar, (Uttarakhand)
9. M/S The Bazpur Co-operative Sugar Factory Ltd., (Distillery Unit), Bazpur, Distt. US Nagar, (Uttarakhand)
10. M/S Raj Rajeshwari technofeb Pvt Ltd., C14-15, Dev Bhoomi Industrial Estate, Bantakheri, Roorkee, Distt. Haridwar

As already stated the CETP at Sitarganj is lying closed and it is to be run by SIDCUL which is a Government undertaking.

90. There are 4600 industries of different kinds in all, in the State of Uttarakhand. Out of them, and as already noticed, there are only 298 Seriously Polluting Industries. There are large number of industries which has not even applied for obtaining the consent of UKPCB primarily for the reason that the State Government has issued a directive that 226 types of industries need not obtain consent of UKPCB though they have permission from the State Government to carry on the activities. The river Ram Ganga is seriously polluted

because of industrial effluent and sewage discharge into it as there is not even a single STP or CETP in the Kumaon Sector of Ram Ganga. It is stated that not even a single STP is proposed to be installed at Ram Ganga. In Kashipur, on the entire catchment of Ram Ganga, there are 27 pulp and paper industries which are seriously polluting and all of them have obtained consent of UKPCB to operate. To 3 industries, Show Cause Notice for closure has been issued. The CPCB has issued directive to these industries to change their technology. It is submitted that there has been considerable improvement in the quality of the effluent discharged by these industries. There is no CETP at Kashipur. The industries discharge their effluent through drains which ultimately meet River Ram Ganga.

Out of the 71 Grossly Polluting Industries only 3 industries are connected to the CETP SIDCUL, Haridwar and 1 to CETP Sitarganj. The 298 Seriously Polluting Industries including Pulp and paper, automobile and sugar industries, some of which have also been found to be persistently defaulting.

The Member Secretary, CPCB had with some vehemence suggested that, 60 per cent of the sewage was being directly discharged into the river without any treatment at CETP at SIIDCUL, Haridwar. It was suggested that reverse osmosis and recycling should be provided at the CETP and properly treated effluent should only be released into the River Sukhi.

COMMENTS ON MUNICIPAL SOLID WASTE

91. Shri D.S. Garbyal, Principal Secretary, Urban Development, State of Uttarakhand informed that there is 1500 Metric Tonnes of municipal solid waste generated in the State of Uttarakhand per day. Out of which, municipal solid waste generated at Haridwar is 200 Metric Tonnes and 30 Metric Tonne is generated at Rishikesh.

The waste to energy plant is proposed at Roorkee and site is earmarked, in fact it has even been allotted. However, as of now no clearances, including Environment Clearance, have been obtained. The Government does not propose to deposit any MSW at Chandi Ghat site as the site at Sarai has already been approved and the Government is taking effective steps in that direction. The main districts where the generation of waste is high and land is available for identification of MSW site are Dehradun, Haridwar and Rudraprayag. The Government is in the process of taking steps in that direction**.** Uttarkashi is also proposed to have its own site. However, all these steps are long term measures. For the present, the authorities should identify atleast temporary dumping sites in all the districts and major towns forming part of the Segment- A where the municipal solid waste should be dumped after segregation. The plastic or other such waste which can be used as a fuel should be sent to the proper plants.

In the meetings we were informed that the State of Uttarakhand has decided to develop the municipal solid wastes site and composting plant at Sarai in Haridwar as well as waste to energy plant at Roorkee. Presently, there are no proper dumping sites for municipal solid waste which confirm to the specifications of MSW Rules. The State proposes

the following sites at the city/towns noticed hereunder. The State has also placed on record the status in that regard. The tabulated statement filed by the State reads as under:

Urban Development Department, Govt. of Uttarakhand, Dehradun							
Honourable National Green Tribunal, New Delhi							
Sl. no.	Neighbouring Towns on Ganga & its Tributaries	Ganga River & its Tributaries	Population as per Census (2011)	Estimated Quantity of MSW generation (MTPD)	Type of Land	Land Requirement (Acre)	Dumping Ground & Land Transfer Status
1.	Haridwar	Ganga	231139	237.00	Revenue	50.00	Land Transferred, EIA approved, 20 Hectare at Sarai Village; Door to Door collection is being done in 13 wards by Currently dumped at Shyampur Kangri Road KRLIPL
2	Rishikesh	Ganga	70319	35.00	Revenue	1.00	Land Transferred, Khar Kahkari Mafi (10 Acre)
3	Joshimath	Alaknanda	16551	13.00	Revenue	1.00	Revenue Land measuring 0.3 Hec (Kamad Gaon) identified and transfer is under progress; Waste currently dumped at Singh Dhar (Forest Land);
4	Tehri Garhwal	Bhagirathi	24014	13.00	Revenue	10.00	Revenue land measuring 0.235 Hec identified (Budhogi), Process on for land transferring; Currently dumped at Moal Dhar (675m2)
5	Srinagar	Alaknanda	20091	11.00	Forest/Revenue	10.00	Land is being

							searched; Waste currently dumped near River Alaknanda basin
6	Muni-ki-Reti	Ganga	28636	10.00	Revenue	1.00	Revenue land measuring 0.10 Hec identified, Process on for land transferring; Currently dumped at Khara Srot Byepass
7	Chamoli-Gopeshwar	Alaknanda	21444	8.00	Forest	5.00	Land identified, yet to transfer (0.60 Hect) (Beri Chamoli) next land identified at Pokhri Bent-Gopeshwar and Kashiram Bent-Chamoli both measuring 0.20 Hec respectively; Currently dumped at Bedi Gaon, NADEP Pits
8	Karanprayag	Pindar	8297	8.00	Revenue	5.00	Land Transferred (0.10 hec) near Panchpulli; NADEP Pit and
9	Gauchar	Alaknanda	8864	6.00	Revenue	5.00	Currently dumped at Bhagri Gadera, near ITBP land 0.1012 Hec &
10	Rudraprayag	Mandakini	9307	6.00	Revenue	5.00	Land Transferred (0.80 Hec+0.61Hec) near Jhirmauli ward#9; Compactor & NADEP Pits are in use
11	Shivalik Nagar (Ranipur)	Ganga	17307	6.00	Revenue	1.00	Current Survey is for identifying of Forest/Reve

							nue Land
12	Uttarkashi	Bhagirathi	17480	5.00	Revenue	3.00	Current Survey is for identifying of Forest/Reve nue Land
13	Swargashara m	Ganga	4669	5.00	Being Surveyed	1.00	Current Survey is for identifying of Forest/Reve nue Land
14	Augustmuni	Alakanand a	6905	4.00	Revenue	2.00	Land identified at 0.140 Hec; Currently dumped at Pahari Dhal
15	Badrinath	Alaknanda	2307	4.00	Being Surveyed	2.00	Current Survey is for identifying of Forest/Reve nue Land
16	Chinyalisaur	Bhagirathi	8844	2.00	Revenue	2.00	Land identified, yet to transfer
17	Ukhimath	Mandakini	2920	1.00	Revenue	1.00	Land identified at Dangwadi; Currently dumped in ward No. 3&4 on revenue land
18	Nandprayag	Nandakini	1641	1.00	Revenue	1.00	Land Transferred, (0.10 Hect)
19	Devprayag	Bhagirathi	2152	1.00	Revenue	1.00	Land identified (1.601 Hec)at Beli bend, currently dumped near Bhah Bazar in safe pits
20	Gangotri	Bhagirathi	110	0.50	Forest	1.00	Current Survey is for identifying of Forest/Reve nue Land
21	Kedarnath	Mandakini	612	0.50	Being Surveyed	1.00	Current Survey is for identifying of Forest/Reve nue Land
22	Kirtinagar	Alaknanda	1517	0.50	Forest	1.00	Land identified (1.02 Hec) at Nuini khal; Waste currently dumped at Rampur near Pool
Total			505126	377.50		58.00	

We may notice that the above plan of the State does indicate concern of the State for collection and disposal of the municipal solid waste but they must not use or make any sites on the river bed or atleast within 500 meters from the flood plain of the river. We have already directed that the municipal solid waste dumping sites at Chandi ghat will not be used as dumping site as it is right in the heart of the river bed. The State can proceed with its planning in this regard but subject to the restrictions afore-stated.

92. We are also informed that in relation to construction and demolition waste in the State of Uttarakhand, neither identification of any dumping site has been done nor are there any Process Plants for re-utilisation of such waste. Presently it is being dumped into valley or the river bed as the case may be. The Government proposes to take effective steps in that regard and regulate collection and disposal of construction and demolition waste.

93. In relation to Bio Medical Waste (for short 'BMW'), there are nearly 708 hospitals in the State of Uttarakhand. However, there are only two private entrepreneurs dealing with BMW and hazardous medical waste. They are M/s Global Environmental Solution in Udham Singh Nagar and M/s Medical Pollution Committee in Roorkee. Both these entrepreneurs have consent of UKPCB but do not have Environmental Clearance. These two entrepreneurs are collecting BMW from Hospital (Government and private), nursing homes, Healthcare Centre, but, they are not sufficient to treat the entire BMW generated by the State and UKPCB will take steps to ensure

compliance of the Bio Medical Waste (Management and Handling) Rules, 1998 and proper disposal of BMW.

94. In the State of Uttarakhand, it is the Uttarakhand Pey Jal Nigam, which is responsible for construction of plant, laying down of Sewer line and allied function relating to sewage, collection and water supply. While Uttarakhand Jal Sanshthan is responsible for running and maintaining those plants. Both fall under the Secretary of Water Supply of State of Uttarakhand.

95. The works referred above shall be executed and directions under this judgment be complied with by the Executing Committee, which shall work under the direct supervision and control of the Supervisory Committee which in turn shall get all its financial, technical and ancillary matters cleared from the Principal Committee, which are stated hereinafter:

A. PRINCIPAL COMMITTEE:

(i). Secretary, Ministry of Water Resources.

(ii). Additional Secretary, Ministry of Environment & Forests.

(iii). Chief Secretary, State of Uttarakhand.

(iv). Member Secretary, Central Pollution Control Board.

(v). Financial Advisor, Ministry of Environment & Forests.

(vi). Prof. A.K. Gosain.

(vii). Prof. C.R. Babu.

B. SUPERVISORY COMMITTEE:

(i). Additional Chief Secretary/FRDC, Uttarakhand as the Chairperson

(ii). Secretary Medical

(iii). Secretary Urban Development

(iv). Secretary Water Resources

(v). Secretary Environment

(vi). Member Secretary of Pollution Control Board

(vii). Managing Director of Pey Jal Nigam, Uttarakhand

(viii). Managing Director of Jal Sansthan, Uttarakhand

(ix). Nominated Member of the CPCB

(x). Nominated Member of the Ministry of Water Resources and MoEF

C. EXECUTIVE COMMITTEE:

(i). Secretary, Urban Development, State of Uttarakhand.

(ii). Secretary, Environment, State of Uttarakhand.

(iii). Head of Department/Managing Director, Pey Jal Nigam, State of Uttarakhand.

(iv). Head of Department/Managing Director, Uttarakhand Jal Sansthan.

(v). Member Secretary, Uttarakhand Pollution Control Board.

96. Where they worship River Ganga, there they throw every waste without any sense of care for River Ganga which is not only a lifeline for this area but is a major source of livelihood. The floating population of lakhs and lakhs which comes to Haridwar adds to the revenue of the State at one hand and income of these people running their shops, ashrams, hotels and dharamshalas in that area on the other. Besides that, they owe a moral duty to rejuvenate River Ganga and they are bound by the Principles of Polluter Pays and the statutory obligations imposed upon them under Water Act and the Act

of 1986. We would direct the above authorities to give precedence to these projects and provide all financial assistance to achieve the object of cleaning river Ganga within the stipulated time as directed.

97. Two thousand five hundred twenty five kilometre long River Ganga, a river which is worshiped and is a life line to the five states through which it flows is one of the major components of economic development. Growth of the States is subjected to intolerable pollution contributed majorly by industrial untreated/treated effluent which is violative of the prescribed standards, sewage and dumping of various wastes like Municipal Solid Waste, Construction and demolition waste. Water of the holy river which was preserved by people for years together and used as a purifier to other waters (a fact which is scientifically established) is unable to provide direct source for drinking from the river. Concerned with this and keeping the sentiments of the country in mind, the Prime Minister of the country declared cleaning of the Ganga River as a national project. The Finance Minister provided Rs. 20,000 Crores budget for 5 years. Despite this, much needs to be done in this direction and concerted effort is required to be put to redeem Ganga of the high pollutants and the Centre, State and the citizens of the country owe a Constitutional obligation and duty to restore and rejuvenate river Ganga to its pristine past. Huge quantity of untreated sewage and industrial effluent is being indiscriminately dumped into river Ganga. In our considered view, it will be more than practically, economically as well as technically viable to bifurcate this project into different phases commencing from the point of origin of the holy river. As already

discussed above, we have dissected the entire project into 4 different phases. Phase-I- Gangotri to Border of the State of Uttar Pradesh (Divided into 2 segments, segment-A from Gangotri to beyond Haridwar towards the State of Uttar Pradesh and Segment-B from Haridwar to the Border of Kanpur), Phase-II of river Ganga from Border of Kanpur to Border of the State of Uttar Pradesh, Phase-III from Border of the State of Uttar Pradesh till Border of Jharkand and Phase-IV from Border of Jharkhand to Border of West Bengal (Bay of Bengal). In this judgment, we are dealing only with Segment A of Phase-I.

Before we enter into the realm of the scope and ambit of the directions that we are called upon to issue in the facts and circumstances of the present case it would be appropriate to notice the stand which MoEF has taken in regard to the area covered under Segment-A of this judgment. MoEF had filed an affidavit as late as 5th December, 2014 before the Hon'ble Supreme Court of India in I.A. 6 of 2013 in Civil Appeal no. 6736 of 2013 titled as *Alakhnand Hydro Power Project Company Ltd v. Anuj Joshi & Ors.* The averments made in this affidavit primarily relate to the construction of the Hydro Project but significant is the aspect of this affidavit which deals with the fragile and eco-sensitive nature of this area. In the Affidavit it was stated that after the formation of the NGRBA in consideration of the 'Avrial Dhara' of Ganga in terms of her cultural significance and in relation to the eco-sensitivity of the Ganga Himalyan Basin, the authorities took cognisance of this issue and intended to reach a solution for conservation and protection of the river Ganga. In the

meeting held on 5th October, 2009 under the Chairmanship of the Prime Minister it was decided that MoEF and Ministry of Power would study the issue of hydro projects located in the upper region of Bhagirathi. Finally it was decided by the Government of India through its letter dated 31st August, 2010 to completely scrap these projects in Gangotri Valley in the second meeting of NGBRA held on 1st November, 2010. It was finally approved and it was recommended to declare the area from Gaumukh to Utarakashi as eco-sensitive zone. The Catchment all along 100 km stretch of Bhagirathi was notified as eco-sensitive zone vide Notification dated 18th December, 2012 under the Act of 1986. Of course, implementation of these guidelines is still pending with the State Government. WII Report stated that out of 39 proposed projects, 24 projects have been found to be significantly infructuous. The biodiversity in 2 sub basins and the combined foot print of all 24 projects have been considered for their potential to impact areas with biodiversity values, both aquatic and terrestrial which are critically important habitats of rare and threatened species of Flora and Fauna. The environmental flow of Ganga and its tributaries was affected and in turn would have extensive implication of other needs of the society and the river itself. Referring to the disaster of June, 2013 and the analysis taken out by metrological department it is also stated that the Notification mentioned that anthropogenic activities has also lead to massive over exploitation of the local environment, thereby, losing the top soil and making the region susceptible to landslides and flash floods. The rampant construction activities taking place in the Ganga Basin, weakened the delicate balance of the Himalaya's ecology leading to such events. This

disaster in the Ganga Basin of Uttarakhand Himalayas has forced re-thinking of the aspect and understanding the developmental activities in the fragile Himalayas. Eco sensitivity of Gangotri valley did not permit greater construction of such projects. It also seems logical and essential to demarcate zones in the higher Himalayan region that are naturally unstable. It was felt necessary that there should be uninterrupted flow of Ganges and continuous thread of the stream should not be interfered with.

In this background, the MoEF made various recommendations, primarily on hydro projects under construction or to be newly constructed but subsequently, it also recommended the needs to establish and identify such locations/areas' in the State which need to be designated as 'no-go areas' with respect to construction of Hydroelectric Projects taking into account the fragile biodiversity and tectonic status of the Himalayas. Dealing with the aspect of reconsidering the matter in relation to these projects, MoEF in this Affidavit stated that in view of the expert observations, recommendations and the disaster that had taken place, which renders the Bhagirathi and Alakhnanda Basin more fragile, the MoEF found no reason to reconsider its the opinion and recommendation.

These observations though are primarily in relation to hydro power projects but the two significantly relevant aspects that emerge and require consideration of the Tribunal in the present case are that the entire belt of 100 kms is a eco sensitive area and there is a need for complete and comprehensive demarcation of the no-go areas. 'No-go areas' is a term of absolute connotation as in the area so declared

there should be no activity of development or otherwise of any nature that is not permitted in such eco-sensitive and fragile areas. It would be opposed to the Principal of Sustainable Development and would lead to serious/adverse impact on environment, ecology and biodiversity. Thus, the Tribunal while examining the ambit and scope of the directions to be issued has to keep in mind that the directions are comprehensive and squarely protect the environment, ecology and biodiversity with a particular reference to the rivers. The pollution of the rivers is not only caused by construction activities or development activities per se. There are other contributories of pollution but all are human centric. They would be Municipal Solid Waste, dumping of other waste including Construction and Demolition waste, indiscriminate discharge of sewage into the river, human defecation on the river banks and in the colonies adjacent thereto and finally discharge of trade and industrial effluent. In other words, it is not only expected but is imperative for the Tribunal to deal with all these aspects of pollution if river Ganga is to be cleaned, protected and restored to its original pristine form.

The Tribunal must take notice of the rights and obligations of the stakeholders in the field of environment. Under the Indian Constitution there is a constitutional obligation of the State authorities to provide decent and clean environment to its citizens by itself or through its agencies, it is also the obligation placed upon the State and citizens to protect the rivers and water bodies in terms of Directive Principles and constitutional obligations under provisions of Article 48 A and 51 A(g) of the Constitution respectively.

98. The directions have to be so comprehensive as to provide wide spectrum solution to this substantial environmental issue. Directions covering one of the pollutants would not serve ends of environmental justice. For proper dispensation of justice in the present case and within the ambit and scope of Section 14 of the NGT Act read in conjunction with the order of the Hon'ble Supreme Court of India dated 29th October, 2014, we issue the following directions:

I. The directions in this Judgement would strictly relate to all contributories to pollution of river Ganga in Segment 'A' of Phase I, i.e., Gaumukh to Border of District Haridwar downstream in the State of Uttarakhand.

II. **DIRECTIONS IN REGARD TO COLLECTION AND DISPOSAL OF SEWAGE**:

A. The Executing Committee as stated **in para 95** shall be directly and personally responsible for execution of works specifically stated and compliance of the directions enunciated in this judgment.

B. No work in relation to sewer line network shall be carried out by the State of Uttarakhand and/or any public authority/ body except at Gangori where the sewer line network has been completed and at Gopeshwar where 96% work has already been completed and both are to be connected to the STP. If any work of this nature is to be carried on by the State of Uttarakhand or any of its Instrumentalities or Public Authorities or Bodies, it shall submit the proposal to the Principal Committee. The comments of the Principal

Committee would be placed before the Tribunal for final orders. We also direct that no fresh works will be undertaken by the State or Public Authorities without approval of the Tribunal in relation to collection, treatment and disposal of the sewage except the works specifically provided in this judgment.

C. Every effort would be made to provide a common Bio-Digester for hamlets.

D. Establishment of 40 MLD Sewage Treatment Plant at Jagjeetpur, Haridwar shall be completed within 6 months from today.

E. All the concerned public authorities and the district administration would be responsible for proper operation and maintenance of this new Plant as well as both the existing STPs having a capacity of 45 MLD (18+27). The new STP being constructed now shall ensure that they are capable of treating Faecal Coliform Bacteria.

F. All the established and to be established STPs, shall ensure that the treated sewage released from these STPs is adhering to the prescribed parameters, i.e., BOD and TSS amongst others, should be below 10 mg per litre which is the current standard declared by the CPCB.

G. The Tribunal is not passing any direction in relation to 9 Hydro-projects which are operational and 11 which are stated to be under construction, as we are informed that the matter is pending before the Hon'ble Supreme Court. However, we would specify here that all hydro-projects which are in

operation or under construction would be directed to provide their own STP's and make them operational within 3 months from the date of pronouncement of this judgment, upon which, the joint inspection team shall inspect such STPs, analyse their discharge and if found to be beyond the prescribed parameters, the UKPCB shall take punitive action against the head of the department of such projects and persons responsible for operation and maintenance of such plants. This would be in addition to the action that the Tribunal may direct for violation of its directions. Even this direction is subject to the orders that may be passed by the Hon'ble Supreme Court of India in the matter relating to Hydro projects. The Project Proponents would not be entitled to claim any advantage of this order.

H. No drain carrying sewage in any of the cities/towns forming part of Segment A of Phase-I would be permitted to join river Ganga or its tributaries. All the drains shall be tapped and the sewage from these drains would be brought to the common bio-digesters/STPs as the case may be. We prohibit discharge of any sewage or any untreated effluent through drains or otherwise into the River Ganga or its tributaries in the entire Segment-A of Phase-I.

I. Wherever there is a town which is closer to the industrial clusters, it will be ensured that the treated sewage water from the town is recycled for industrial purposes or other permissible purposes. However on other places it should be used for agriculture and horticulture purposes and other

permissible purposes. Every effort should be made not to discharge more than 25 per cent of the total release from all the STPs into river Ganga.

J. Proper management scheme or protocol shall be prepared and notified by the State and all its agencies to ensure that the sewerage or sewage effluent collected in common septic tanks or bio-digesters, is emptied regularly and taken to the STP for appropriate treatment and its consequential release. The manure collected in the bio-digester shall be distributed free of cost to the farmers around the area and for this purpose the State administration shall ensure effective participation of the respective gram panchyats.

K. There shall be a team constituted of senior officers from Uttarakhand Pey Jal Nigam, UKPCB and representatives of the Government from Department of Urban Development. They shall submit quarterly reports to the Tribunal in regard to operation and management of the STPs and bio-digesters and in regard to the implementation of the action plan.

L. Every officer and head of the department of the public authority or body responsible for maintaining and operating the STPs/Bio digesters would be personally responsible for default, if the released sewage/effluent is found to be excessive to the prescribed parameters.

M. The Executing Committee appointed under this judgment shall be responsible for completion of up gradation of the six existing STPs and would ensure that the projects are completed and operationalised within the time noticed in the

Judgement. Further, this Committee would be responsible for construction and establishment of another 15 STPs and 24 Bio-digesters of requisite capacity at the locations and within the time specified in **para 86** of the judgment. This Committee shall work under the supervision and control of the Principal Committee. The total project is valued at Rs. 502 crores, funds for which would be provided through the Principal Committee in the proportion so determined. The State of Uttarakhand, its instrumentalities, public bodies, Uttarakhand Pey Jal Nigam, Uttarakhand Jal Sansthan and all other local bodies shall fully co-operate and extend full support to the Executing Committee to ensure that the works are executed expeditiously and within the time specified. The complete Action Plan along with the copies of the DPRs already submitted to NMGC/Ministry of Water Resources would be present before the principal committee and then for approval before the NMGC for sanction of fund within 1 month from today.

N. The Executing Committee with the help of the Uttarakhand Pey Jal Nigam, Uttarakhand Jal Sansthan and all other public authorities would submit a comprehensive report in relation to up-gradation of technology or otherwise of the existing 7 STPs which are not performing to the prescribed standards. It will be ensured that the technology of filtration and ozonisation is used to ensure that Faecal Coliform Bacteria does not enter into water bodies in excess of the prescribed parameters. The project so submitted shall be dealt with by the Principal

Committee with utmost expeditiousness and shall be executed through the proper agencies.

III. DIRECTIONS IN RELATION TO INDUSTRIES

A. All the Seriously Polluting Industries which are operating without consent of the UKPCB and/or who have failed to comply with the directions issued by the UKPCB shall be closed down forthwith.

B. There are 4 seriously polluting industries located at Sitarganj which are persistent defaulters as stated **in para 89 of** this judgment. We direct that such industries shall be closed forthwith. After remedial and rectification steps are taken by these industries and they install anti-pollution devices, they would be at liberty to approach UKPCB for grant of 'consent to operate'. If they approach UKPCB for obtaining 'consent to operate', such applications would be decided by the Board expeditiously. The consent granted would become operative subject to the orders of the Tribunal.

C. The State Government and District Administration shall ensure that all the Seriously Polluting Industries in relation to which UKPCB has already passed orders of closure shall also be closed forthwith.

D. In the event, any of the industries are found to be defaulting, their premises shall be sealed and electricity and water connection shall be disconnected forthwith.

E. The industries which are in the process of complying with the directions issued by UKPCB and/or are installing anti-pollution devices like ETPs or other mechanism to ensure that

the trade effluent discharged by them on land, drains, water bodies or any other places is strictly complying with the prescribed parameters, would not be closed and would be permitted to do the needful at the earliest and in any case within three months.

F. Some of the Grossly Polluting Industries (15 in number) have applied for obtaining 'consent to operate' from UKPCB. The applications which are pending with UKPCB shall be disposed of in accordance with law not later than six weeks from passing of this judgment. Names of these industries have been given **in para 89 of** this judgment.

F.1. The Grossly Polluting Industries (10 in number) which have not obtained/or applied for obtaining the consent of the UKPCB shall be ordered to be closed forthwith. They would also be permitted to carryout remedial measures and install anti pollution devices, whereupon they could apply to UKPCB for obtaining 'consent to operate'. If upon Joint Inspection, consent is granted, the industry would be permitted to operate subject to orders of the Tribunal (**recorded in para 89**).

G. The Industries which are operating without consent of UKPCB and are not seriously or grossly polluting as stated in the Judgement would be at liberty to apply for obtaining 'consent to operate' from UKPCB. If such applications are filed within one month from today, then UKPCB will deal with such applications with utmost expeditiousness. However, none of these industries would carry out their operations without specific orders of the Tribunal.

H. All industries located anywhere in any part of Segment-A of Part-I would obtain consent of the Board irrespective of nature of their business and quantity and quality of discharge of their trade effluent.

I. In the case of grossly and seriously polluting industries, UKPCB shall grant consent only after the industries have been subjected to a joint inspection by the joint inspection team consisting of representatives of CPCB, UKPCB, Directorate of Industries, State of Uttarakhand and nominated a lecturer from IIT Roorkee.

J. The four industries to whom 'consent to operate' has been declined by UKPCB as stated at serial no. 1 to 4 under **para 89 of** this judgment shall be closed forthwith and would not be permitted to operate till further orders of the Tribunal. These industries shall be inspected and report should be submitted to the Tribunal by UKPCB on the aspect that they are actually lying closed. They would be at liberty to take remedial measures and approach UKPCB for obtaining 'consent to operate' afresh.

K. The 10 industries whose names have been given **in para 89 of** the judgment and which have not even applied for obtaining 'consent to operate' from UKPCB shall be liable to be shutdown forthwith.

L. The joint inspection team shall collect effluent samples and analyse them and recommend grant of consent, only if their parameters are found to be within the prescribed limit. They would be permitted to operate subject to the orders of the

Tribunal. All industries which are not seriously polluting but are operating without the consent of UKPCB or have violated the conditions imposed by UKPCB in the order granting them 'consent to operate' shall be served with a Notice/Show Cause Notice requiring them to comply with the requirements of environmental protection and obtain the consent of UKPCB. If such industries become compliant and non-polluting, they would be permitted to operate. In the event they fail to comply with the same within 2 months of the issuance of the Show Cause Notice, which should be issued within 15 days from the date of passing of this judgment, such industries would also be liable to be closed and UKPCB would take appropriate action in accordance with law against such units.

M. The two existing CETPs, one at Sitarganj and other at SIDCUL, Haridwar are a matter of serious concern. While the first is not operational, the second does not discharge effluents as per prescribed norms. The CETP at SIDCUL, Haridwar was directed to become zero liquid discharge unit which it has failed despite directions.

Thus, we direct that the Uttarakhand Industrial Development Corporation should ensure that the CETP at Sitarganj is serviced and made operational within one month from today. It should be ensured that the effluent that it discharges meets the current prescribed standards. The said Corporation can do the work itself or operate it through some agency but it shall be the exclusive responsibility of the Corporation to ensure proper operationalisation and management of the CETP. The

CETP at SIDCUL, Haridwar should become a zero liquid discharge unit. As this process is likely to take some time, we direct the government and operating agencies to ensure that the effluent discharge from this CETP is definitely of tertiary levels and should be recycled for the benefit of the industries which are discharging their trade effluent to this very CETP.

We further direct that in the event the CETP is unable to attain zero liquid discharge, the authorities and the Society shall install an independent ETP of 4 MLD at SIDCUL, Haridwar to ensure that no pollutants enter river Ganga from that CETP.

N. The joint inspection team shall also conduct a survey and submit a report to the Tribunal stating whether the established CETPs are capable of treating the effluent discharged in terms of quantum and quality from the respective industrial cluster to which they are catering.

O. The State Government and all concerned authorities and public bodies would ensure that the industries located under any industrial cluster, particularly at SIDCUL and Sitarganj, should be connected to the CETP through the existing common conveyor belt. If any industry does not comply with this direction, the UKPCB and the concerned maintaining/operating authority should serve notice of show cause upon that industry as to why it should not be directed to be closed in case of the default, where-after, it shall pass appropriate order which shall be submitted before the

Tribunal and the same would be subject to the orders of the Tribunal.

O. (1). The Supervisory Committee, therefore, should submit a report within one month from the date of pronouncement of this judgment to the Principal Committee in regard to basic need and possibility of operationalisation of this CETP. It must be ensured that industrial untreated effluents from the SIDCUL, Pant Nagar does not enter river Ganga or its Tributaries at all.

O. (2). The 19 Seriously Polluting Industries (SPIs) and 4 Grossly Polluting Industries (GPIs) industries whose application for obtaining consent of UKPCB have been rejected and they are still operating, as stated **in para 89** of the judgment are directed to be closed forthwith. Upon taking remedial measures and installing anti-pollution devices, they would be entitled to apply for obtaining consent of UKPCB afresh. However, they would be permitted to operate only after orders of the Tribunal.

P. The effluents discharged from the CETP are presently stored in the lagoon from where it is being discharged into river Sukhi. Steps will be taken by the agency operating CETP as well as all concerned authorities to channelize effluents into lagoon through the reverse osmosis system and recycle the same so that least effluent is discharged into river Sukhi. The Executing Committee shall examine whether it is possible to utilize In-Situ Bioremediation for treatment of sewage technology in place of installing STP/Bio-digesters. This

technology is stated to be economically more viable and practically efficient for smaller plants. They would make their recommendations to the Principal Committee within the time directed.

Q. BHEL is hereby directed to install its own STP of 11 MLD capacity by January 2016 as it is stated to be under finalisation. The STP so installed, should preferably achieve zero liquid discharge. The treated sewage water should be used and recycled for agriculture, horticulture or its own industrial purpose. If it discharges any treated sewage water, it should be strictly of the current prescribed values, i.e., 10 mg per litre BOD and 10 mg per litre TSS and should be capable of fully treating Coliform, Faecal or otherwise, as per prescribed norms.

R. As noticed in the Judgment, there are 226 kinds of industries (total being more than 4000) which are operating without the consent of UKPCB. They claim to have exemption granted to them by the Industries Department of the State. The Department of Industries has no jurisdiction to exempt the industries from operation of the Water Act and Air Act. (refer *Gurdev Singh v. Punjab Pollution Control Board, Punjab Pollution Control Board Zonal Office, Sohan Singh and The Punjab State Electricity Board* 2013 ALL (I) NGT REPORTER (2) (DELHI) 1)

All these industries except the ones which have a dry process and which do not discharge any trade effluent either directly or indirectly into river, water bodies or drains would be

required to move an application, complete in all respects, to take consent of UKPCB within one month from the date of pronouncement of this Judgment. Such application, if filed would be dealt with by the Board and consent granted or refused to the units within 3 months thereafter. The units which are refused consent shall be closed and would not be permitted to carry on their industrial operations.

Keeping in view that there is a likelihood of substantial increase in the work load of UKPCB, we would require the State Government to consider providing more posts in the hierarchy of UKPCB to ensure proper implementation of the Environmental Laws, particularly the Acts specified in Schedule 1 of the NGT Act.

IV. DIRECTIONS IN RELATION TO HOTELS/DHARAMSHALAS/ ASHRAMS

A. All the Hotels which have failed to establish their own STPs, and have failed to obtain the consent of UKPCB despite persuasion and public notice dated 15th September 2015 and are releasing their domestic waste and sewage into river Ganga or its tributaries and/or the drains whether or not leading to the STPs in Rishikesh or Haridwar, shall be directed to be shut down forthwith.

B. The hotels which have applied for obtaining the consent of UKPCB in response to the above mentioned public notice shall be granted and/or refused consent within 1 month from the date of pronouncement of this Judgment without default.

C. Similarly, ashrams and Dhramshalas which are discharging their sewage or domestic effluent directly into the River Ganga or its tributaries, whether or not they have their STP, would be directed to stop such discharge within 1 month from the date of issuance of the notice in this regard. Drains which directly bring sewage to the STP already established or to be established as afore-directed shall be connected to the common conveyor belt.

D. The ashrams/dharamshalas which do not have their own STP would be required to establish such STP within 3 months from the date of pronouncement of this Judgement. They will not, in any event, be permitted to release their discharged sewage or domestic waste into river Ganga directly. They must discharge such effluent into drains alone that bring such effluent to the STP.

E. If any hotel, dharamshala or ashram violates these directions it shall be liable to pay environmental compensation for causing pollution of River Ganga at the rate of Rs. 5000 per day. The joint inspection team referred above shall conduct inspection of the hotel, ashram and dharamshala and if any of them is found to be violating these directions and/or whose STPs/ETPs are either not functioning effectively or not releasing effluent within the prescribed limits then the inspection team shall submit the report to the Tribunal quarterly.

V. DIRECTIONS IN RELATION TO MUNICIPAL SOLID WASTE

A. There shall be complete prohibition on use of plastic, i.e., plastic carry bags/plastic plates, glasses, spoons, packages and allied items in all the cities/towns falling on the river Ganga and/or its tributaries in Segment 'A' of Phase-1. Under no circumstances, plastic carry bags of any thickness whatsoever would be permitted. The procurement, storing and sale of such plastic bags, plates, glasses, spoons, etc. are hereby prohibited.

B. These restrictions would become operative w.e.f. 1st February, 2016. We further make it clear that the State of Uttarakhand in co-ordination with Ministry of Textile and other agencies would provide bio-degradable materials including jute bags, paper glasses, tumbler and such other items, use of which would be permitted from the specified date in the entire Segment 'A' of Phase-1.

   We direct the Ministry of Textile within 15 days from today to provide the complete alternative or possible alternatives to the State of Uttarakhand in this regard.

C. All the directions contained in relation to MSW in our order dated 2nd July, 2015 in Original Application No. 10 of 2015 shall remain in force. The said order which we have reproduced **in para 49 of the Judgement** shall be read as an integral part of this judgment.

D. The MSW dumping site at Chandi ghat which is located on the flood plain shall not be used any longer for dumping MSW. We hereby prohibit the State Government and all the Local

Authorities at Haridwar from dumping any waste henceforth at the Chandi ghat site.

We direct the State Government to develop and construct MSW dumping site at Sarai Village, Haridwar in terms of the stand taken by the State before the Tribunal in the case of *Gram Sarai Samiti v. MoEF & Ors.*, Appeal no. 106 of 2015. From the records submitted before us in that case, it is clear that the Environmental Clearance for the site has already been granted. Once this site is ready, the entire MSW deposit at Chandi ghat site shall be segregated, removed and deposited at the new site. Transportation and segregation of the MSW at this site shall be strictly in accordance with the conditions of the Environmental Clearance and the Municipal Solid Wastes (Handling & Management) Rules, 2000. The authorities concerned shall formulate a scheme and methodology for door to door collection from the bins in the respective colonies, segregation at the collection point, its transportation in covered vehicles and its disposal at the site and the Plant in accordance with the MSW Rules.

E. We hereby direct the Supervisory Committee constituted under this judgment to submit a report to the Tribunal for construction of MSW dumping sites and plants which would ensure that the generated waste from the entire State can be effectively collected and disposed of in accordance with MSW Rules. The report should be submitted within one month from today. Preferably the scheme should be District based and with the adequate mechanism for transportation of MSW.

F. There shall be prohibition on throwing of any municipal waste, construction and demolition and other wastes into river Ganga and its tributaries and even on banks thereof. Any person/body, if found violating this condition, shall be liable to pay environmental compensation at the rate of Rs. 5000 per event. The authorities concerned shall bring it to the notice of all concerned, widely publicise the same and place sign boards at the relevant sites.

G. We further direct the State Government, and its instrumentalities and all public authorities to ensure that public facilities like toilets are provided on the appropriate places in colonies abutting river Ganga all along Segment-A of Phase-I. The toilets should be connected and linked to bio-digesters or STPs constructed for that purpose alone. The State Government, public authorities, Nigam and Municipalities shall prepare an action plan in relation to providing bio-toilets in such number which is commensurate to the floating population coming to Haridwar and different parts of Uttarakhand as pilgrims or in the festive season. The bio-toilets so provided will be cleaned and the sewerage so collected shall be transported to the STPs establish for this purpose alone for treatment and removal of coliform as per prescribed standards.

H. During the interregnum, the local authorities shall ensure proper system in place for cleaning of these toilets and bringing the sewage and other waste from these toilets to the existing STPs for treatment. This direction is necessitated to

ensure that there is no human defecation on the flood plain or areas nearby.

I. Uttarkashi is also to have its own site for STP. However all these steps are long term measures. For the present, the authorities should identify atleast temporary dumping sites in all the districts and major towns forming part of the Segment-A where the MSW should be dumped after segregation. The State Government, all public authorities, Nigams and Municipalities, etc. would ensure that even such temporary sites should not be within 500 meters distance from the end of the flood plain of the river Ganga or its Tributaries. The plastic or such other waste which can be used as a fuel should be sent to the proper plants.

VI. DIRECTIONS IN RELATION TO FLOOD PLAINS

A. The State of Uttarakhand shall prepare and submit to the MoEF, Tourism-cum-Plain map, Flood Plain map and zoning of flood plain shall be in accordance with the Notification dated 18th December, 2012 issued by the Ministry and the Act of 2012 afore-referred positively within 3 months from the date of pronouncement of this judgment. Upon submission, MoEF shall approve such plans with amendments or otherwise within 1 month thereafter and then it shall be notified and brought in the public domain.

B. Keeping in view the Notification of the MoEF, intent of the Act of 2012, orders passed by the Tribunal in other matters, High Courts and the Hon'ble Supreme Court in various cases, we

would order and direct that as an interim measure at least 100m from middle of the river would be treated and dealt with as 'Eco sensitive and prohibited zone'. No activity whether permanent or temporary in nature will be permitted to be carried on in this zone including camping. The only exception would be the points for picking up and dropping the guests who are doing rafting in river Ganga.

The area beyond 100 meters and less than 300 meters would be treated as regulatory zone in the hilly terrain, for which the State will comply with the above directions.

The area upto 200 meters shall be the prohibited area in the plain terrain and more than 200 meters and less than 500 meters would be treated as regulatory zone.

Area/river bank/flood plain 2 kms. upstream to Rishikesh and till Border of the State of Uttarakhand towards Uttar Pradesh in river Ganges would be treated as plain terrain while upstream the above hilly terrain.

The State Government while complying with its obligations under the Act of 2012 and this judgment in this regard would keep in mind 1 in 25 years flood to be the criteria for declaring flood plain and the regulated activities which would be permitted in that area. This is the guiding factor which has complete scientific and documented studies to impose such limitations.

C. Strict supervision in that regard shall be enforced by the State agencies responsible for that purpose, primarily by the Secretary of Irrigation Department, State of Uttarakhand and

the Chief Conservator of Forests, Uttarakhand. The policy so framed, with the restrictions as contemplated in the Notification of the MoEF and the Act of 2012 formulated by Government of Uttarakhand shall be placed before the Tribunal after expiry of the above stated period.

D. Any activity or construction in the regulated area afore-referred where the gradient is beyond 35^0 should be further checked and preferably no activity should be permitted, to prevent ecological damage and land sliding in that area. All precautionary steps should be taken in that behalf.

E. In this prohibited area, no public authority or State department, including the panchayat would grant permission for any activity whatsoever, including eco-tourism except to the extent of points for pick up and dropping for river rafting.

VII. <u>DIRECTIONS IN RELATION TO MINING ON THE RIVER BED</u>.

A. The river bed mining shall be carried on in a highly regulated manner and under strict supervision of the authorities concerned.

B. No mechanised river bed mining would be permitted. No JCBs would be permitted to operate in the river bed.

C. No suction of the minerals from the river and the river bed would be permitted by the mechanical process like suction pumps etc.

D. The regulated mining would include the seasons during which such mining is permitted and which shall be strictly adhered to.

VIII. DIRECTIONS IN RELATION TO BIO MEDICAL WASTE

A. In absolute terms there should be no throwing of any medical, bio medical or any other waste, into the river, on the river banks and anywhere in the areas forming part of Segment-A of Phase-I. If any present hospital is found throwing such waste anywhere on land, water bodies or other places, UKPCB and the Municipal Authorities would re-cover Rs. 20,000 per violation from that person, Hospital or authorities on account of Environmental Compensation in terms of Section 15 of the NGT Act and on the basis of Polluter Pays Principle. These amounts would be deposited with the State Government and should be utilised for the project under this judgment.

B. The two entrepreneurs specified **in para 93** of this judgment which are dealing with collection, treatment and disposal of bio medical and hazardous medical waste will obtain Environmental Clearance within 3 months from the date of pronouncement of this judgement. Such application should be filed within 2 weeks from today and dealt with by the concerned authorities expeditiously. We direct the State Government to construct and establish by itself through annuity/PP mode or any other method that is suitable in the opinion of the Central Government at least two more bio-medical waste and hazardous waste plants of such capacity that would meet the requirement of 708 hospitals in the State of Uttarakhand. These plants would be established at safe sites and away from beyond 1000 meters from the river/flood

plain of the river Ganga. These plants would be established and made operative in accordance with law.

C. All the 708 Hospitals would be served with a notice by UKPCB and the department of health of the State requiring them to ensure proper collection, segregation and disposal of such waste in accordance with the Bio Medical Waste (Management and Handling) Rules, 1998. In the event the hospitals fail to comply with the directions so issued by the authorities, UKPCB should take action against such hospitals in accordance with law.

IX. GENERAL DIRECTIONS

A. For completion of the project and compliance of these directions, the State Government, its instrumentalities, public authorities and bodies would be entitled to invoke the Principal of 'Polluter Pays' and require the industries, hotels and Dharamshalas and even households to pay environmental compensation, and/or sewage charges in all events the State and its instrumentalities would ensure efficient, and effective operation, maintenance and management of the various STPs/CETPs, and Bio-digesters, etc.

B. The Environmental Compensation payable under these directions would be directly proportionate to the discharge of the effluent from such premises. This should primarily be imposed upon industries, hotels, ashrams and dharamshalas, for instance, hotel having 10 rooms should be directed to pay a particular amount, while a hotel of 50 rooms or above should be directed to pay much higher amount on this

account. We leave, fixation of this amount, in discretion of the State Government.

C. We also direct that the State of Uttarakhand and its various departments and public authorities to divert the balance funds provided for that purpose towards this project. Rs. 258 crores was provided out of which Rs. 78 crore has been spent thus, a balance of Rs. 180 crores is left. These funds would be utilised for carrying out the directions under this judgment. For the balance requisite amount, State Government will approach the NMCG and the Ministry of Water Resources to provide the funds from the already earmarked budget for cleaning of river Ganga.

D. If the Government proposes imposition of such environmental compensation or environmental cess then that cess shall be used only for implementation of the projects covered under this judgment till completion. Thereafter, the State could use these amounts as it considers appropriate.

E. In regard to granting sanction and release of funds for establishment of the 40 MLD plant at Jagjeetpur, Haridwar the NMCG shall release the same expeditiously and in any case not later than 1 month from today. The project, as noticed above, has already been approved. Plant should become operational in six months from today.

F. All other projects covered under this judgment shall be considered by the Ministry of Water Resources and NMCG on priority basis. It will be for them to decide as to which category of funding is to be adopted (i.e. 100 per cent funding by the

Centre or Centre and State sharing basis and/or projects funded by the other sources) and which all projects are to be controlled by the Central Government. Such projects shall be considered and approved with amendments or otherwise by these authorities expeditiously and with top priority. The projects so sanctioned shall be executed by the nominated State agency without any further delay and in accordance with the prescribed procedure.

G. All the works would be initiated, sanctioned, executed and maintained under the direct supervision of NMCG. The Executing Committee will directly supervise and be responsible for completion of the projects and report the matter to Principal Committee, which in turn, will submit its final report to the Tribunal.

H. We have already held that the State Governments are not only expected but it is their obligation to contribute and ensure effective implementation and operationalisation of these projects.

99. Accordingly, we dispose of this matter as far as Segment A of Phase 1 of Cleaning of River Ganga is concerned.

100. List this matter for consideration of Segment B of Phase 1, i.e., from Border of Haridwar to the Border of Kanpur downstream in the State of Uttar Pradesh. The Chamber meeting of the concerned officers, Chief Secretary of the State of Uttarakhand, Chief Secretary of Uttar Pradesh, Secretary Water Resources, Secretary MoEF, all heads

of the department of the public authorities, Pey Jal Nigam, Jal Sansthan will be held on 22nd December, 2015.

Justice Swatanter Kumar
Chairperson

Justice M.S. Nambiar
Judicial Member

D.K. Agrawal
Expert Member

Bikram Singh Sajwan
Expert Member

New Delhi
10th December, 2015

Annexure A-12

BEFORE THE NATIONAL GREEN TRIBUNAL,
PRINCIPAL BENCH, NEW DELHI

Original Application No. 200/2014
(C.W.P. No. 3727/1985)
(M.A. No. 594 of 2017 and 598 of 2017)
And
Original Application No. 501 of 2014
(M.A. No. 404 of 2015)
And
Original Application No. 146 of 2015
And
Appeal No. 63 of 2015
And
Original Application No. 127 of 2017
And
Original Application No. 133/2017
(W.P. (C) No. 200/2013)

IN THE MATTER OF : -

M.C. Mehta Vs. Union of India & Ors.
And
Anil Kumar Singhal Vs. Union of India & Ors.
And
Society for Protection of Environment & Biodiversity & Anr.
Vs.
Union of India & Ors.
And
Confederation of Delhi Industries & CEPT Societies
(An Organisation of CETP Societies)
Vs.
D.P.C.C. & Ors.
And
J.K. Srivastava Vs. Central Pollution Control Board & Ors.
And
Swami Gyan Swarop Sanand Vs. Ministry of Home Affairs & Ors.

CORAM : HON'BLE MR. JUSTICE SWATANTER KUMAR, CHAIRPERSON
HON'BLE DR. JUSTICE JAWAD RAHIM, JUDICIAL MEMBER
HON'BLE MR. JUSTICE RAGHUVENDRA S. RATHORE, JUDICIAL MEMBER
HON'BLE MR. BIKRAM SINGH SAJWAN, EXPERT MEMBER
HON'BLE DR. AJAY A. DESHPANDE, EXPERT MEMBER
HON'BLE DR. NAGIN NANDA, EXPERT MEMBER

Present Applicant: **Mr. M.C. Mehta and Ms. Katyayni, Advs.**
Mr. Sanjay Upadhyay, Adv. alongwith Ms. Upama Bhatacharjee, Ms. Eisha Krishen and Mr. Keith Varghese, Advs. for ICC & Jubilant Life Science
Mr. Rahul Choudhary and Ms. Meera Gopal, Advs.
Dr. Vijendra Mahndiyan and Ms. Pallavi Awasthi, Advs. for State of Uttar Pradesh
Mr. Mukesh Verma and Mr. Bikash Kumar Sinha, Advs.
Mr. Anil Grover, AAG, Haryana and Mr. Rahul Khurana, Adv. for State of Haryana & HSPCB
Ms. Antima Bazaz, Adv. for AIDA, Jain Distillery and Mohit Petrochemicals
Ms. D. Bharathi Reddy, Adv. for State of Uttarakhand
Mr. I.K. Kapila, Adv. for UP Jal Nigam and Kanpur Nagar Nigam and Jal Sansthan
Mr. M.Z. Choudhary, Adv., Mr. S.A. Zaidi and Mansi Chahal, Advs. for Coral Prints Ltd.
Mr. Ajay Marwha, Adv. for HPPCB
Ms. Neelam Rathore and Mr. Shaantanu Dev., Advs. for Association of Textile Processor, Uttar Pradesh Dyes and Bleaches Assocaitons & MLA Group, Chamber of Indian Trade and Industry
Mr. Atul Batra and Mr. Kundan Kr. Mishra, Advs. for Mother Dairy Pilakhuwa Unit
Mr.V.K. Shukla & Ms.Vijay Laxmi, Advs. - State of MP

Mr. Amit Anand Tiwari and Ms. Vishakha, Advs. for State of Uttarakhand
Ms. Panchajanya Batra Singh, Adv for Ministry of Environment, Forest and Climate Change with Dr. Susan Georage, Joint Director, Ministry of Environment, Forest and Climate Change
Mr. Raja Chatterjee alongwith and Ms. Chanchal Kr. Ganguli and Mr. Piyush Sachdev, Advs. for State of West Bengal.
Mr. Ravi P. Mehrotra and Mr. Abhinav Kumar Malik, Advs.
Mr. Manoj Kumar, Adv. for Mr. Moni Cinmoy, Adv. for DSIIDC
Mr. Narender Pal Singh, Adv. Mr. Dinesh Jindal, LO, Delhi Pollution Control Committee
Mr. Sanjeev Ralli, Adv. with Mr. Dinesh Jindal, LO, Delhi Pollution Control Committee
Mr. Ishwer Singh, Adv. for National Mission for Clean Ganga with Mr. Sundeep, Director, NMCG
Mr. Purushaindra Kaurav, Sr. Adv. with Mr. Varun Mohan, Ms. Anuradha Mishra and Mr. Brajesh Pandey, Advs. for NMCG
Mr. Sandeep, Director, NMCG
Mr. Gautam Singh and Mr. Raudhreshwar Singh, Advs. for State of Bihar and BSPCB
Ms. Asha Basu and Mr. R. Pandey, Advs. for WBPCB
Ms. Yogmaya Agnihotri, Adv. For CECB
Mr. Ravindra Kumar, Adv.
Mr. B. V. Niren, Adv. and Mr. Vinayak Gupta Adv. for Central Ground Water Authority
Mr. Om Prakash, Adv. for Northern Railway
Mr. Divya Prakash Pande, Adv. For MoEF
Mr. Rajkumar, Adva. with Mr. Bhupender, LA, CPCB
Mr. Krishna Kumar Singh, Adv. for Ministry of Environment, Forest and Climate Change
Mr. Rajul Shrivastav, Adv. for MPPCB
Mr. Jayesh Gaurav, Adv. For JSPCB
Mr. Pradeep Misra and Mr. Daleep Dhyani, Advs. for UPPCB

	Date and Remarks	**Orders of the Tribunal**
	Item No. 01 to 06 **July 13, 2017** **sn**	The judgment in relation to segment-B of Phase-I from Haridwar to Unnao, Uttar Pradesh has been pronounced. Let the directions be complied with without any default. Now, we are concerned with Phase-II i.e. from border of Unnao, Kanpur to border of State of Uttar Pradesh. Since Border of Uttar Pradesh is a common with the State of Bihar, we direct to hold a chamber meeting for drawing of action plan, opinion and the views of the stakeholders, on 24th July, 2017 at 3:00 P.M. As the matter in relation to cleaning and

	Item No. 01 to 06 **July 13, 2017** **sn**	rejuvenation of river Ganga has already been transferred to the Tribunal by the Hon'ble Supreme Court of India and river Yamuna which is one of the major tributaries of river Ganga joins it at Allahabad which will fall in Phase-II, we direct that the following officers should be present in the meeting: 1. Additional Secretary, Ministry of Water Resources 2. Additional Secretary, Ministry of Environment, Forest and Climate Change 3. Additional Secretary, Urban Development 4. Executive Director of National Mission for Clean Ganga 5. Chief Secretaries of State of Uttar Pradesh, State of Rajasthan, State of Haryana, State of Madhya Pradesh and State of Bihar would be present in that meeting. 6. Chairman/Member Secretaries of all the Pollution Control Boards. 7. Professor A.K. Gosain and Professor Vinod Tare. 8. Mr. Sundeep, Director, National Mission for Clean Ganga 9. Dr. A.B. Akolkar, Member Secretary, Central Pollution Control Board All these officers should be fully aware of the steps that the concerned State and its instrumentalities proposes to take in relation to cleaning and rejuvenation

	Item No. 01 to 06 **July 13, 2017** **sn**	of river Ganga and its tributaries in Phase-II. They must inform the Tribunal about all the relevant factors in that behalf, particularly, in view of the judgment pronounced today. With this order, the main Application to that extent stands disposed of. List on 24th July, 2017 for chamber meeting. Miscellaneous Application Nos. 594 of 2017, 598 of 2017 and 404 of 2015 to be listed on 18th July, 2017. .....,CP (Swatanter Kumar) .....,JM (Dr. Jawad Rahim) .....,JM (Raghuvendra S. Rathore) .....,EM (Bikram Singh Sajwan) .....,EM (Ajay A. Deshpande) .....,EM (Dr. Nagin Nanda)

Annexure A-13

BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI

Original Application No. 673/2018

IN THE MATTER OF:

NEWS ITEM PUBLISHED IN 'THE HINDU' AUTHORED BY SHRI. JACOB KOSHY Titled
"More river stretches are now critically polluted: CPCB"

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

DATED: 20TH SEPTEMBER, 2018.

ORDER

1. This application has been registered on the basis of a news item dated 17.09.2018 in 'The Hindu" under the heading "More river stretches are now critically polluted: CPCB"[1].

2. According to the news item, 351 polluted river stretches have been noted by the Central Pollution Control Board (CPCB). 117 such stretches are in the States of Assam, Gujarat, and Maharashtra. The CPCB has apprised the concerned States of the extent of pollution in the rivers. According to the news item, most polluted stretches are from Powai to Dharavi – with Biochemical Oxygen Demand (BOD) 250 mg/L; the Godavari - from Someshwar to Rahed – with BOD of 5.0-80 mg/L; the Sabarmati – Kheroj to Vautha – with BOD from 4.0-147 mg/L; and the Hindon – Saharanpur to Ghaziabad – with a BOD of 48-120 mg/L. The CPCB has a programme to monitor the quality of rivers by measuring BOD. BOD greater than or equal to 30mg/L is termed as 'Priority I', while that between 3.1-6 mg/L is 'Priority V'. The CPCB considers a BOD less than 3mg/L an indicator of a healthy river. In its 2015 Report[2], the CPCB had identified 302 polluted stretches on 275 rivers, spanning 28 States and six Union Territories. The number of such stretches has now been found to be 351.

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[1] https://www.thehindu.com/news/national/more-river-stretches-critically-polluted cpcb/article24962440.ece
[2] http://cpcb.nic.in/cpcbold/RESTORATION-OF-POLLUTED-RIVER-STRETCHES.pdf

3. The question for consideration is whether any direction is necessary by this Tribunal, if river stretches are polluted as per the report of CPCB, which is a statutory body under the Water (Prevention and Control of Pollution) Act, 1974, (the Water Act).

4. The matter has been considered by the Hon'ble Supreme Court and this Tribunal in several cases to which reference will be made at appropriate place in the order. The matter was recently reviewed in a Chamber Meeting held on 10.09.2018 amongst all the Members of the Tribunal and the representatives of the CPCB, the Department of Water Resources, the Ministry of Environment, Forest & Climate Change, the Niti Ayog, the National Mission for Clean Ganga, Ministry of Housing and Urban Affairs, the representatives of the States of Maharashtra, Gujarat, Tamil Nadu, Andhra Pradesh, Madhya Pradesh, Bihar, Punjab, Uttar Pradesh, NCT of Delhi and the Union Territory of Daman & Diu. The object of the meeting was to discuss as to how the level of fitness for bathing in all the rivers must be achieved at the earliest. The Tribunal was open to consider the matter on judicial side. Accordingly, we proceed to consider the same in the light of inputs available in public domain.

5. There is no dispute with the proposition that the water is the lifeline for existence. Shortage of clean water is a matter of serious concern. Checking of pollution in the rivers is integrally linked not only to the availability of clean potable water but also to the protection of environment.

6. Article 48A of the Constitution casts a duty on the State to protect and improve the environment. Article 51A imposes a fundamental duty on every citizen to protect and improve the environment. The Stockholm Declaration (1972) recommended prevention of pollution by adopting the 'Precautionary Principle', the 'Polluter Pays Principle' and the principle of 'Sustainable Development'.

7. The Water Act was enacted to provide for prevention and control of water pollution. The Central and State Boards have been established under the said Act. The Act

prohibits use of any stream or well for disposal of polluting matter. Standards to be maintained can be laid down. The Parliament has passed the Environment (Protection) Act, 1986 to protect and improve the quality of environment. The Central Government is authorized to issue appropriate directions for protection of environment to the concerned authorities.

8. Considering the issue of pollution in River Ganga by the leather industry at Kanpur, the Hon'ble Supreme Court of India in *M.C. Mehta Vs. Union of India &Ors.*[3], held that the discharge of the pollutants in Ganga could not be permitted directly or indirectly.

9. Again, in *M.C. Mehta Vs. Union of India &Ors.*[4], directions to enforce the statutory provisions by the municipal bodies and the industries by stopping discharge of untreated sewage and effluents in River Ganga were issued. It was noted that the water pollution caused serious diseases, including Cholera and Typhoid. Water pollution could not be ignored and adequate measures for prevention and control are necessary. It was also observed that the educational institutions must teach atleast for one hour in a week lessons relating to protection and improvement of environment. Awareness should be created by organizing suitable awareness programs. In the same matter, the issue of Calcutta tanneries was considered in *M.C Mehta Vs. Union of India And Ors.*[5], *(Calcutta Tanneries' Matter)*. The tanneries were directed to be shifted by adopting the 'Precautionary Principle' so as to prevent discharge of effluents in the River Ganga.

10. Dealing with the control of pollution in river Pallar in Tamil Nadu, the Hon'ble Supreme Court in *Vellore Citizen' Welfare Forum Vs. Union of India*, (1996) 5 SSC 647 observed:

> *"13. The Precautionary Principle and the Polluter Pays Principle have been accepted as part of the law of the land. Article 21 of the Constitution of India guarantees protection of life and personal liberty. Articles 47, 48-A and 51-A(g) of the Constitution are as under:*

[3] (1987) 4 SCC 463 ¶14
[4] (1988) 1 SCC 471
[5] (1997) 2 SSC 411

"47. Duty of the State to raise the level of nutrition and the standard of living and to improve public health.—The State shall regard the raising of the level of nutrition and the standard of living of its people and the improvement of public health as among its primary duties and, in particular, the State shall endeavour to bring about prohibition of the consumption except for medicinal purposes of intoxicating drinks and of drugs which are injurious to health.
48-A. Protection and improvement of environment and safeguarding of forests and wildlife.—The State shall endeavour to protect and improve the environment and to safeguard the forests and wildlife of the country.

51-A. (g) to protect and improve the natural environment including forests, lakes, rivers and wildlife, and to have compassion for living creatures."

Apart from the constitutional mandate to protect and improve the environment there are plenty of post-independence legislations on the subject but more relevant enactments for our purpose are: the Water (Prevention and Control of Pollution) Act, 1974 (the Water Act), the Air (Prevention and Control of Pollution) Act, 1981 (the Air Act) and the Environment (Protection) Act, 1986 (the Environment Act). The Water Act provides for the constitution of the Central Pollution Control Board by the Central Government and the constitution of the State Pollution Control Boards by various State Governments in the country. The Boards function under the control of the Governments concerned. The Water Act prohibits the use of streams and wells for disposal of polluting matters. It also provides for restrictions on outlets and discharge of effluents without obtaining consent from the Board. Prosecution and penalties have been provided which include sentence of imprisonment. The Air Act provides that the Central Pollution Control Board and the State Pollution Control Boards constituted under the Water Act shall also perform the powers and functions under the Air Act. The main function of the Boards, under the Air Act, is to improve the quality of the air and to prevent, control and abate air pollution in the country. We shall deal with the Environment Act in the latter part of this judgment.

16. The constitutional and statutory provisions protect a person's right to fresh air, clean water and pollution-free environment, but the source of the right is the inalienable common law right of clean environment. It would be useful to quote a paragraph from Blackstone's commentaries on the Laws of England (Commentaries on the Laws of England of Sir William Blackstone) Vol. III, fourth edition published in 1876. Chapter XIII, "Of Nuisance" depicts the law on the subject in the following words:
"Also, if a person keeps his hogs, or other noisome animals, or allows filth to accumulate on his premises, so near the house of another, that the stench incommodes him and makes the air unwholesome, this is an injurious nuisance, as it tends to deprive him of the use and benefit of his house. A like injury is, if one's neighbour sets up and exercises any offensive trade; as a tanner's, a tallow-chandler's, or the like; for though these are lawful and necessary trades, yet they should be exercised in remote places; for the rule is, 'sic uteretuo, utalienum non leadas'; this therefore is an actionable nuisance. And on a similar principle a constant ringing of bells in one's immediate neighbourhood may be a nuisance.

> *... With regard to other corporeal hereditaments; it is a nuisance to stop or divert water that used to run to another's meadow or mill; to corrupt or poison a watercourse, by erecting a dye-house or a lime-pit, for the use of trade, in the upper part of the stream; to pollute a pond, from which another is entitled to water his cattle; to obstruct a drain; or in short to do any act in common property, that in its consequences must necessarily tend to the prejudice of one's neighbour. So closely does the law of England enforce that excellent rule of gospel-morality, of 'doing to others, as we would they should do unto ourselves'."*

11. The Central Government was directed to constitute an Authority under section 3 (3) of the Environment Act which can take measures to reverse the damage and recover the cost from the individuals responsible.

12. In *S. Jagannath Vs. Union of India &Ors.*[6], effluents discharged by commercial shrimp culture farms were directed to be controlled. An authority was directed to be constituted headed by former Judge of the High Court to protect fragile coastal areas.

13. In the news item published in Hindustan Times titled "And Quiet Flows The Maily Yamuna"[7], steps were directed to be taken to check pollution in river Yamuna.

14. In *Tirupur Dyeing Factory Owners Association Vs. Noyyal River Ayacutdars Protection Association &Ors.*[8], directions were issued to check pollution in river Noyyal in the State of Tamil Nadu. A Committee headed by a former Judge of the High Court was appointed to assess the extent of damage and to identify the victims and based on the said report direction to cover damages and to stop pollution were issued by the High Court. Upholding the said directions, it was observed that if the pollution is not checked, the industrial activity has to be closed; cost for restoration has to be covered from those responsible for the pollution.

15. Inspite of directions in several Judgments, discharge of untreated sewage and industrial effluents in rivers and water bodies is continuing at a large scale. Sewage treatment capacity is disproportionate to the sewage generated. Reports have

[6] (1997) 2 SCC 87
[7](2009) 17 SSC 720
[8] (2009) 9 SSC 737

found high level of Coliform in water bodies. According to some estimates, 75 to 80 % water is polluted in India. Number of polluted river stretches is on the increase. It is patent that statutory framework is inadequate or those who man the statutory authorities are not able to perform the duties assigned to them. This aspect has to be reviewed by the concerned Governments.

16. We may also refer to some of orders of this Tribunal on the subject.

17. In *Manoj Mishra Vs. Union of India*[9], the Tribunal dealt with the pollution of river Yamuna in the light of directions of the Hon'ble Supreme Court. The Tribunal noted that right to clean and healthy environment was a Fundamental Right of the inhabitants. In violation of the said Right, the debris and solid waste were being dumped on the river bed. Encroachments have taken place, resulting in damage to the environment. Storm water drains which were polluted, were meeting the river at several points without being cleaned. The failure to manage extraction of ground water and diverting the river water for irrigation and other purposes beyond reasonable norms was resulting in obstructing the flow of the river. Dumping of untreated sewerage and industrial effluents was a major source of pollution.

18. An Expert Committee was appointed which suggested setting up of STPs to tackle this problem. It was seen that on account of pollution, vegetables grown in the area, irrigated by the polluted water were a health hazard and caused diseases like cancer. The Committee appointed by the Tribunal recommended that solid waste dump should be removed from the flood plains and construction activities on the flood plains should be stopped. All Settlements on the flood plains should be relocated. Construction of new barrages and roads, railways and metro bridges, and embankments and bunds should not be permitted. In exceptional cases, if it is permitted, a critical assessment of their potential impact should be assessed. Environmental clearance should be made necessary. High level of lead was found in 23% of the children as a result of pollution adversely affecting their health. The food crops were contaminated. The ground water was contaminated. Mercury

[9] O.A. No. 6/2012, 2015 ALL(I) NGT REPORTER (1) (DELHI) 139

concentration was 200 times the standards on account of location of thermal power plant. The Faecal Coliform- bacteria were 30 times the standards. There was presence of high level of pesticides, heavy metals and other harmful matters in the vegetables/vegetation grown on the river bank.

19. Accordingly, the Tribunal issued several directions for cleaning the river and protecting the flood plains. The implementation of above directions was monitored from time to time in the last three years.

20. On 26.07.2018, the Tribunal recorded that there was a failure of the Administration in complying with the directions, even after more than three years, which made it necessary for the Tribunal to exercise power as an Executing Court under Section 25 of the National Green Tribunal Act, 2010. The Tribunal directed constitution of a two-member Monitoring Committee, comprising a former Chief Secretary of Delhi and a former Expert Member of the Tribunal so that the said Committee could prepare a time bound action plan and closely oversee the execution of the order of this Tribunal on a regular basis.

21. The Tribunal also dealt with the problem of level of pollution in river Ganga which is 2025 km. The two main sources of pollution, which were noted, are the industrial pollution and the municipal sewage. Apart from this, diversion of water and extraction of groundwater reduced the flow of the river which adversely affected its eco-system and vitality. The serious industrial pollution was caused by the leather industries at Jajmau, Kanpur and Unnao. The Tribunal considered the initiatives taken by the Central Government by way of Ganga Action Plan-I and Ganga Action Plan-II. It was also noted that the said initiatives had failed to bring about the desired results. The Tribunal disposed of the matter on 10.12.2015 with regard to Phase-I, Segment-A i.e. from Gaumukh to Haridwar. The rest of the matter was dealt with by subsequent Judgement dated 13.07.2017 in *M.C. Mehta Vs. Union of India*[10].

[10]O.A No. 200 of 2014, 2017 NGTR (3) PB 1

The directions issued by the Tribunal included regulation of dumping of municipal solid waste and other wastes, prevention and control of sewage and industrial effluents, encroachments of floodplains, regulation of diversion of water and extraction of groundwater, cleaning of the drains meeting the river Ganga, maintaining environmental flow of the river, checking constructions on floodplains, setting up of regulating or stopping industrial activity of polluting nature, checking mining activities and disposal of bio-medical and other wastes, etc.

22. The implementation of the above directions was taken up from time to time. It was found that inspite of huge expenditure already incurred and efforts of the Committees monitoring the directions of this Tribunal as well as initiatives of the Government authorities, the requisite result has not been achieved. The water did not meet the requisite standards. The Tribunal had to appoint a Committee headed by a former High Court Judge vide order dated 06.08.2018.

23. On an earlier date on 27.07.2018, the Tribunal directed that the results of tests of water samples at various locations should be displayed on the website of Central Pollution Control Board (CPCB). It was noted that water from Haridwar to Kanpur was unfit for drinking and with few exceptions, even unfit for bathing. There was dumping of Chromium at and around Jajmau and Kanpur. There was violation of provisions of the Water Act, 1974 requiring closing of industries and prosecution. The Tribunal hoped that at one point of time the red sign in the map which was displayed on the website of the CPCB will be converted to green with the improvement in water quality. Till then, the progress could not be held to be satisfactory.

24. On 13.07.2018, in *Mahendra Pandey Vs. Union of India &Ors.*[11], pollution in river Ramganga was considered. River Ramganga is a tributary of River Ganga. It was found that in surface water samples, there was presence of heavy metals like Iron (Fe), Zinc (Zn), Copper (Cu) and Mercury (Hg). The level of Mercury was found above the screening levels (i.e. Indian Drinking Water standard). The stand of the

[11]O.A. No. 58/2017

Uttar Pradesh Pollution Control Board was that there was difficulty in locating the site for construction of secured landfill. The Tribunal noted that the hazardous waste was required to be disposed of in a scientific manner. Illegal dumping of e-waste was required to be stopped. It was noted that pollution was being caused by electronic waste processing which was generating Milled Black Powder. This resulted in contamination of water with heavy metals.

25. On 24.07.2018 in *Sobha Singh &Ors. Vs. State of Punjab &Ors.*[12], the Tribunal considered the issue of pollution of River Sutlej and River Beas. The pollution resulted in toxicity and accumulation of Chromium, Nickel, Zinc and pesticides. The polluted drains were found meeting River Sutlej. The untreated industrial waste as well as the domestic waste was being dumped without any adequate action being taken by the Pollution Control Boards. Failure to check pollution was established by various inspections. Inspite of steps taken in four years, with almost fifty adjournments and the directions of the Tribunal, the situation did not improve as expected. Accordingly, the Tribunal constituted an Independent Monitoring Committee which included a social activist to oversee the execution of directions of the Tribunal.

26. On 31.07.2018 in *Nityanand Mishra Vs. State of M.P. &Ors.*[13], pollution of Son river was considered. Illegal sand mining activity was found to be resulting in affecting the flow of the river. Construction of barrage and operation of industries were affecting the habitat and breeding of *Gharials*. The Tribunal issued directions to stop illegal pollution for protection of the river and the wildlife near the Bansagar Dam and constituted a Committee to oversee the compliance of the directions of the Tribunal.

27. As already noted, on 06.08.2018, after reviewing the progress in the matter of River Ganga and finding that the progress did not meet the expectations of the Tribunal, the Tribunal exercised its jurisdiction under Section 25 of the National Green Tribunal Act, 2010 and constituted a Monitoring Committee headed by a former

[12]O.A.No. 101/2014
[13]O.A. No. 456/2018

Judge of the High Court to execute the directions already issued in a time bound manner. It was also observed that public education and public involvement were required to be considered.

28. On 07.08.2018 in "Stench Grips Mansa's Sacred Ghaggar River (Suo-Moto Case)[14]", this Tribunal considered pollution of river Ghaggar and failure of the authorities to check the same. The report of the Joint Inspection Committee showed that the pollution in the river was beyond the prescribed standards. There was failure on the part of the Pollution Boards in checking the pollution. Inspite of several directions in the last four years by the Tribunal, the situation has not improved. The Tribunal directed that a Special Task Force (STF) must be constituted in every District and in every State. In a District, the STFs should comprise of District Magistrate, Superintendent of Police, Regional Officer of the State Pollution Control Boards in concerned District and one person to be nominated by the District Judge in every District in his capacity as Head of the District Legal Services Authority. At the State level, it was to comprise of the Chief Secretary, the Environment Secretary, the Secretary of Urban Development and Secretary of Local Bodies. The STFs were required to publish reports on the website. The Tribunal also constituted a Committee headed by a former Judge to oversee the compliance of the directions.

29. On 08.08.2018, in *Doaba Paryavaran Samiti Vs. State of U.P. &Ors.*[15], pollution in river Hindon was the subject matter of consideration. The matter was taken up on the allegation that 71 persons in Baghpat district died and more than 1000 persons were affected by diseases on account of pollution. The Tribunal noted that there was contamination of groundwater on account of pollution caused by sugar, paper, distilleries and tannery industries. An inspection team, appointed by the Tribunal, found that 124 industries were causing pollution. It was noted that no punitive action has been initiated. The pollution caused included discharge of Mercury. The Tribunal observed that sources of contaminated water are required to be closed. The victims of diseases are required to be rehabilitated. A statement that there are

[14]O.A. No. 138/2016 (T_{NHRC})
[15] O.A. No. 231/2014

302 river stretches in the country was noted and the CPCB was directed to identify atleast 10 most critical stretches and prepare an action plan, in similar format as that of river Hindon.[16] The directions issued by the Tribunal include making functionaries of the statutory authorities accountable for their failure, making potable water available, sources of contamination being closed, action plans being prepared at District, State and National levels for restoration of water quality and reversing the damage. The Committee headed by a former Judge of High Court was also constituted to oversee the execution of the directions.

30. On 17.08.2018, in *Arvind Pundalik Mhatre Vs. Ministry of Environment, Forest and Climate Change &Ors.[17],* the matter of pollution of River Kasardi was considered and directions were issued to remedy the situation and the Tribunal appointed a Committee headed by a former Judge of the High Court to oversee the compliance of the directions.

31. On 23.08.2018 *in Meera Shukla Vs. Municipal Corporation, Gorakhpur &Ors.[18]*, pollution of Ramgarh Lake, Ami River, Rapti River and Rohani River in and around District Gorakhpur on account of discharge of untreated sewage and industrial effluents was considered. It was noted that there was no proper management of solid waste disposal, leading to vector borne diseases and health problems. The pollution was caused, inter-alia, by sugar industries and other factories. The underground water was contaminated with arsenic. In the year 2012, 557 persons died with encephalitis deaths. In the last 30 years, 50,000 people had died. A financial package of Rs. 4,000 crore was given by the Central Government to fight the said diseases but there is no proper utilization of the amount. Apart from the 557 death in Gorakhpur District, more deaths had taken place in the area as stated in the news report dated 16.07.2013. The total deaths reported were 1256 in the year 2012. The Tribunal accordingly directed necessary steps to be taken to remedy

[16] Hindon action plan prepared by CPCB is explained in para 46
[17] O.A. No. 125/2018,
[18] O.A. No. 116/2014,

the situation and also appointed a Committee headed by a former Judge of the High Court to oversee the compliance of directions of the Tribunal.

32. On 24.08.2018, in *Amresh Singh Vs. Union of India &Ors.*[19], the matter of pollution of the Chenab and Tawi Rivers was considered and directions were issued to remedy the situation which was to be overseen by a Committee headed by a former High Court Judge.

33. Similarly, in respect of river *Subarnarekha in Sudarsan Das Vs. State of West Bengal &Ors.*[20], this Tribunal considered the matter and also appointed a Committee headed by a former Judge of the High Court to oversee the compliance of the directions.

34. There are instances of many other cases involving pollution of rivers which have come up for consideration before this Tribunal. It is not necessary to refer to all the cases.

35. We are of the view that the situation is far from satisfactory and action is required to be taken on war footing. Once statutory framework in the form of Water Act and the Environment Act is in place and the standards have been laid down by the Central Pollution Control Board, the matter cannot rest at ascertaining and identification of polluted stretches. There has to be meaningful further action to restore the minimum prescribed standards for all the rivers of the country. The polluter has to pay the cost of restoring the damage.

36. Without casting any aspersions on the statutory bodies, it is an acknowledged fact that the Pollution Control Boards have not been able to take adequate steps for keeping the standards of water within the prescribed limits. They have not been able to stop dumping of wastes, discharge of municipal or industrial effluents in rivers and water bodies. One of the reasons which has been frequently highlighted is the unsatisfactory manning of the Pollution Control Boards. This aspect was

[19] Execution Application No. 32/2016 in O.A. No. 295/2016,
[20] O.A.No. 173 of 2018

considered by the Hon'ble Supreme Court in *TechiTagi Tara Vs. Rajendra Singh Bhandari &Ors.* [21] as follows:

> *"33. Unfortunately, notwithstanding all these suggestions, recommendations and guidelines the SPCBs continue to be manned by persons who do not necessarily have the necessary expertise or professional experience to address the issues for which the SPCBs were established by law. The Tata Institute of Social Sciences in a Report published quite recently in 2013 titled "Environmental Regulatory Authorities in India: An Assessment of State Pollution Control Boards" had this to say about some of the appointments to the SPCBs: "An analysis of data collected from State Pollution Control Boards, however, gives a contrasting picture. It has been observed that time and again across state governments have not been able to choose a qualified, impartial, and politically neutral person of high standing to this crucial regulatory post. The recent appointments of chairpersons of various State Pollution Control Boards like Karnataka (A a senior BJP leader), Himachal Pradesh (B a Congress party leader and former MLA), Uttar Pradesh (C appointed on the recommendation of SP leader X), Arunachal Pradesh (D a sitting NCP party MLA), Manipur Pollution Control Board (E a sitting MLA), Maharashtra Pollution Control Board (F a former bureaucrat) are in blatant violation of the apex court guidelines. The apex court has recommended that the appointees should be qualified in the field of environment or should have special knowledge of the subject. It is unfortunate that in a democratic set up, key enterprises and boards are headed by bureaucrats for over a decade. In this connection, it is very important for State Governments to understand that filling a key regulatory post with the primary intention to reward an ex-official through his or her appointment upon retirement, to a position 9 Item Nos. 07-08 July 20, 2018 dv for which he or she may not possess the essential overall qualifications, does not do justice to the people of their own states and also staffs working in the State Pollution Control Boards. The primary lacuna with this kind of appointment was that it did not evoke any trust in the people that decisions taken by an ex-official of the State or a former political leader, appointed to this regulatory post through what appeared to be a totally non-transparent unilateral decision. Many senior environmental scientists and other officers of various State Pollution Control Boards have expressed their concern for appointing bureaucrats and political leader as Chairpersons who they feel not able to create a favourable atmosphere and an effective work culture in the functioning of the board. It has also been argued by various environmental groups that if the government is unable to find a competent person, then it should advertise the post, as has been done recently by states like Odisha. However, State Governments have been defending their decision to appoint bureaucrats to the post of Chairperson as they believe that the vast experience of IAS officers in handling responsibilities would be easy. Another major challenge has been appointing people without having any knowledge in this field. For example, the appointment of G with maximum qualification of Class X as Chairperson of State Pollution Control Board of Sikkim was clear violation of Water Pollution and Prevention Act, 1974."*
>
> *34. The concern really is not one of a lack of professional expertise – there is plenty of it available in the country – but the lack of dedication and willingness to take advantage of the resources available and instead benefit someone close to the powers that be. With this couldn't care-less attitude, the environment and public trust are the immediate casualties. It is unlikely that with such an attitude, any substantive effort can be made to*

[21] (2018) 11 SCC 734

tackle the issues of environment degradation and issues of pollution. Since the NGT was faced with this situation, we can appreciate its frustration at the scant regard for the law by some State Governments, but it is still necessary in such situations to exercise restraint as cautioned in State of U.P. v. Jeet S. Bisht.

35.. Keeping the above in mind, we are of the view that it would be appropriate, while setting aside the judgment and order of the NGT, to direct the Executive in all the States to frame appropriate guidelines or recruitment rules within six months, considering the institutional requirements of the SPCBs and the law laid down by statute, by this Court and as per the reports of various committees and authorities and ensure that suitable professionals and experts are appointed to the SPCBs. Any damage to the environment could be permanent and irreversible or at least long-lasting. Unless (2007) 6 SCC 586 corrective measures are taken at the earliest, the State Governments should not be surprised if petitions are filed against the State for the issuance of a writ of quo warranto in respect of the appointment of the Chairperson and members of the SPCBs. We make it clear that it is left open to public spirited individuals to move the appropriate High Court for the issuance of a writ of quo warranto if any person who does not meet the statutory or constitutional requirements is appointed as a Chairperson or a member of any SPCB or is presently continuing as such."

37. This Tribunal also considered this matter in order dated 20.07.2018,in the case of *Satish Kumar vs. U.O.I &Ors.,*[22]and observed as follows:

"Accordingly, we suggest that the Central Government as well as State Governments may appoint persons with judicial background to deal with the issues which may require the knowledge of legal and judicial system in the Pollution Control Boards and the local authorities. Such persons can also advise such bodies on manner of compliance of law so that such bodies can be saved from unnecessary litigation and charges of failure to comply with law.

24. Presence of a person with judicial background will help the Pollution Control Boards as well as local bodies to effectively discharge their administrative and judicial functions in an efficient manner. We are informed that in some of the Pollution Control Boards and Local Bodies, Judicial officers are already being engaged.

25. We thus call upon the Central Government and all the State Governments to take a call on this issue consistent with the observation of the Hon'ble Supreme Court in Techi Tagi Tara (Supra)"

38. In order to do so, an officer of Superior Judicial Services may have to be taken on deputation by requesting the concerned High Court on the pattern of Law Secretaries of States.

39. As already noted, well known causes of pollution of rivers are dumping of untreated sewage and industrial waste, garbage, plastic waste, e-waste, bio-medical waste, municipal solid waste, diversion of river waters, encroachments of catchment areas and floodplains, over drawl of groundwater, river bank erosion on account of illegal sand mining. Inspite of directions to install Effluent Treatment Plants (ETPs),

[22]O.A No. 56 (T_{HC}) of 2013

Common Effluent Treatment Plants (CETPs), Sewage Treatment Plants (STPs), and adopting other anti-pollution measures, satisfactory situation has not been achieved. Tough governance is the need of the hour. If pollution does not stop, the industry has to be stopped. If sewage dumping does not stop, locals have to be made accountable and their heads are to be prosecuted. Steps have to be taken for awareness and public involvement.

40. River Water is considered to be fit for bathing when it meets the criteria of having Bio-chemical Oxygen Demand (BOD) less than 3.0 mg/L, Dissolved Oxygen more than 5.0 mg/L and Faecal Coliform bacteria to be less than 500 MPN/100 ml.

41. According to the "Restoration of Polluted River Stretches- Concept & Plan" published by CPCB in January, 2018, 30,042 million litres per day (MLD) of domestic sewage is generated from urban areas along the polluted river stretches. The installed sewage treatment capacity is about 16,846 MLD, leaving a gap of about 13,196 MLD (43.9%). There is a large gap in sewage treatment capacity and generation of sewage in urban areas.

42. As already noted, according to latest assessment by the CPCB, there are 351 polluted river stretches in India i.e. where the BOD content is more than 3mg/L. The plan of CPCB is to target enhancement of river flow. The plan for restoration of polluted river stretches is proposed to be executed through two-fold concepts. One concept is to target enhancement of river flow through interventions on the water sheds/catchment areas for conservation and recharge of rain water for subsequent releases during lean flow period in a year. This concept will work on dilution of pollutants in the rivers and streams to reduce concentration to meet desired level of water quality. Other concept is of regulation and enforcement of standards in conjunction with the available flow in rivers /streams and allocation of discharges with stipulated norms.

43. The water quality assessment of aquatic resources by CPCB, on long term basis, has provided information on the segments of rivers that are not meeting water quality

criteria and have been identified as polluted. Assessment studies carried out on the sources of Restoration of Polluted River Stretches pollution in the rivers has highlighted the need for creation of infrastructure facilities (STPs /CETPs/ETPs) for management of wastewater in line with low flow or no flow of fresh water in the rivers and streams. In order to have a practical solution to augment non-monsoon availability of water, CPCB has suggested four phases for full scale water shed management in the upper reaches of catchment of the rivers and streams. The suggested phases for water shed management may be (a) Recognition phase (b) Restoration phase (c) Protection phase (d) Improvement phase.

(a) Recognition Phase is identification and recognition of the problem, analysis of the cause of the problem and its effect and development of alternative solutions of problem.

(b) Restoration Phase includes two main steps viz. selection of best solution to problems identified and application of the solution to the problems of the land.

(c) Protection Phase takes case of the general health of the watershed and ensures normal functioning. The protection is against all factors, which may cause determined in watershed condition.

(d) Improvement Phase deals with overall improvement in the watershed and all land is covered.

44. Attention is paid to agriculture and forest management and production, forage production and pasture management, socio-economic conditions to achieve the objectives of watershed management.

45. The river action plans are designed for control of pollution and to restore the water quality of the rivers. The infrastructure development for treatment of sewage always remains short of the waste water generation. The ever growing population and increasing water use in the urban centres has outpaced the plan for creation of infrastructure. The river action plans although have not improved the quality of the

water resources, however in absence of such plans, the quality of aquatic resources would have been further deteriorated.

46. River Hindon has been taken up as a model for preparation of action plan for restoration of water quality.[23] Salient features of the Action Plan are:

i. Execution of field surveys to assess pollution load generated by industries and sewage generated in a city or town discharging sewage and trade effluent into river Hindon and its tributaries.

ii. Collating water quality monitoring data of Hindon and its tributaries and assigning the class as per primary water quality criteria.

iii. Water quality assessment of river in context of sewage/industrial drain outfalls with dilution and distance factors.

iv. Laying time-limes for regulating industrial pollution control by ensuring consent compliance and closing the defaulting industries till they comply with the norms stipulated to them.

v. Setting up of STPs in towns located in the river catchment and emphasis on utilization of treated sewage.

vi. Adopting water conservation practices, ground water regulation, flood plain zone management and maintaining environmental flow.

47. The polluted river stretches have been divided in five priority categories i.e., I, II, III, IV, V depending upon the level of BOD. Following are the parameters for assessing the criteria:

I. <u>Criteria for Priority I</u>

(a) Monitoring locations exceeding BOD concentration 30 mg/L has been considered as it is the standard of sewage treatment plant and in river it appears without dilution.(River locations having water quality exceeding discharge standards for BOD to fresh water sources)

(b) All monitoring locations exceeding BOD concentration 6 mg/L on all occasions.

(c) Monitoring locations exceeding 3 mg/L BOD are not meeting desired water quality criteria but does not affect to Dissolved

[23] http://cpcb.nic.in/NGT/CPCB-Reply-Affidavit-Report-on-Hindon-Action-Plan.pdf

Oxygen level in water bodies. If BOD exceeds 6mg/L in water body, the Dissolved Oxygen is reduced below desired levels.

(d) The raw water having BOD levels upto 5 mg/L are does not form complex chemicals on chlorination for municipal water supplies. Hence the water bodies having BOD more than 6 mg/L are considered as polluted and identified for remedial action.

II. Criteria for Priority II

(a) Monitoring locations having BOD between 20-30 mg/L.
(b) All monitoring locations exceeding BOD concentration 6 mg/L on all occasions.

III. Criteria for Priority III

(a) Monitoring locations having BOD between 10-20 mg/L.
(b) All monitoring locations exceeding BOD concentration 6 mg/L on all occasions.

IV. Criteria for Priority IV

(a) Monitoring locations having BOD between 6-10 mg/L.

V. Criteria for Priority V

(a) Monitoring locations having BOD between 3-6 mg/l.
(b) The locations exceeding desired water quality of 3mg/l BOD.

Polluted River Stretches- State wise-Priority wise

STATE	I	II	III	IV	V	Grand Total
ANDHRA PRADESH				2	3	5
ASSAM	3	1	4	3	33	44
BIHAR			1		5	6
CHHATTISGARH				4	1	5
DAMAN, DIU AND DADRA NAGAR HAVELI	1					1
DELHI	1					1
GOA			1	2	8	11
GUJARAT	5	1	2	6	6	20
HARYANA	2					2
HIMACHAL PRADESH	1	1	1		4	7
JAMMU & KASHMIR		1	2	2	4	9
JHARKHAND				3	4	7
KARNATAKA			4	7	6	17
KERALA	1			5	15	21
MADHYA PRADESH	3	1	1	3	14	22
MAHARASHTRA	9	6	14	10	14	53
MANIPUR		1			8	9
MEGHALAYA	2			3	2	7
MIZORAM			1	3	5	9
NAGALAND	1		1	2	2	6
ODISHA	1		3	2	13	19
PUDUCHERRY				1	1	2

PUNJAB	2			1	1	4
RAJASTHAN			1		1	2
SIKKIM					4	4
TAMIL NADU	4			1	1	6
TELANGANA	1	2	2	2	1	8
TRIPURA					6	6
UTTAR PRADESH	4		1	2	5	12
UTTARAKHAND	3	1	1	4		9
WEST BENGAL	1	1	3	4	8	17
Grand Total	**45**	**16**	**43**	**72**	**175**	**351**

Polluted River Stretches- Priority I & Priority II				
STATE	**RIVER NAME**	**RIVER STRETCH**	**BOD RANGE/ MAX VALUE (mg/L)**	**PRIORITY**
ASSAM	BHARALU	GUWAHATI TO CHILARAI NAGAR	52.0	I
	BORSOLA	ALONG SARABBHATTI, GUWAHATI	34.0	I
	SILSAKO	ALONG CHACHAL, GUWAHATI	34.0	I
	SORUSOLA	ALONG PALTAN BAZAR, GUWAHATI	30.0	II
DAMAN, DIU AND DADRA NAGAR HAVELI	DAMANGANGA	SILVASSA TO DAMAN JETTY, MOTI DAMAN	10 - 80	I
DELHI	YAMUNA	WAZIRABAD TO ASGARPUR	9 - 80	I
GUJARAT	AMLAKHADI	PUNGUM TO BHARUCH	40 - 45	I
	BHADAR	JETPUR VILLAGE TO SARAN VILLAGE	426.0	I
	BHOGAVO	SURENDRANAGAR TO NANA KERALA	67.0	I
	KHARI	LALI VILLAGE TO KASHIPURA	235.0	I
	SABARMATI	KHEROJ TO VAUTHA	4 - 147	I
	VISHWAMITRI	VADODARA TO ASOD	6 - 21	II
HARYANA	GHAGGAR	RORKI TO SIRSA	6 - 482	I
	YAMUNA	PANIPAT TO SONEPAT	4 - 55	I
HIMACHAL PRADESH	SUKHANA	SUKHNA TO PARWANOO	54.0	I
	MARKANDA	KALA AMB TO NARAYANPUR	3.2 - 24	II
JAMMU & KASHMIR	DEVIKA	GURU RAVIDAS TEMPLE TO NAINSU	3.4-22	II
KERALA	KARAMANA	MALEKKDU TO THIRUVALLAM	56.0	I
MADHYA PRADESH	CHAMBAL	NAGDA TO RAMPURA	12 - 80	I
	KHAN	KABIT KHEDI TO KHAJRANA	30.8 - 80	I
	KSHIPRA	SIDDHAWAT TO TRIVENISANGAM	4 - 38	I
	BETWA	MANDIDEEP TO VIDISHA	3.3 - 20.2	II
MAHARASHTRA	GODAVARI	SOMESHWAR TEMPLE TO RAHED	5.0-88	I
	KALU	ALONG ATALE VILLAGE	75.0	I
	KUNDALIKA	SALAV TO ROHA	3.8-65	I
	MITHI	POWAI TO	250.0	I

		DHARAVI		
	MORNA	AKOLA TO TAKALIJALAM	52.8	I
	MULA	BOPODI TO AUNDH GAON	33-35	I
	MUTHA	SHIVAJI NAGAR TO KHADAKWASLA DAM	5.0-42.5	I
	NIRA	SANGAVI TO SHINDEWADI	12.5-35	I
	VEL	NHAVARE TO SHIKARPUR	30.2	I
	BHIMA	VITHALWADI TO TAKLI	8.0-22.0	II
	INDRAYANI	MOSHIGAON TO ALANDIGAON	12.5-22	II
	MULA-MUTHA	THEUR TO MUNDHWA BRIDGE	14-22	II
	PAWANA	DAPODI TO RAVET	15.5-24	II
	WAINGANGA	TUMSA TO ASHTI	10.4-22.4	II
	WARDHA	GHUGHUS TO RAJURA	7.0-22.0	II
MANIPUR	NAMBUL	SINGDA DAM TO BISHNUPUR	3.6-23.7	II
MEGHALAYA	UMKHRAH	MAWLAI TO SHILLONG	30-90.2	I
	UMSHYRPI	UMSHYRPI BRIDGE TO DHANKETI	38.5-95.0	I
NAGALAND	DHANSIRI	CHECK GATE TO DIPHU BDG	7.0-50.0	I
ODISHA	GANGUA	D/S BHUWANESHWAR	14-39	I
PUNJAB	GHAGGAR	SARDULGARH TO MUBARAKPUR	9.0-380	I
	SATLUJ	RUPNAGAR TO HARIKA BRIDGE	3.8-108	I
TAMIL NADU	CAUVERY	METTUR TO MAYILADUTHURAI	3.3-32	I
	SARABANGA	THATHAYAMPATTI TO T.KONAGAPADI	78.0	I
	THIRUMANIMUTHAR	SALEM TO PAPPARAPATTI	190.0	I
	VASISTA	MANIVILUNDHAN TO THIYAGANUR	675.0	I
TELANGANA	MUSI	HYDRABAD TO NALGONDA	4.0-60.0	I
	MANJEERA	GOWDICHARLA TO NAKKAVAGU	5.0-26	II
	NAKKAVAGU	GANDILACHAPET TO SEVALAL THANDA	26.0	II
UTTAR PRADESH	HINDON	SAHARANPUR TO GHAZIABAD	48-120	I
	KALINADI	MUZAFFAR NAGARTO GULAOTHI TOWN	8 - 78	I
	VARUNA	RAMESHWAR TO CONF WITH GANGA, VARANASI	4.5-45.2	I
	YAMUNA	ASGARPUR TO ETAWAH SHAHPUR TO ALLAHABAD (BALUA GHAT)	12.0-55	I
UTTARAKHAND	BHELA	KASHIPUR TO RAJPURA ATNDA	6.0-76.0	I
	DHELA	KASHIPUR TO GARHUWALA, THAKURDWARA	12 - 80	I
	SUSWA	MOTHROWALA TO RAIWALA	37.0	I
	KICHHA	ALONG KICHHA	28.0	II
WEST BENGAL	VINDHADHARI	HAROA BRIDGE TO MALANCHA BURNING GHAT	26.7-45.0	I
	MAHANANDA	SILIGURI TO BINAGURI	6.5-25	II

Polluted River Stretches- Priority III, IV & V				
STATE	**RIVER NAME**	**RIVER STRETCH**	**BOD RANGE/ MAX VALUE (mg/L)**	**PRIORITY**
ANDHRA PRADESH	KUNDU	NANDYAL TO MADDURU	7.7	IV
	TUNGABHADRA	MANTHRALAYAM TO BAVAPURAM	3.2 - 6.7	IV
	GODAVARI	RAYANPETA TO RAJAHMUNDRI	3.1 - 3.4	V
	KRISHNA	AMRAVATHI TO HAMSALA DEEVI	3.2	V
	NAGAVALI	ALONG THOTAPALLI	3.2	V
ASSAM	DEEPAR BILL	DEEPAR BILL TO GUWAHATI	10.6	III
	DIGBOI	LAKHIPATHE, RESERVE FOREST	14.0	III
	KAMALPUR	ALONG KAMALPUR	18.6	III
	PANCHNAI	ORANG TO BORSALA	11.4	III
	BRAHAMPUTRA	KHERGHAT TO DHUBRI	3.2 - 6.4	IV
	KHARSANG	ASSAM-ARUNANCHAL BORDER TO LONGTOM-1	7.2	IV
	PAGLDIA	NALBARI TO KHUDRA SANKARA	8.2	IV
	BARAK	PANCHGRAM TO SILCHAR	3.5 - 4.2	V
	BAROI	DOWNSTREAM OF BRIDGE AT NH-52	3.6	V
	BEGA	ALONG MANGALDOI	4.5	V
	BEKI	BARPETA ROAD TO JYOTI GAON	3.5	V
	BHOGDOI	JORHAT TO DULIAGAON	4.5	V
	BOGINADI	LAKHIMPUR TO DIBRUGARH	4.2	V
	BORBEEL	ALONG RAMNAGAR, DIGBOI	3.8	V
	BORDOIBAM BEELMUKH	ALONG BEELMUKH BIRD SANCTUARY, DHEMAJI	5.2	V
	BURHIDIHING	MARGHERITA TO TINSUKIA	4 - 4.6	V
	DHANSIRI	GOLAGHAT TO KATHKETIA	4.3 - 5.6	V
	DIKHOW	NAGINI MORA TO DIKHOMUKH	3.2	V
	DIKRONG	ALONG BANDARDEWA	3.2	V
	DIPLAI	ALONG SILGARA, KOKRAJHAR	3.2	V
	DISANG	DILLIGHAT TO GUNDAMGHAT	4.2	V
	GABHARU	ALONG TUMIUKI, SONITPUR	5.4	V
	HOLUDUNGA	ALONG SOMARAJAN, DHEMA JI	4.8	V
	Jai Bharali	ALONG SONITPUR	3.1	V
	JHANJI	JORHAT TO CHAWDANG	3.8	V
	KALONG	NAGAON TO MORI KALONG	3.7 - 4.3	V
	KAPILI	NAGAON TO KAMPUR TOWN	5.5	V
	KILLING	ALONG MOREGAON	5.8	V
	KOHORA	KOHORA TO MOHPARA	4.4	V
	KULSI	ALONG CHAYGAON	3.6	V
	MALINI	ALONG RAMNAGAR, SILCHAR	5.3	V
	MORA BHARALI	ALONG TEZPUR	5.2	V

	PARASHALI	ALONG DEMORIA	4.0	V
	PUTHIMARI	ALONG PUTHIMARI	4.8	V
	RANGA	ALONG GERAMUKH	3.8	V
	SAMAGURI	ALONG SAMAGURI, NAGAON	4.0	V
	SANKOSH	ALONG GOLAKGANJ	3.3	V
	SON	ALONG DEODHAR, KARIMGANJ	4.3	V
	SONAI	SONAI TO DAKSHIN MOHANPUR	4.4	V
	TENGA PUKHURI	ALONG KUKURACHOWA GAON	4.0	V
BIHAR	SIRSIA	RUXOL TO KOIREA TOLA (RAXAUL)	20.0	III
	FARMAR	ALONG JOGBANI	3.6	V
	GANGA	BUXAR TO BHAGALPUR	3.2 - 4.2	V
	POONPUN	GAURICHAK TO FATUHA	3.3	V
	RAM REKHA	HARINAGAR TO RAMNAGAR	5.0	V
	SIKRAHNA	ALONG NARKATIAGANJ	4.5	V
CHHATTISGARH	HASDEO	KORBA TO URGA	3.6 - 7	IV
	KHAROON	BUNDRI TO RAIPUR	3.3 - 7.2	IV
	MAHANADI	ARRANG TO SIHAWA	3.3 - 8	IV
	SEONATH	SHIMGA TO BEMTA	3.4 - 8.4	IV
	KELO	RAIGARH TO KANAKTORA	3.8	V
GOA	SAL	KHAREBAND TO MOBOR	4.2 - 16.8	III
	MANDOVI	MARCELA TO VOLVOI	3.3 - 6.2	IV
	TALPONA	ALONG CANACONA	6.8	IV
	ASSONORA	ASSONORA TO SIRSAIM	3.3	V
	BICHOLIM	BICHOLIM TO CURCHIREM	4.8	V
	CHAPORA	PERNEM TO MORJIM	3.5 - 5.2	V
	KHANDEPAR	PONDA TO OPA	3.4	V
	SINQUERIM	ALONG CANDOLIM	3.6	V
	TIRACOL	ALONG TIRACOL	3.9	V
	VALVANT	SANKLI – BICHOLIM TO PORIEM	4.3	V
	ZUARI	CURCHOREM TO MADKAI	3.2 - 5.1	V
GUJARAT	DHADAR	KHOTDA TO CHANDPURA	16.0	III
	TRIVENI	TRIVENI SANGAM TO BADALPARA	11.0	III
	AMRAVATI (TRIBUTARY OF NARMADA)	ALONG DADHAL, ANKALESHWAR	10.0	IV
	DAMANGANGA	KACHIGAON TO VAPI	8.0	IV
	KOLAK	KIKARLA TO SALVAV	8.0	IV
	MAHI	SEVALIA TO BAHADARPUR	4.5 - 7	IV
	SHEDHI	DHAMOD TO KHEDA	9.0	IV
	TAPI	KHADOD (BARDOLI) TO SURAT	8.0	IV
	ANAS	DAHOD TO FATEHPURA	5.0	V
	BALEHWAR KHADI	PANDESARA TO KAPLETHA	4.0	V
	KIM	SAHOL BRIDGE TO HANSOL	3.1	V
	MESHWA	ALONG SHAMLAJI	4.0	V
	MINDHOLA	ALONG SACHIN	6.0	V
	NARMADA	GARUDESHWAR TO BHARUCH	5.0	V
HIMACHAL PRADESH	SIRSA	NALAGARH TO SOLAN	8 - 16	III
	ASHWANI	ALONG YASHWANT NAGAR	3.2	V
	BEAS	KULLU TO DEHRAGOPIPUR	6.0	V

	GIRI	ALONG SAINJ	4.4 - 6	V
	PABBAR	ALONG ROHRU	3.6 - 4	V
JAMMU & KASHMIR	BANGANGA	PONY SHED TO BATHING GHAT	6 - 14	III
	CHUNT KOL	MAULANA AZAD BRIDGE TO KANIKADAL	14.5	III
	GAWKADAL	GAWKADAL BRIDGE TO NOHATA	9.0	IV
	TAWI	SURAJNAGAR TO BELICHARANA	5 - 8.3	IV
	BASANTER	SAMBA TO CHAKMANGARAKWAL	5 - 6	V
	CHENAB	JAL PATAN TO PARGAWAL	5.0	V
	JHELAM	CHATTABAL WEIR TO ANANTNAG	3.2 - 5.5	V
	SINDH	ALONG DUDERHAMA	3.7	V
JHARKHAND	GARGA	ALONG TALMUCHU	6.2	IV
	SANKH	KONGSERABASAR TO BOLBA	8.4	IV
	SUBARNAREKHA	HATIA DAM TO JAMSHEDPUR	3.4 - 10	IV
	DAMODAR	PHUSRO ROAD BDG TO TURIO	3.9	V
	JUMAR	KANKE DAM TO KADAL	3.3	V
	KONAR	ALONG TILAYA AND KONAR	3.4 - 3.6	V
	NALKARI	ALONG PATRATU	3.8	V
KARNATAKA	ARKAVATHI	HALLI RESERVOIR TO KANAKAPURA TOWN	14.0	III
	LAKSHMANTIRTHA	KATTEMALAVADI TO HUNSUR	7.1 - 12.4	III
	MALPRBHA	KHANAPUR TO DHARWAD	7.3 - 17.3	III
	TUNGABHADRA	HARIHAR TO KORLAHALLI	4 - 19	III
	BHADRA	HOLEHUNNUR TO BHADRAVATHI	5.5 - 7.8	IV
	CAUVERY	RANGANATHITTU TO SATHYAMANGALAM BRIDGE	3.1 - 6.7	IV
	KABINI	NANJANAGUD TO HEJJIGE	3.6 - 6.5	IV
	KAGINA	SHAHABAD TO HONGUNTA	4.6 - 7.4	IV
	KALI	HASAN MAAD (WEST COAST PAPER MILL) TO BOMMANAHALLI RESERVOIR	6.5	IV
	KRISHNA	YADURWADI TO TINTINI BRIDGE	3.1 - 6.2	IV
	SHIMSHA	YEDIYAR TO HALAGUR	4 - 10	IV
	ASANGI NALLA	ALONG ASANGI	4.4	V
	BHIMA	GHANAPUR TO YADGIR	3.3 - 6	V
	KUMARDHARA	ALONG UPPINANGADI	4.0	V
	NETRAVATHI	UPPINANGADI TO MANGALURU	4.0	V
	TUNGA	SHIVAMOGA TO KUDLI	4.3	V
	YAGACHI	ALONG YAGACHI, HASSAN	4.0	V
KERALA	BHARATHAPUZHA	ALONG PATAMBI	6.6	IV
	KADAMBAYAR	MANCKAKADAVU TO BRAHMAPURAM	5.9 - 6.4	IV
	KEECHERI	PULIYANNOR TO KECHERY	6.4	IV
	MANIMALA	KALLOOPARA TO THONDRA	6.3 - 6.4	IV
	PAMBA	MANNAR TO THAKAZHY	3.3 - 7.8	IV
	BHAVANI	ALONG ELACHIVAZHY	5.4	V
	CHITRAPUZHA	IRUMPANAM TO KARINGACHIRA	4.6	V

	KADALUNDY	ALONG HAJIRAPPALLY/ HAJIYARPALLI	3.6	V
	KALLAI	THEKEPURAM TO ARAKKINAR	4.5	V
	KARUVANNUR	ALONG KARUVANNUR	3.5	V
	KAVVAI	ALONG KAVVAI	3.9	V
	KUPPAM	THALIPARAMBA TO VELICHANGOOL	3.1 - 3.8	V
	KUTTIYADY	ALONG KUTTIYADY	5.0	V
	MOGRAL	ALONG MOGRAL	3.1	V
	PERIYAR	ALWAYE-ELOOR TO KALAMASSERY	3.2 - 5.1	V
	PERUVAMBA	ALONG PERUVAMBA	3.9	V
	PUZHACKAL	OLARIKKARA TO PUZHACKAL	3.8	V
	RAMAPURAM	ALONG RAMAPURAM	3.3	V
	THIRUR	NADUVILANGADI TO THALAKKADATHUR	3.6	V
	UPPALA	POYYA TO MULINJA	3.2	V
MADHYA PRADESH	SONE	ALONG AMLAI	12.4	III
	GOHAD	GOHAD DAM TO GORMI	6.3	IV
	KOLAR	SURAJNAGAR TO SHIRDIPURAM	7.5	IV
	TAPI	NEPANAGAR TO BURHANPUR	4.6 - 8	IV
	BICHIA	SILPARI TO GADHAWA	3.5	V
	CHAMLA	ALONG BADNAGAR, UJJAIN	4.0	V
	CHOUPAN	ALONG VIJAIPUR	3.4	V
	KALISOT	MANDIDEEP TO SAMARDHA VILLAGE	4.1	V
	KANHAN	KANHAN IN CHINDWARA DISTRICT BOUNDRY	3.2	V
	KATNI	ALONG KATNI	3.5	V
	KUNDA	KHARGONE TO KHEDI KHURD	4.0	V
	MALEI	JAORA TO BARAUDA	3.5	V
	MANDAKINI (MP)	ALONG CHITRAKUT	5.8	V
	NEWAJ	ALONG SHUJALPUR	4.0	V
	PARVATI	BATAWADA TO PILUKHEDI	3.2	V
	SIMRAR	ALONG KATNI	3.9	V
	TONS	CHAKGHAT TO CHAPPAR	3.5	V
	WAINGANGA	CHINDWARA TO BALAGHAT	3.2	V
MAHARASHTRA	GHOD	ANNAPUR TO SHISHUR	10.2	III
	KANHAN	BHANDARA TO NAGPUR	9.8-16.4	III
	KOLAR (MAH)	ALONG KORADI	18.0	III
	KRISHNA	SHINDI TO KURUNDWAD	3.4-14.0	III
	MOR	JALGAON TO AMODA	16.0	III
	PATALGANGA	KHADEPADA TO KOPOLI	5.0-18	III
	PEDHI	NARAYANPUR TO BHATKULI	20.0	III
	PENGANGA	MEHKAR TO UMARKHED	8.6-20	III
	PURNA	DHUPESHWAR TO ASEGAON	10.2-18.4	III
	TAPI	RAVER TO SHAHADA	8.0-12.0	III
	URMODI	DHANGARWADI TO NAGTHANE	12.4	III
	VENNA	MAHABALESHWAR TO MAHULI	7.2-12.5	III
	WAGHUR	SUNASGAON TO SAKEGAON	18.0	III
	WENA	KAWADGHAT TO HINDONGHAT	10.2-13.8	III

	BINDUSAR	SWARAJ NAGAR TO SNEHNAGAR	8.0	IV
	BORI	ALONG AMALNER	9.2	IV
	CHANDRABHAGA	PANDHARPUR TO SHEGAON DHUMALA	7.5-9.5	IV
	DARNA	IGATPURI TO SANSARI	5.0-9.0	IV
	GIRNA	MALEGAON TO JALGAON	6.6-9.0	IV
	HIWARA	PACHORA TO NIMBORA	8.6	IV
	KOYNA	KARAD TO PAPDARDE	8.6	IV
	PEHLAR	PELHAR DAM TO GOLANI NAKA	7.0	IV
	SINA	SOLAPUR TO BANKALAGI	8.5	IV
	TITUR	ALONG CHALISGAON, JALGAON	7.8	IV
	AMBA	BENSE TO ROHA	4.8	V
	BHATSA	SHAHAPUR TO BHADANE	4.8-6.0	V
	GOMAI	LONKHEDA TO SHAHDA	6.0	V
	KAN	KAVATHE TO SAKARI	5.0	V
	MANJEERA	LATUR TO NANDED BRIDGE	5.0	V
	PANCHGANGA	SHIROL TO KOLHAPUR	3.2-5.8	V
	PANZARA	VARKHEDE TO DHULE	6.0	V
	RANGAVALI	TINTEMBA TO NAVAPUR	5.0	V
	SAVITRI	DADLI TO MUTHAVALI	3.2-5.0	V
	SURYA	DHAMNI DAM TO PALGHAR	4.4-5.0	V
	TANSA	ALONG THANE	6.0	V
	ULHAS	KALYAN TO BADLAPUR	4.0-5.0	V
	VAITARNA	GANDHRE TO SARASHI	4.0	V
	VASHISTI	KHERDI TO DALVATNE	3.2-3.4	V
MANIPUR	IMPHAL	KANGLA MOAT TO SAMUROU	3.4-6.4	V
	IRIL	KANGLA SIPHAI TO UKHRUL	3.2	V
	KHUGA	KHUGA LAKE TO CHURACHANDPUR	3.1-3.6	V
	KHUJAIROK	MOREH TO MAOJANG	4.3	V
	LOKCHAO	BISHNUPUR TO LOKTAK LAKE	4.5	V
	MANIPUR	SEKMAIJAN TO THOUBAL	3.6-4.3	V
	THOUBAL	SHONG KONG TO PHADOM	3.5	V
	WANGJING	WANGJING TO HEIROK	4.1-4.3	V
MEGHALAYA	KYRHUKHLA	SUTNGA TO KHLIERIAT	10.0	IV
	NONBAH	NANGSTOIN TO WAHRIAT	6.0-7.5	IV
	UMTREW	BYRNIHAT TO MORANG DALA	6.2-8.0	IV
	LUKHA	MYNDIHATI TO SHYMPLONG	6.0	V
	MYNTDU	JOWAI TO PAMHADEM	5.2	V
MIZORAM	TIAU	ALONG CHAMPHAI	11.3	III
	TLAWNG	ALONG ZOBAWK, SAIRANG TO BAIRABI	3.1-6.7	IV
	TUIPUI	ALONG CHAMPHAI	8.2	IV
	TUIVAWL	ALONG KEIFANG	6.8	IV
	CHITE	ALONG ARMED VENG	3.7	V
	MAT	ALONG SERCHHIP	5.5	V
	SAIKAH	ALONG LAWNGTLAI	4.4	V
	TUIKUAL	ALONG SERCHHIP	6.0	V

	TUIRIAL	ALONG TUIRIAL, AIZWAL	3.4-4.6	V
NAGALAND	DZUNA	ALONG KOHIMA	6.0-13.0	III
	CHATHE	MEDZIPHEMA TO, DIMAPUR	7.0	IV
	DZU	KOHIMA TO DZUKO VALLEY	7.0	IV
	DZUCHA	ALONG KOHIMA	4.0	V
	SANO	ALONG KOHIMA	4.0	V
ODISHA	GURADIH NALLAH	ALONG ROURKELA	11.3	III
	KATHAJODI	CUTTACK TO URALI	5.8-11.2	III
	NANDIRAJHOR	D/S TALCHER	2.7 - 13	III
	DAYA	BHUBANESWAR TO BARAGARH	4.0-7.3	IV
	KUAKHAI	URALI TO BHUBANESWAR	6.7-7.7	IV
	BANGURU NALLAH	ALONG TALCHER RENGALI	3.2	V
	BHEDEN	ALONG BHEDEN	3.6	V
	BRAHAMANI	ROURKELA TO BIRITOL	5.8-6.0	V
	BUDHABALNAGA	MAHULIA TO BARIPADA	3.5	V
	KUSUMI	ALONG ANGUL TALCHER	3.2	V
	MAHANADI	SAMBALPUR TO PARADEEP	3.6	V
	MANGALA	ALONG PURI	5.7	V
	NAGAVALLI	JAYKAYPUR TO RAYAGADA	3.5	V
	NUNA	ALONG BIJIPUR, PURI	3.1	V
	RATNACHIRA	ALONG BHUBHNESHWAR, PURI	3.3	V
	RUSHIKULYA	PRATAPPUR TO GANJAM	3.4	V
	SABULIA	ALONG JAGANNATHPATNA, RAMBHA	5.0	V
	SERUA	KHANDAETA TO SANKHATRASA	4.8	V
PUDUCHERRY	ARASALAR	ALONG KARAIKAL	7.0	IV
	CHUNNAMBAR	ALONG ARIYANKUPPAM	6.0	V
PUNJAB	KALI BEIN	SULTANPUR LODHI TO CONF TO BEAS	9.0	IV
	BEAS	ALONG MUKERIAN	3.8	V
RAJASTHAN	BANAS	ALONG BISALPUR DAM, SWAROOPGANJ, NEWTA DAM	13.2	III
	CHAMBAL	SAWAIMADHOPUR TO KOTA	3.2-4.8	V
SIKKIM	MANEY KHOLA	ADAMPOOL TO BURTUKK	3.2-4.5	V
	RANGIT	DAM SITE (NHPC) TO TREVENI	3.2-3.8	V
	RANICHU	NAMLI TO SINGTAM	3.8-4.0	V
	TEESTA	MELLI TO CHUNGTHANG	4.0-4.3	V
TAMIL NADU	BHAVANI	SIRUMUGAI TO KALINGARAYAN	3.3-6.6	IV
	TAMBIRAPANI	PAPPANKULAM TOARUMUGANERI	3.1-4.0	V
TELANGANA	KARAKAVAGU	ALONG PALWANCHA	18.0	III
	MANER	WARANGAL TO SOMNAPALLI	6-20.0	III
	GODAVARI	BASAR TO KHAMMAM	4.0-9.0	IV
	KINNERSANI	ALONG PALWANCHA	10.0	IV
	KRISHNA	THANGADIGI TO WADAPALLY	5.0-6.0	V
TRIPURA	BURIGAON	ALONG BISHALGARH	3.9	V
	GUMTI	TELKAJILA TO AMARPUR	3.9	V
	HAORA	AGARTALA TO BISHRAMGANJ	3.2-4.0	V
	JURI	ALONG	4.9	V

		DHARMANAGAR		
	KHOWAI	ALONG TELIAMURA	3.3	V
	MANU	ALONG KAILASHAHAR	3.5-3.6	V
UTTAR PRADESH	GOMTI	SITAPUR TO VARANASI	3.1-18.0	III
	GANGA	KANNAUJ TO VARANASI	3.5-8.8	IV
	RAMGANGA	MURADABAD TO KANNAUJ	6.6	IV
	BETWA	HAMIRPUR TO WAGPURA	3.5-4.2	V
	GHAGHARA	BARHALGANJ TO DEORIA	4.0-4.5	V
	RAPTI	DOMINGARH TO RAJGHAT	4.7-5.9	V
	SAI	UNNAO TO JAUNPUR	4.0-4.5	V
	SARYU	AYODHYA TO ELAFATGANJ	4.3	V
UTTARAKHAND	KALYANI	D/S PANT NAGAR	16.0	III
	GANGA	HARIDWAR TO SULTANPUR	6.6	IV
	KOSI	SULTANPUR TO PATTIKALAN	6.4	IV
	NANDOUR	ALONG SITARGANJ	5.6-8.0	IV
	PILKHAR	IN THE VICINITY OF RUDRAPUR	10.0	IV
WEST BENGAL	CHURNI	SANTIPUR TOWN TO MAJHADIA	10.3-11.3	III
	DWARKA	TARAPITH TO SADHAK BAMDEB GHAT	5.6-17.0	III
	GANGA	TRIBENI TO DIAMOND HARBOUR	5.0-12.2	III
	DAMODAR	DURGACHAKM TO DISHERGARH	4.4-8.2	IV
	JALANGI	LAAL DIGHI TO KRISHNA NAGAR	8.3	IV
	KANSI	MIDNAPORE TO RAMNAGAR	9.9	IV
	MATHABHANGA	MADHUPUR TO GOBINDAPUR	8.5	IV
	BARAKAR	KULTI TO ASANSOL	5.7	V
	DWARAKESHWAR	ALONG BANKURA	1-5.6	V
	KALJANI	BITALA TO ALIPURDWAR	6.0	V
	KAROLA	JALPAIGURI TO THAKURER KAMAT	3.9	V
	MAYURKASHI	SURI TO DURGAPUR	5.2	V
	RUPNARAYAN	KOLAGHAT TO BENAPUR	3.1-5.8	V
	SILABATI	GHATAL TO NISCHINDIPUR	3.8	V
	TEESTA	SILIGURI TO PAHARPUR	3.3	V

48. In view of above, it is absolutely necessary that Action Plans are prepared to restore the polluted river stretches to the prescribed standards. The Action Plans may cover the following:

A) Source control

Source control includes industrial pollution control and treatment and disposal of domestic sewage as detailed below:-

(a) Industrial pollution control

(i) Inventorisation of industries

(ii) Categories of industry and effluent quality

(iii) Treatment of effluents, compliance with standards and mode of disposal of effluents

(iv) Regulatory regime.

(b) Channelization, treatment, utilization and disposal of treated domestic sewage.

(i) Identification of towns in the catchment of river and estimation of quantity of sewage generated and existing sewage treatment capacities to arrive at the gap between the sewage generation and treatment capacities;

(ii) Storm water drains now carrying sewage and sullage joining river and interception and diversion of sewage to STPs,

(iii) Treatment and disposal of septage and controlling open defecation,
(iv) Identification of towns for installing sewerage system and sewage treatment plants.

(B) River catchment/Basin Management-Controlled ground water extraction and periodic quality assessment

(i) Periodic assessment of groundwater resources and regulation of ground water extraction by industries particularly in over exploited and critical zones/blocks.

(ii) Ground water re-charging /rain water harvesting

(iii) Periodic ground water quality assessment and remedial actions in case of contaminated groundwater tube wells/bore wells or hand pumps.

(iv) Assessment of the need for regulating use of ground water for irrigation purposes.

(C) Flood Plain Zone.

(i) Regulating activities in flood plain zone.
(ii) Management of Municipal, Plastic, Hazardous, Bio-medical and Electrical and Electronic wastes.
(iii) Greenery development- Plantation plan.

(D) Ecological/Environmental Flow (E-Flow)

(a) Issues relating to E-Flow
(b) Irrigation practices

(E) Such other issues which may be found relevant for restoring water quality to the prescribed standards.

49. Model Action Plan for Hindon River, already prepared by the CPCB, may also be taken into account.

50. In view of above, we consider it necessary to issue the following directions:

i) All States and Union Territories are directed to prepare action plans within two months for bringing all the polluted river stretches to be fit at least for bathing purposes (i.e BOD < 3 mg/L and FC < 500 MPN/100 ml) within six months from the date of finalisation of the action plans.

ii) The action plans may be prepared by four-member Committee comprising, Director, Environment., Director, Urban Development., Director, Industries., Member Secretary, State Pollution Control Board of concerned State. This Committee will also be the Monitoring Committee for execution of the action plan. The Committee may be called ''River Rejuvenation Committee'' (RRC). The RRC will function under the overall supervision and coordination of Principal Secretary, Environment of the concerned State/Union Territory.

iii) The action plan will include components like identification of polluting sources including functioning/ status of STPs/ETPs/CETP and solid waste management and processing facilities, quantification and characterisation of solid waste, trade and sewage generated in the catchment area of polluted river stretch. The action plan will address issues relating to; ground water extraction, adopting good irrigation practices, protection and management of Flood Plain Zones (FPZ), rain water harvesting, ground water charging, maintaining minimum environmental flow of river and plantation on both sides of the river. Setting up of biodiversity parks on flood plains by removing encroachment shall also be considered as an important component for river rejuvenation. The action plan should focus on proper interception and diversion of sewage carrying drains to the Sewage Treatment Plant (STP) and emphasis should be on utilization of treated sewage so as to minimize extraction of ground or surface water. The action plan should have speedy, definite or specific timelines for execution of steps. Provision may be made to pool the resources, utilizing funds from State budgets, local bodies, State Pollution Control Board/ Committee and out of Central Schemes.

iv) The Action Plans may be subjected to a random scrutiny by a task team of the CPCB.

v) The Chief Secretaries of the State and Administrators/ Advisors to Administrators of the Union Territories will be personally accountable for failure to formulate action plan, as directed.

vi) All States and Union Territories are required to send a copy of Action Plan to CPCB especially w.r.t Priority I & Priority II stretches for approval.

vii) The States and the Union Territories concern are directed to set up Special Environment Surveillance Task Force, comprising nominees of District Magistrate, Superintendent of Police, Regional Officer of State Pollution Control Board and one person to be nominated by District Judge in his capacity as Chairman of Legal Services Authority on the pattern of direction of this Tribunal dated 07.08.2018, in *Original Application No. 138/2016 (T_{NHRC}), "Stench Grips Mansa's Sacred Ghaggar River (Suo-Motu Case).*

viii) The Task Force will also ensure that no illegal mining takes place in river beds of such polluted stretches.

ix) The RRC will have a website inviting public participation from educational institutions, religious institutions and commercial establishments. Achievement and failure may also be published on such website. The Committee may consider suitably rewarding those contributing significantly to the success of the project.

x) The RRCs will have the authority to recover the cost of rejuvenation in Polluter Pays Principle from those who may be responsible for the pollution, to the extent found necessary. In this regard, principle laid down by this Tribunal in order dated 13.07.2017 in *O.A No. 200 of 2014, M.C Mehta Vs. U.O.I* will apply. Voluntary donations, CSR contribution, voluntary services and private participation may be considered in consultation with the RRC.

51. We understand that the State Pollution Control Boards or other authorities are having funds deposited under the order of the Tribunal besides funds available

under Consent Mechanism. The said funds may be utilized for the purpose of expenditure for the Committees, including preparation and execution of action plans in accordance with the provisions contained in the Water Act, 1974.

52. A copy of this be sent by e-mail to all the concerned i.e. the Ministry of Water Resources, Ministry of Environment, Forest & Climate Change, Ministry of Housing and Urban Affairs, the Niti Ayog, National Mission for Clean Ganga, Central Pollution Control Board, Chief Secretaries of all the States and Union Territories for compliance.

53. The RRCs will send progress reports by e-mail at filing.ngt@gmail.com on or before 15.12.2018.

54. Needless to say, that order of National Green Tribunal is binding as a decree of Court and non-compliance is actionable by way of punitive action including prosecution, in terms of the National Green Tribunal Act, 2010.

55. Put up for consideration of the Report on 19th December, 2018.

……., CP
(Adarsh Kumar Goel)

……..,JM
(S.P. Wangdi)

……..,EM
(Dr. Nagin Nanda)

New Delhi
September 20, 2018