

Reserved Judgment

IN THE HIGH COURT OF UTTARAKHAND AT NAINITAL

Writ Petition (PIL) No.140 of 2015

Reserved on: 09.11.2016

Delivered on: 02.12.2016

Lalit Miglani

..... **Petitioner**

Versus

State of Uttarakhand & others

... **Respondents**

Mr. Pankaj Miglani, Advocate for the petitioner.

Mr. Pradeep Joshi, Standing Counsel, for the State/respondent nos.1 & 3.

None for respondent no.2.

Mr. Rakesh Thapliyal, Advocate, for respondent no.4.

Mr. Lalit Sharma, Advocate, for the Union of India.

Coram: Hon'ble Rajiv Sharma , J.

Hon'ble Alok Singh, J.

Per: Hon. Rajiv Sharma, J.

On the oral prayer of learned counsel for the petitioner, (1) National Mission for Clean Ganga through its Director, (2) Secretary, Ministry of Environment, Forest and Climate Change, (3) Central Pollution Control Board and (4) Union of India through Ministry of Water Resources, River Development and Ganga Rejuvenation, are added as respondent nos.5, 6, 7 and 8 respectively. Registry is directed to implead those respondents in the array of parties.

2. The present petition, in the nature of public interest litigation, has been instituted by an advocate practicing in this Court. Petitioner has highlighted the pollution of river Ganga. According to the averments made in the petition, the authorities are remiss in discharge of their statutory duties. It is averred in the petition that the Uttarakhand Environment Protection and Pollution Control Board (UEPPCB) conducted a study and slotted the water of river Ganga in four categories: (a)

being fit for drinking, (b) for bathing, (c) for agriculture and (d) for excessive pollution. The level of coliform bacteria in the river water is above the prescribed limit. The coliform found in the water should be below 50 mpn/100 ml to be fit for drinking; less than 500 mpn/100 ml for bathing and below 5000 mpn/100 ml for agricultural use. The present level of coliform in river Ganga has reached 5500 mpn/100 ml. The main cause attributed to the higher level of coliform is the disposal of human faeces, urine and sewage directly thrown into the river from its origin in Gaumukh till it reaches Haridwar. A startling revelation has been made in the petition that the sewage of 89 million litres per day (mld) is released into river Ganga from 12 municipal towns that fall along its route. The quality of river Ganga has deteriorated so much that is not fit even for taking a bath. The untreated wastewater and effluents from various units are also discharged directly into the river. The Sewage Treatment Plant (STP) at Jagjeetpur alone releases 129 million litres daily in the Ganga with a faecal coliform concentration of about 34 million/100 ml. It causes serious threats to the quality of river water as well as health hazards to million of devotees and the people who are dependent on the river.

3. According to the averments made in the petition, though the respondents are aware of the situation of further decreasing quality of water, but they have not taken any preventive or remedial measures. The flora and fauna dependent on the river is also adversely affected. It is not only the Municipal Corporations, Municipal Councils and Nagar Panchayats,

who are directly releasing the untreated waste in the water, but several Ashrams are also throwing faecal waste in Ganga. Petitioner has highlighted that the sewer lines should be diverted away from river Ganga and the capacity of Sewage Treatment Plants be enhanced.

4. A reply has been filed on behalf of respondent no.2 on the affidavit of Sri S.S. Pal, Scientific Officer, Uttarakhand Environment Protection & Pollution Control Board, Dehradun. According to the reply filed, the water quality at Laxman Jhula, Rishikesh meets Category 'A' standards, whereas at Harki Paudi, Haridwar, the water quality meets the 'B' category standards. The respondent-State Pollution Control Board, itself, has admitted that the water of Ganga is not fit for drinking at Haridwar. It has also categorically been admitted in the reply that though, the level of coliform is high but all other parameters, such as Dissolved Oxygen and Bio Chemical Oxygen Demand are well within limits. The STPs located at Haridwar and Rishikesh are regularly being monitored. There is one operational Sewage Treatment Plant (STP) of 3-MLD capacity at Swargashram and 6-MLD Oxidation Pond at Rishikesh, which are also operational. Further, 3 more STPs are in operation in Haridwar having the respective capacity of 18 MLD, 27MLD and 18MLD. In pursuance of the inspections carried out by a Joint Inspection Team at Haridwar and Rishikesh, it was found that the existing STPS are under-capacity in comparison to the sewage load that is received from two towns. The matter has been taken up with Uttarakhand Peyjal Nigam and Uttarkhand Jal Sansthan to take appropriate

measures for treatment of the sewage generated/collected from Haridwar and Rishikesh. Respondent No.2 has issued 82 Show cause notices and 44 Closure notices in the year 2014-15. In the year 2015-16, 180 Show cause notices and 106 Closure Notices were issued to the defaulting units, industries, hotels etc. in the State due to non-compliance of the provisions of the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1986.

5. Necessary directions have also been issued to the grossly polluted industries like Pulp & Paper Industries, Sugar Industries, Distilleries, Textile industries etc. for installation of Real Time Effluent Quality Monitoring Systems at their effluent outlet points. Furthermore, the Real Time Monitoring Systems have been installed and Real Time Data is being transmitted to the Central Pollution Control Board and the State Pollution Control Board. Directions have also been issued to as many as Seven Ashrams/Dharamshalas situated in Haridwar, which were disposing the wastewater into the drain leading to river Ganga, to stop the disposal of wastewater generated from their premises. Directions have also been issued to Bharat Heavy Electricals Ltd., Ranipur, Haridwar for installation of 11 MLD Capacity Sewage Treatment Plant (STP). Further directions were issued by respondent no.2 to as many as 21 Hydroelectric Projects located in the mainstream of Ganga for installation of Sewage Treatment Plants of appropriate capacity during construction phase and operational phase. Furthermore, Closure notices have also been issued to 12 Hotels

situated in the main course of Ganga due to non-compliance of provisions of the Water (Prevention and Control of Pollution) Act, 1974.

6. A reply on behalf of respondent no.1- State of Uttarakhand has also been filed on the affidavit of Mr. Ranjit Singh, Deputy Secretary, Peyjal, Govt. of Uttarakhand, Dehradun. It has been averred in the reply that the State Government had instructed Uttarakhand Peyjal Nigam to prepare the DPR for stopping the pollution during Ardh Kumbh, 2016. The Uttarakhand Peyjal Nigam has prepared a DPR amounting to Rs.266.09 crores for interception and diversion of leftover drains for treatment to Sewage Treatment Plants (STPs), new STPs, up-gradation of existing STPs and other appurtenant works at Haridwar. The same was forwarded by the State Programme Management Group to the National Mission for Clean Ganga in the month of October, 2015 for approval and release of funds, however, the sanction of the DPR from the Govt. of India is still awaited.

7. It has also been stated that 80-85 MLD sewage is being received at STP, Jagjeetpur against which 45 MLD is presently being treated and working properly to meet all parameters/norms. For the treatment of remaining 35-40 MLD sewage, a DPR of 40 MLD STP at Jagjeetpur has already been sanctioned by the National Mission for Clean Ganga on 29th September, 2015, for which, bids were invited by the Uttarakhand Peyjal Nigam but the National Mission for Clean Ganga directed to put the bidding process on hold as the Govt. of India is considering to construct the said STP on PPP Model.

8. It has been admitted in the reply that in Haridwar town, there are 22 drains which are leading to River Ganga out of which 17 are tapped (16 drains maintained by Uttarakhand Jal Sansthan and 01 is maintained by Uttarakhand Peyjal Nigam). For interception and diversion of remaining 5 Nalas, DPR of Rs.266.09 crores (which includes other works also) have already been prepared by Uttarakhand Peyjal Nigam and submitted for approval and release of fund to National Mission for Clean Ganga on 5.10.2015 but the decision is still awaited.

9. Water is one of the basic elements. Neither human beings nor any animals or aquatic life can survive without water. There cannot be any vegetation without water. Every citizen has a right to clean water under Article 21 of the Constitution of India to get clean water which is also the basic human right.

10. The River Ganga is a way of life for all Hindus, however, as of today, the river is most polluted due to continuous discharge of sewage and industrial effluents. There is a growing need to control and prevent the pollution into river Ganga and restoration of quality of river water. It would be apt to mention at this stage that the respondent no.2- Uttarakhand Environment Protection & Pollution Control Board is remiss in discharge of its statutory duties. The stringent provisions are contained in the Water (Prevention and Control of Pollution) Act, 1974 and the Environment (Protection) Act, 1986. We give the last opportunity to respondent no.2- Uttarakhand Environment Protection & Pollution Control Board to strictly comply with the environmental

laws failing which the Court may order for its dissolution. In that eventuality, the duties, being discharged by respondent no.2, would be delegated to the Central Pollution Control Board in order to save River Ganga.

11. The Central Pollution Board is directed to take stern action against the officers/officials of respondent no.2 -Uttarakhand Environment Protection & Pollution Control Board for not implementing the environmental laws in the State of Uttarakhand.

12. We have also gone through the pictures placed on record by the petitioner, whereby several Drains are opening in river Ganga. There is plastic strewn in the rivers, river banks, public places i.e. bus stand, railway station, parks etc. Huge garbage is dumped on the banks of river Ganga. The Pooja Samagri is also dumped in the river. The industrial waste/effluents are being thrown in the river directly. Seven Ashrams are disposing the wastewater directly in the river which has lead to decrease the quality of water.

13. What emerges out from the facts, as enumerated hereinabove, that the quality of river Ganga is deteriorating rapidly everyday. The water is not fit for drinking at Haridwar.

14. The Parliament has enacted the Water (Prevention and Control of Pollution) Act, 1974 (hereinafter to be referred as the Act of 1974). The Statement of Objects and Reasons of the said Act are that the problem of pollution of river and streams has assumed considerable importance and urgency in recent years as a result of the growth of industries and the

increasing tendency to urbanization. Thus, it is essential to ensure that the domestic and industrial effluents are not allowed to be discharged into the watercourse without adequate treatment as such discharges would render the water unsuitable as source of drinking water as well as for supporting fish life and for use in irrigation. Pollution of rivers and streams also causes increasing damage to the country's economy. Section 2(dd) of the Act of 1974 explains the term 'outlet' to include any conduit pipe or channel, open or closed, carrying sewage or trade effluent or any other holding arrangement which causes, or is likely to cause, pollution. Pollution has been defined under Section 2(e). The term 'sewage effluent' has been defined under Section 2(g) which means effluent from any sewerage system or sewage disposal works and includes sullage from open drains. Section 2(gg) explains the 'sewer' to mean any conduit pipe or channel, open or closed, carrying sewage or trade effluent. As per Section 2(j), the 'stream' includes (i) river; (ii) water course (whether flowing or for the time being dry); (iii) inland water (whether natural or artificial); iv) sub-terranean waters and (v) sea or tidal waters to such extent or, as the case may be, to such point as the State Government may, by notification in the Official Gazette, specify in this behalf. Section 2(k) defines 'trade effluent' which includes any liquid, gaseous or solid substance which is discharged from any premises used for carrying on any [Industry, operation or process, or treatment and disposal system], other than domestic sewage. Section 3 of the Act of 1974 provides for Constitution of a Central Board and Section 4 empowers the State to constitute the State Boards. The functions of

the State Board are laid down under Section 17 of the Act. Every such Board is bound by the directions, issued in writing, as the Central Government or the State Government, as the case may be, may give to it. Section 18 of the Act reads as follows: -

“18. POWERS TO GIVE DIRECTIONS.

[1] In the performance of its functions under this Act --

(a) the Central Board shall be bound by such directions in writing as the Central Board may give to it; and

(b) every State Board shall be bound by such directions in writing as the Central Board or the State Government may give to it:

Provided that where a direction given by the State Government is inconsistent with the direction given by the Central Board, the matter shall be referred to the Central Government for its decision.

[(2) Where the Central Government is of the opinion that the State Board has defaulted in complying with any directions given by the Central Board under sub-section (1) and as a result of such default a grave emergency has arisen and it is necessary or expedient so to do in the public interest, it may, by order, direct the Central Board to perform any of the functions of the State Board in relation to such area for such period and for such purposes, as may be specified in the order.

(3) Where the Central Board performs any of the functions of the State Board in pursuance of a direction under sub-section (2), the expenses, if any, incurred by the Central Board with respect to performance of such functions may, if the State Board is empowered to recover such expenses, be recovered by the Central Board with interest (at such reasonable rate as the Central Government may, by order, fix) from the date when a demand for such expenses is made until it is paid from the person or persons concerned as arrears of land revenue or of public demand.

(4) For the removal of doubts, it is hereby declared that any directions to perform the functions of any State Board given under sub-

section (2) in respect of any area would not preclude the State Board from performing such functions in any other area in the State or any of its other functions in that area].

15. Section 21 of the Act of 1974 empowers the State Board or any officer empowered by it, to take samples of effluents and procedure to be followed in connection therewith.

16. Section 24 deals with Prohibition on use of stream or well for disposal of polluting water etc. while Section 25 provides for restrictions on new outlets and new discharges. Sections 24 and 25 are quoted hereinbelow: -

“24. PROHIBITION ON USE OF STREAM OR WELL FOR DISPOSAL OF POLLUTING MATTER, ETC.

(1) Subject to the provisions of this section, -

(a) no person shall knowingly cause or permit any poisonous, noxious or polluting matter determined in accordance with such standards as may be laid down by the State Board to enter (whether directly or indirectly) into any 40[stream or well or sewer or on land]; or

(b) no person shall knowingly cause or permit to enter into any stream any other matter which may tend, either directly or in combination with similar matters, to impede the proper flow of the water of the stream in a manner leading or likely to lead to a substantial aggravation of pollution due to other causes or of its consequences.

(2) A person shall not be guilty of an offence under sub-section (1), by reason only of having done or caused to be done any of the following acts, namely;-

(a) constructing, improving or maintaining in or across or on the bank or bed of any stream any

building, bridge, weir, dam, sluice, dock, pier, drain or sewer or other permanent works which he has a right to construct, improve or maintain;

(b) depositing any materials on the bank or in the bed of any stream for the purpose of reclaiming land or for supporting, repairing or protecting the bank or bed of such stream provided such materials are not capable of polluting such stream;

(c) putting into an stream any sand or gravel or other natural deposit which has flowed from or been deposited by the current of such stream;

(d) causing or permitting, with the consent of the State Board, the deposit accumulated in a well, pond or reservoir to enter into any stream.

(3) The State Government may, after consultation with, or on the recommendation of, the State Board, exempt, by notification in the Official Gazette, any person from the operation of subsection (1) subject to such conditions, if any, as may be specified in the notification and any condition so specified may by a like notification and be altered, varied or amended.

25. RESTRICTIONS ON NEW OUTLETS AND NEW DISCHARGES.

41[(1) Subject to the provisions of this section, no person shall, without the previous consent of the State Board,--

(a) establish or take any steps to establish any industry, operation or process, or any treatment and disposal system or an extension or addition thereto, which is likely to discharge sewage or trade effluent into a stream or well or sewer or on land (such discharge being hereafter in this section referred to as discharge of sewage); or

(b) bring into use any new or altered outlets for the discharge of sewage; or

(c) begin to make any new discharge of sewage;

Provided that a person in the process of taking any steps to establish any industry, operation or process immediately before the commencement of the Water (Prevention and Control of Pollution) Amendment Act, 1988, for which no consent was necessary prior to such commencement, may continue to do so for a period of three months from such commencement or, if he has made an application for such consent, within the said period of three months, till the disposal of such application.

(2) An applications for consent of the State Board under sub-section (1) shall be made in such form, contain such particulars and shall be accompanied by such fees as may be prescribed.]

(3) The State Board may make such inquiry as it may deem fit in respect of the application for consent referred to in sub-section (1) and in making any such inquiry shall follow such procedure as may be prescribed.

[(4) The State Board may --

(a) grant its consent referred to in sub-section (1), subject to such conditions as it may impose, being--

(i) in cases referred to in clauses (a) and (b) of sub-section (1) of section 25, conditions as to the point of discharge of sewage or as to the use of that outlet or any other outlet for discharge of sewage;

(ii) in the case of a new discharge, conditions as to the nature and composition, temperature, volume or rate of discharge of the effluent from the land or premises from which the discharge or new discharge is to be made; and

(iii) that the consent will be valid only for such period as may be specified in the order,

and any such conditions imposed shall be binding on any person establishing or taking any steps to establish any industry, operation or process, or treatment and disposal system or extension or addition thereto, or using the new or

altered outlet, or discharging the effluent from the land or premises aforesaid; or

(b) refuse such consent for reasons to be recorded in writing.

(5) Where, without the consent of the State Board, any industry operation or process, or any treatment and disposal system or any extension or addition thereto, is established, or any steps for such establishment have been taken or a new or altered outlet is brought into use for the discharge of sewage or a new discharge of sewage is made, the State Board may serve on the person who has established or taken steps to establish any industry, operation or process, or any treatment and disposal system or any extension or addition thereto, or using the outlet, or making the discharge, as the case may be, a notice imposing any such conditions as it might have imposed on an application for its consent in respect of such establishment, such outlet or discharge.

(6) Every State Board shall maintain a register containing particulars or conditions imposed under this section and so much of the register as relates to any outlet, or to any effluent, from any land or premises shall be open to inspection at all reasonable hours by any person interested in, or affected by such outlet, land or premises, as the case may be, or by any person authorised by him in this behalf and the conditions so contained in such register shall be conclusive proof that the consent was granted subject to such conditions.]

(7) The consent referred to in sub-section (1) shall, unless given or refused earlier, be deemed to have been given unconditionally on the expiry of a period of four months of the making of an application in this behalf complete in all respects to the State Board.

(8) For the purposes of this section and sections 27 and 30,-

(a) the expression "new or altered outlet" means any outlet which is wholly or partly constructed

on or after the commencement of this Act or which (whether so constructed or not) is substantially altered after such commencement;

(b) the expression "new discharge" means a discharge which is not, as respects the nature and composition, temperature, volume, and rate of discharge of the effluent substantially a continuation of a discharge made within the preceding twelve months (whether by the same or different outlet), so however that a discharge which is in other respects a continuation of previous discharge made as aforesaid shall not be deemed to be a new discharge by reason of any reduction of the temperature or volume or rate of discharge of the effluent as compared with the previous discharge."

17. Section 32 of the Act provides for emergency measures to be resorted to in case of pollution of stream or well. The Board is also empowered to make an application to the Courts for restraining the person from polluting the water in any stream or well. Chapter VII of the Act deals with the penalties and procedure.

18. The Parliament has also enacted the Environment (Protection) Act, 1986 (*hereinafter to be referred as the Act of 1986*). Section 2(a) of the said Act defines 'environment', 2(b) 'environmental pollutant' and 2(c) 'environmental pollution'. Section 3 empowers the Central Government to take measures to protect and improve environment. Section 7 lays down that any person carrying on industry, operation or process, shall discharge or emit or permit to be discharged or emitted any environmental pollutant in excess of such standards as may be prescribed. Section 15 provides that whoever fails to comply with or contravenes any of the provisions of this Act, or the rules made or orders or directions

issued thereunder, shall, in respect of each such failure or contravention, be punishable with imprisonment for a term which may extend to five years with fine which may extend to one lakh rupees, or with both, and in case the failure or contravention continues, with additional fine which may extend to five thousand rupees for every day during which such failure or contravention continues after the conviction for the first such failure or contravention.

19. Section 16 of the Act of 1986 provides that where any offence under the Act has been committed by a company, every person who, at the time the offence was committed, was directly in charge of, and was responsible to, the company for the conduct of the business of the company, as well as the company, shall be deemed to be guilty of the offence and shall be liable to be proceeded against and punished accordingly.

20. According to Section 17 of the Act of 1986, where an offence under the Act has been committed by any Department of Government, the Head of the Department shall be deemed to be guilty of the offence and shall be liable to be proceeded against and punished accordingly. Cognizable offences have been defined under Section 19 of the Act of 1986.

21. The Central Government has also framed the Environment (Protection) Rules, 1986. The Board has merely issued the Show cause Notice and Closure Notices without even caring to see whether the industries, in fact, have been closed or not. It could also take emergency measures as per Section 32 of the Act of 1974 and/or as per the provisions of Section 33 of the said Act, it could

have approached the Court for restraining the person from polluting the water in any stream or well. Respondent no.2- State Board could also launch the criminal proceedings against the defaulters.

22. In case the provisions of Act of 1974 were strictly enforced by respondent no.2-Board, the things would not have come to such a sorry pass. The Central Government could also not be oblivious to the non-functioning of the statutory body i.e. respondent no.2. The Central Government ought to have issued the directions to the respondent no.2- State Pollution Control Board under Section 18 of the Act of 1974 to implement the provisions of the Act strictly. The State Government, on its part, has also not chosen to take any action, till date, against the respondent no.2-Board. We impress upon the State Government to take appropriate action against the respondent no.2 under Section 62 of the said Act since it has failed to discharge its statutory duties under the Act.

23. Under the Act of 1986, and the Rules framed thereunder, certain parameters and standards have been laid down for discharge of effluents for Sugar industry, Small Pulp & Paper Industry, Large Pulp & Paper Industry, Hotel Industry etc. The parameters and standards have also been laid down for Effluent Treatment Plants. The standards have also been laid down for Primary Water Quality for Class SW-I Waters, SW-II Waters, SW-III Waters, SW-IV Waters and SW-V Waters. Parameters for Primary Water Quality Criteria for bathing water (Water used for organized outdoor bathing) have also been laid down. The General

Standards for Discharge of Environmental Pollutants have also been laid down under Schedule VI framed under Rule 3(3A).

24. It is the duty of the statutory authorities to maintain the parameters and standards under the Water (Prevention and Control of Pollution) Act, 1974 as well as under the Environment (Protection) Act, 1986 and the Rules framed thereunder.

25. The onus lies on the respondent no.2 to maintain the standards maintained under the law. The Court can take judicial notice of the fact that the Central Pollution Board as well as the State Pollution Board are well aware that the standards and parameters to maintain the quality of water of holy and scared river Ganga are not being maintained. Stern action, required under the law, has not been taken against the defaulters.

26. In the book 'Aspects of Geology and Environment of the Himalaya' authored by *Charu C. Pant* and *Arun K. Sharma*, the article has been written by *H.C. Nainwal* and *C. Prasad* under the caption 'Studies of Glacial and Glacio-Fluvial Geomorphology of Gangotri Glacier in between Gaumukh and Gangotri, Garhwal Himalaya'. In this article, the Gangotri Glacier has been declared as valley type glacier, which extends from Chaukhamba peak (7000 m a.s.l.) and flows towards northwest, with its snout at Gaumukh (4120 m a.s.l.) The glacier covers a glacierised area of 258.56 km². It is about 30.20 km long, and its width varying from 0.5 to 2.5 km. It is located in the area bounded by latitude 30° 43' 22"-30° 55' 49" N and longitude 79° 4' 41"-79° 16' 34" E. Its three main tributaries viz. Raktvaran, Chaturangi

and Kirti, merge at different altitudes into the trunk glacier. The oldest terminal moraine of the Gangotri glacier is at Sukhi below Jhala which probably represents the snout during the Pleistocene glaciation. According to the authors, the data shows a marked shrinkage in the ice cover. The data shows that within a span of six years, the snow cover shrunk for 3.1% in the peak accumulation period and 3.3% in peak ablation periods. The data collected for 61 years (1936-1996) show that the total recession of Gangotri glacier was 1147 meter, with the average rate of 19 meter per year.

27. In the same book, another article has been written by *Anjani K. Tangri* under the title '*Shrinking Glaciers of Uttarakhand: Cause of Concern and Hope for the Future*'. According to the author, temporal monitoring of the configuration of snout of Gangotri glacier through multi-date satellite data has demonstrated that the snout has been on continuous retreat as well. Between 1962 to 1982, the rate of retreat was 46 m/year. Between 1982 and 1990, the snout retreated at the rate of 40 m/year, between 1990 and 1994, the rate of retreat is recorded as 37.5 m/year, whereas between 1994 and 1998, the rate of retreat of the snout is recorded to be 25 m/year. The rate of retreat of snout of Gangotri glacier has a direct consequence of the rate of rise in regional temperatures.

28. The Central Pollution Control Board has published a compilation on Pollution Assessment: River Ganga in the month of July, 2013. According to this report, the total length of the river Ganga is 2525 kilometres. It travels about 450 kilometres through

Uttarakhand. It is the largest river basin in India. The total surface water resource of Ganga river has been assessed as 33×10^7 cusec out of which 7×10^7 cusec of surface water has been put to use. In addition, the annual groundwater potential for irrigation, domestic and industrial usage in the Ganga basin has been assessed at 11×10^7 cusec and out of which 7×10^7 cusec of groundwater is being used as per records of Central Ground Water Board. There is Upper Ganga Reach, Middle Ganga Reach and Lower Ganga Reach. The river Ganga, in the upper reaches, flows on a steep and narrow bed, mostly rocks and boulders. This reach is considered to have immense potential for harnessing hydropower. The river in the middle reach enters and flows in plains, meandering mostly on a bed of fine sand. The lower Ganga reach has wide and considerable changes in the sediment transport and deposition is observed which eventually leads to frequent change in the river course and wide spread flooding.

29. In order to assess the water quality of river Ganga, the Central Pollution Control Board has set up 57 water quality monitoring stations on the main stem of river Ganga, in association with State Pollution Control Boards of Uttarakhand, Uttar Pradesh, Bihar, Jharkhand and West Bengal. There are 11 Water Quality Monitoring Stations in the State of Uttarakhand. The monitoring results obtained during 2011 under National Water Quality Monitoring Programme reflect that organic matter and bacterial population of faecal origin continue to dominate the pollution problem in River Ganga. The major water quality concerns, as revealed from the

monitoring results, are pathogenic pollution as reflected through indicators i.e. Total Coliforms (TC) & Faecal Coliform (FC), organic matter as reflected through Biochemical Oxygen Demand (BOD). The water quality assessment in Uttarakhand, as per BOD, ranges from 0.2-11.0 mg/l. The highest value 11.0 mg/l is observed at D/s Haridwar. River Ganga at D/s of Raiwala and D/s of Rishikesh is not meeting the water quality criteria for bathing with respect to BOD. The Faecal Coliform value ranges from 5-46000 MPN/100ml and not meeting the water quality criteria for bathing in river Alaknanda at Rudraprayag before confluence and after confluence, River Mandakini and at Devprayag. The Total Coliform value ranges from 5-58000 which do not meet the primary water criteria based on designated best use of category 'C' at all monitored locations of river Alaknanda and Mandakini; and in river Ganga at downstream Raiwala and downstream Haridwar. The higher value of coliform bacteria and organic pollution is observed in Upper Ganga due to open defecation and discharge of waste water directly through small drains into the river. It is also observed that the location Haridwar appears as a critical condition.

30. As far as spatial and temporal trend of water quality is concerned, as per the Water Quality Assessment, the standards and parameters of the water quality has deteriorated in the Upper Stretch of Uttar Pradesh. The BOD does not comply with the standards at most of locations for the period 2006-2011. On an average, the river Ganga, in upper and lower stretch of Uttar Pradesh, was polluted. The quality of water, when

the river entered in Bihar, was also poor. The Total Coliform Values range from 1400-90,000 do not meet the criteria. Higher faecal coliform is observed than the criteria at most of the monitored locations. The water quality of River Ganga with respect to DO, BOD, Faecal Coliform, Total Coliform and conductivity in the stretch of West Bengal from Baharampur to Diamond Harbour for the year 2011, also did not meet the required parameters. All the riparian States have the right to get the unpolluted water to use for irrigation, bathing and drinking purposes.

31. According to the report, there are 36 Class-I cities and 14 Class-II towns along the mainstream of Ganga. Fifty cities (Class I & Class II) discharge 2723.3 MLD wastewater, out of which 1208.8 MLD has the treatment capacities i.e. 44%. The contribution of Class I cities is 96% of total wastewater generation and the treatment capacity is almost 99% of the total treatment capacity. The discharge of sewage generation in Ganga River by Class-I city in Uttarakhand at Haridwar was 39.6 MLD with the treatment capacity of only 18.0 MLD. Similarly, in the States of Uttar Pradesh, Bihar and West Bengal, the sewage generation was more than its treatment. In the State of Uttar Pradesh, the total sewage generation of Class-I cities was 873.9 MLD and the treatment capacity was only 460.8 MLD. IN the State of Bihar, total sewage generation was 376.5 MLD with the treatment capacity of only 165.2 MLD. In the State of West Bengal, the sewage generation was 1311.3 MLD while the Treatment Capacity was only 548.4 MLD.

32. State of Uttarakhand generated 39.6 MLD i.e. about 27% of total wastewater generation. Uttar Pradesh generated 873.9 MLD i.e. 34% of total wastewater generation. With respect to Bihar, wastewater generation is 376.5 MLD i.e. 14% of total wastewater generation. The State of West Bengal generates 1311 MLD i.e. 50% of total wastewater generation and major city is Kolkata i.e. 47%.

33. For the sewage generation of Class-II towns in Ganga river, State of Uttarakhand has generated total 21.7 MLD of sewage (10.7 MLD at Rishikesh and 11.0 MLD at Roorkee). The capacity of STP is only 6.3 MLD. The total sewage generated in Class-II towns in the State of Uttar Pradesh is 63.5 MLD with the capacity of only 8.1 MLD. In State of Bihar, the total sewage generation is 30.7 MLD with the treatment capacity of merely 2.0 MLD. In West Bengal, the sewage generation of Class-II town in Ganga River is 6.0 with no Treatment Plant.

34. In Uttarakhand, total sewage generation was 21.7 MLD whereas the treatment capacity was 6.3 MLD (29.03%). In Uttar Pradesh, the sewage generation is 63.5 MLD and total treatment capacity is 8.5 MLD (12.75%). The discharge of sewage in State of Bihar is 30.7 MLD whereas treatment capacity is only 2 MLD (6.5%). The sewage generation from Class-I cities is highest in West Bengal followed by Uttar Pradesh, Bihar and Uttarakhand. In Class-II towns, sewage generation in Uttar Pradesh is highest followed by Bihar, Uttarakhand and West Bengal. The major urban centres generating substantial volume of sewage are Kanpur, Allahabad, Varanasi, Patna, Bhagalpur and Kolkata.

There is gap of 1515 MLD in between assessment of sewage generation and development of treatment capacity.

35. The Central Pollution Control Board has identified 64 Sewage Treatment Plants under Ganga River Catchment and Ministry of Environment & Forest has sanctioned 52 STPs. In Uttarakhand, 4 STPs are monitored and their total capacity is 54 MLD. One STP exceeds the BOD and COD limits.

36. In Uttar Pradesh, 8 number of STPs are monitored having total installed capacity is 358 MLD out of which 287 MLD is utilized. 4 STPs exceed the BOD limits and 1 STP was found to be non-operational.

37. In State of Bihar, 5 STPs are monitored having total installed capacity of 140 MLD whereas actual utilization is 100 MLD. One (1) STP was found non-operational, 1 STP exceeds the BOD limits.

38. In West Bengal, 34 numbers of STPs were monitored and their total installed capacity was 457 MLD whereas their actual utilization was only 214 MLD which is 49%. Three (3) STPs exceed the BOD limit whereas COD limit of all STPs is under the prescribed limit. 13 STPs were found non-operational.

39. Drains are the channels which are either man made or available in the system naturally to carry storm water to its disposal point which can be either a river or a lake/pond or sea. However, in absence of sewerage systems, drains are turned into open sewers to carry storm water and sewage. The Central Pollution Control Board has identified 138 drains discharging 6087 MLD of

wastewater. In Uttarakhand, 14 nos. of drains are discharging 440 MLD of industrial and domestic wastewater directly/indirectly to river Ganga. In Uttar Pradesh, the drains discharge 3289 MLD of industrial and domestic wastewater through 45 drains. In State of Bihar, 25 number of identified drains discharge 579 MLD of wastewater to river Ganga. In West Bengal, 1779 MLD of wastewater is discharged into river Ganga through 54 drains.

40. 14 drains have been identified in Uttarakhand discharging 440 MLD domestic as well as industrial wastewater directly/indirectly to River Ganga. Rambha nadi/drain (152 MLD) and Laksar drain (196 MLD) are two major drains which contribute 80% of total wastewater discharge directly or indirectly to river Ganga. Total BOD load from 14 drains was 42800 kg/day. Rishikesh region discharges 178.5 MLD directly to Ganga River. In Haridwar, Kassavan drain, Harki Paudi and Pandeywala drain, discharge more than 12 MLD of industrial and domestic wastewater to Upper Ganga Canal. Matri sadan drain and Jagjitpur STP drain carry 46 MLDs of wastewater and merges directly with river Ganga. Laksar drain carries wastewater and merges with Banganga river which ultimately meets Ganga upstream of Bijnore (U.P.).

41. Total discharge by 14 drains was 440 MLD. Laksar drain (44%) and Rambha river (34 %) contributes 348 MLD of flow. BOD load from 14 drains was 42800 kg/day out of which 35868 kg/day from Laskar drain i.e. 84% of total load discharged in river Ganga at Uttarakhand. Rishikesh region contributes 184 MLD of

wastewater from 08 drains with BOD load of 1265 kg/day. In Haridwar region, the total wastewater flow was 60 MLD whereas 48.6 MLD of wastewater flows directly to river Ganga and remaining drains discharge to Upper Ganga Canal. Harki Paudi drain, Kassavan drain, Pandeywala drain discharge 11.4 MLD of wastewater to Upper Ganga canal.

42. In Uttar Pradesh, 3289 MLD of wastewater is discharged into river Ganga through 45 drains.

43. In State of Bihar, 25 numbers of drains were identified having flow of 579 MLD with total BOD load of 99,506 kg/day. Patna city carries 234 MLD of wastewater alone.

44. In the State of West Bengal, 54 drains were identified, out of which 34 drains are located on left bank and contribute 1179 MLD of wastewater to river Ganga and 20 drains are located on right bank of river and add 600 MLD of wastewater.

45. Similarly, the status of water quality of River Ramganga and Kali was observed. River Ramganga originates from Doodhatoli ranges in the district of Pauri Garhwal, Uttarakhand. The river flows south west from Kumaun-Himalaya. It is a tributary of the river Ganga. Ramganga descends upon the plains from the Corbett National Park near Ramnagar in Nainital district and flows through the plains of Kalagarh, Afzalgarh, Moradabad, Rampur, Bareilly, Shahjahanpur and finally merges with river Ganga near Kannauj (Uttar Pradesh). The problem of colour in downstream stretch is encountered due to untreated/partially treated industrial

discharges containing lignin and other organic load. DO concentration of river Ramganga fluctuates from 3.8 mg/l to 9.2 mg/l.

46. River Dhela, Bahela, Kosi, Rampur Drain, Moradabad drain, are the causes of deterioration of water quality of Ramganga.

47. The Kalinadi is an intermittent river, flowing during the monsoon season. It originates near Khatholi town (Uttar Pradesh) and flows through the districts of Meerut, Hapur, Bulandshar, Aligarh, Kasganj and finally merges with river Ganga at Kannauj (Uttar Pradesh).

48. The Central Pollution Control Board has identified 764 industries in the main stem of Ganga viz. Chemical, Distillery, Food, Dairy & Beverage, Pulp & Paper, Sugar, Textile, Bleaching & Dyeing, Tannery and others. Out of those 764 industries, 687 industrial units are in Uttar Pradesh followed by 42 in Uttarakhand. In Uttarakhand, the total pollution caused by 42 industries is 224 MLD and Waste Water Generation is 127 MLD. Wastewater generation is nearly 45% in terms of total water consumption. In terms of water consumption, maximum water is consumed and generated by Pulp and Paper industries. The consumption is followed by sugar industries while generation is followed by chemical industries.

49. Number of grossly polluting industries located in Uttarakhand is 42, out of which, 7 industries are discharging in the main stem of Ganga and located in the region of Dehradun and rest are located in the sub-basin of Ramganga in the region of Kashipur and Udham

Singh Nagar. 96% of generated wastewater is discharged in Ramganga riverine system, which ultimately leads to the main stem of River Ganga at Kannauj Upstream (Uttar Pradesh).

50. The Central Pollution Control Board in its assessment has made the following conclusion: -

“The River Ganga suffers from myriad problems, most significant ones being the lean flow during dry season. Discharge of untreated and/or partially treated sewage and industrial wastewater into the river is a key issue. Diversion of river water through Upper and Lower Ganga canals, leaving virtually very little flow in the main river stream makes dilution difficult even for the treated sewage. In Uttar Pradesh, there is need of treatment of sewage and availability of proper conveyance system for sewage. River Ganga also needs minimum ecological flow for its survival in the stretch of Uttar Pradesh. Since a river is a living eco-system and therefore ultimate goal should be to protect the functioning of the river eco-system. Major Tributaries of river Ganga namely Ramganga and Kali-East need immediate attention as they carry industrial and domestic pollution load of Uttrakhand and Uttar Pradesh. Major industrial sector namely, Tannery, Sugar & Distillery, Pulp and Paper mills contributes significant pollution load to river Ganga and its tributaries. There is immediate need of firm environment surveillance in order to check their compliance with environmental standards. It is

pertinent to mention that incessant discharge of treated sewage (BOD level of 30 mg/l) cannot bring the river water to bathing quality level in lean season, even if sewage get 100% treatment. Therefore, it is necessary that minimum flow throughout the year is maintained to support ecosystem of river and aquatic life. It would be advisable to create more water storage facility for Ganga riverine system and release water in the lean period to effectively maintain minimum flow in the river.”

51. The assessment made by the Central Pollution Control Board depicts the grim reality of the sacred/pious river Ganga. The Sewage Treatment Plants are not working to the maximum capacity. There is an urgent need to set up new STPs by the Central Pollution Control Board as well as the Ministry of Environment, Forest and Climate Change. All the drains opening into the river Ganga are required to be intercepted and diverted. Even after the treatment, the water does not meet the requirements as per the report of the Central Pollution Control Board. The need of the hour is to save river Ganga as well as its tributaries and to minimise the pollution. There has to be sustainable development. The industry is a must for the nation but the necessary precautions are required to be taken to save the environment. The focus is on the sustainable development. It can be termed as “precautionary principles”. All the industries should ensure that no industrial waste is dumped into the rivers without proper

treatment after meeting all the parameters and limits prescribed under the Environment Protection Act.

52. The book *'The Himalayan Gazetteer'* authored by *Edwin Thomas Atkinson* Volume-3, published on 19th February, 1986, defines *Gangotri Glacier* as under: -

"Gangotri, in patti and parganah Taknaur of Tihri, a small temple on the right bank of the Bhagirathi, is situate in north latitude 30^o-59'-10" and east longitude 78^o-59'-30", about ten miles south-east of its source at an elevation of 10,020 feet above the level of the sea. A gunshot below Gangotri the Kedar Ganga, a rapid and considerable stream, debouches into the Bhagirathi at a place called Gaurikund, a place of ablution for pilgrims. The hills here recede a little, and above Gaurikund the bed of the Bhagirathi widens into a small shingly space, in which the river flows rapidly, changing its course as the floods direct it. Just at the gorge of this space a bridge has been thrown across, and just above the bridge, in a bay formed by a reach of the river in this shingly place, fifteen feet above the stream, is situate the small temple dedicated to the goddess Ganga. This was erected by Amr Singh, Thapa, the chief of the Gorkhali commanders in Gargwal early in the present century. The temple is erected on the sacred stone where tradition has it, Bhagirath used to worship Mahadeo. It is a small building of a square form, for about 12 feet high and rounding in to the top in the manner common to temples in the hills. It is quite plain, coloured white with red mouldings, and surmounted with the usual melon-shaped ornament

commonly known as a Turk's cap. From the eastern face of the square which is turned nearly to the sacred source, there is a small projection covered with a stone roof, in which is the entrance facing east, and just opposite to this there is a smaller temple of similar shape dedicated to Bhaironji, as the guardian of the shrine. The larger temple contains small statues of Ganga, Bhagirath, and other deities supposed to be connected with the locality. The whole is surrounded by a wall built of unhewn stone and mortar, and the space this contains is paved with flat stones. In this space, too, there is a comfortable but small house for the officiating Brahmans. Without the enclosure there are a few wooden sheds constructed for the accommodation of pilgrims, who also find shelter in caves formed by overhanging stones, of which there are many.

Fraser writes:-"There are several pools, called by the names Brahmakund, Vishnukund, and others of corresponding import. Ablution in these is considered an import part of the ritual to be observed by pilgrims who visit this spot, considered popularly to be the source of the Ganga, as further progress up the stream is generally, though erroneously, regarded as impracticable. Though this ablution, with due donations to the officiating Brahmans, is considered to cleanse from all offences, the number of pilgrims is not considerable in consequence of the great length and ruggedness of the journey, and the difficulty of obtaining subsistence by the way. Flasks and similar vessels are filled at Gangotri with

the sacred water of the stream, and being sealed by the officiating Brahman, are conveyed to the plains, where they are highly prized. Gangotri is below the upper limit of forests; deodars growing here, though to no great size, and birch trees thriving remarkably. The mean breadth of the Bhagirathi or Ganga here was ascertained by Hodgson, on the 26th of May, to be forty-three feet, the depth eighteen inches, the current very swift, and over rounded stones. On the second of June following, he conjectured its volume to be doubled, in consequence of the rapid melting of the snow. Renuell's account of Gangotri would scarcely have been expected from one who usually displays so much information and judgment, "This great body of water (the Ganga) now forces a passage through the ridge of mount Himmaleh, at the distance possibly of 100 miles below the place of its first approach to it, and, sapping its very foundations, rushes through a cavern, and precipitates itself into a vast basin, which it has worn in the rock at the hither foot of the mountains. The Ganga thus appears to incurious spectators to derive its original springs from this chain of mountains, and the mind of superstition has given to the mouth of the cavern the form of the head of a cow.

This idea is also mentioned by the Persian authors and Pere Tieffenthaler also notices it; but the Brahman priest in charge met there by Fraser in 1816 ridiculed the idea of the stream proceeding from a rock like a cow's mouth, and pointed out the actual source. Herbert estimates the length of the

Bhagirathi from its source near Gangotri to its entrance to the plains at 203 miles. The elevation of the temple above the sea is 10,319 feet. About a kos from Gangotri is a place called Patangani, which is noted as the spot where the five Pandawas remained for twelve years worshipping Mahadeo after his retreat from Lanka to the Himalaya after that they ascended the Swargaruni peak, whence the Ganga flows, and there four of them died and their spirits ascended to heaven. The fifth Yuddhishtira was translated bodily at the same time. Mr. Griffith thus recounts the birth of the Ganga:-

*“Thus urged, the sage recounted both
The birth of Gangá and her growth:
'The mighty hill with metals stored,
Himálaya, is the mountains' lord;
The father of a lovely pair
Of daughters, fairest of the fair
Their mother, offspring of the will
Of Meru, everlasting hill,
Mená, Himálaya's darling, graced
With beauty of her dainty waist.
Gangá was elder-born: then came
The fair one known by Umá's name,
Then all the Gods of heaven, in need
Of Gangá's help their vows to speed,
To great Himálaya came and prayed
The mountain King to yield the maid.
He, not regardless of the weal
Of the three worlds, with holy zeal
His daughter to the Immortals gave,
Gangá whose waters cleanse and save,
Who roams at pleasure, fair and free,
Purging all sinners, to the sea,
The three-pathed Gangá thus obtained
The Gods their heavenly homes regained.*

*Long time the sister Umá passed
In vows austere and rigid fast,
And the king gave the devotee*

*Immortal Rudra's bride to be;
Matching with that unequalled Lord
His Umá through the worlds adored.
So now a glorious station fills*

*Each daughter of the King of Hills:
One honoured as the noblest stream,
One mid the Goddesses supreme.
Thus Gangá, King Himálaya's child,
The heavenly river, undefiled,
Rose bearing with her to the sky
Her waves that bless and purify.'*

Gau-mukh, or the cow's mouth, is the name given to the glacier cavern from which the headwaters issue on the melting of the ice and snow. This glacier has its origin on the western slopes of the Satopanth group of peaks, the eastern slopes of which are covered by the glaciers above Badrinath in the Mana valley. It also is connected with the glaciers along the northern slopes of the Kedarnath peak, on the south face of which is the temple of that name, so that the three great places of pilgrimage are all within a few miles of horizontal distance from each other. The name Gau-mukh is also given to the prayer-bag which conceals the mudras made in the ceremony of the sandhya."

53. The persons who pollute the environment, may be air/water, are liable to compensate the society, at large, under the 'Polluter pays Principle'. The most polluting units which have literally failed to take any remedial or preventive measures, are required to be re-located. The location of workmen is also important. They have to be duly compensated. The State Government is directed to re-locate the most polluting

units as per the ratio laid down by the Hon. Apex Court in the following judgments: -

1. *M.C. Mehta v. U.O.I. & others*, (1996) 4 SCC Page 750.
2. *M.C. Mehta v. U.O.I. & others*, (1997) 11 SCC Page 327.
3. *M.C. Mehta v. U.O.I. & others*, (1999) 2 SCC Page 91.
4. *Workmen of M/s Birla Textiles v. K.K. Birla & others*, (1999) 3 SCC Page 475.

54. All the religious places are littered with garbage. There are no sufficient numbers of toilets with latest technology. People urinate and openly defecate on the banks of rivers which further pollute the rivers. Spitting in the religious places is also ugly scene. The State Government is required to make suitable legislations in the Municipal Laws to prohibit/ban (1) littering in all religious places, (2) urination in open, (3) defecation in open (4) spitting in open, by imposing stringent fines and imprisonment as well.

55. The use of plastic indiscriminately has also played havoc with the fragile environment and ecology of the entire State of Uttarakhand. The plastics are non-bio degradable. Life of the plastic is more than hundred years. It does not degenerate by the action of bacteria. It also decreases the fertility of the land. The carry bags have choked sewerage system, pollutes the rivers and is a dirty scene on all the public places. Cattle also eat the plastic bags causing serious damage to their lives. The sale, use and storage of plastic bags is required to be banned throughout the State of Uttarkahand.

56. In an article which appeared in the Financial Times Magazine on 17.11.2016 under the caption 'The

Ganga: holy, deadly river’, it is stated that Gaumukh, the source of the River Ganga, is one of the most sacred places in Hinduism. But in truth the entire river, flowing for more than 2,500km across north India from the mountainous haunts of the snow leopard to the tiger-infested mangrove swamps of the Bay of Bengal, is holy. *Ma Ganga* or Mother Ganga, described by Harvard religious scholar Diana Eck as “the archetype of sacred waters”, is worshipped as a goddess by Hindus worldwide. Her water has even been ceremonially poured into a well built on the orders of a generous 19th-century maharaja for the English villagers of Stoke Row, near Reading. The Ganga has helped to sustain a tenth or more of the world’s population with food, water and fish for millennia. In his famous travel book *Slowly Down the Ganga* (1966), Eric Newby lists translations for 108 of the sacred Sanskrit names for the river, among them “eternally pure” and “a light amid the darkness of ignorance”. According to the 2011 water quality statistics published by the Central Pollution Control Board (CPCB) — the Yamuna’s water at Okhla contains 1.1 billion faecal coliform bacteria per 100ml, nearly half-a-million times the (Indian) recommended bathing limit of 2,500. The reason is clear. Half of India’s 1.3 billion inhabitants lack toilets; if they have them, they may not be connected to drains; if they are, there may be no sewage treatment plant; and if there is, it may not be working. More than 300,000 Indian children under five die each year from diarrhoea, many of them in the Ganga basin. Equally sinister are the findings of scientists investigating the rapid, sewage-borne spread of genes known as NDM-1 and NDM-4 (NDM stands for New Delhi metallo-beta-

lactamase). NDM-1 was first detected in Delhi drinking water in the year 2010. Poor sanitation was once again the cause of contamination. In the 19th century, the Thames was so thick with sewage and industrial waste that cholera broke out and sittings of the Commons were abandoned because of the “Great Stink” of 1858. Today, fish and waterbirds have returned to the river.

57. The Ganga is serving an estimated pollution of 500 million people or more, which is larger than any other river in the world. The Ganga action plan was launched by Shri Rajeev Gandhi, the then Prime Minister of India. In the budget tabled in Parliament on 10th July 2014, the Union Finance Minister Arun Jaitley announced an integrated Ganga development project titled 'Namami Gange' and allocated 2,037 crore for this purpose. The program has a budget outlay of Rs. 20,000 crore for the next 5 years. This is a significant four-fold increase over the expenditure in the past 30 years. The Centre is also planning to establish a 4-battalion Ganga Eco-Task Force.

58. In another article authored by *Santosh Nepal and Arun Bhakta Shrestha* under the caption ‘*Impact of Climate Change on the hydrological regime of the Indus, Ganga and Brahmaputra river basins: a review of the literature*’, which appeared in the *International Journal of Water Resources Development, 2015*, it is stated that the Ganga originates in the high-altitude areas of the Himalayas and the Tibetan Plateau, with tributaries flowing south from China, Nepal and India into the Indo-Gangetic Plain. The Ganga merges with the Brahmaputra in an extensive delta area in India and Bangladesh,

finally emerging in the Bay of Bengal. The basin encompasses diverse topography, ecosystems and biodiversity, from the alpine arid rain-shadow areas of the Tibetan Plateau through the steep topography of the high mountains, including the world's highest point, Mt. Everest (8848 m asl), to the flat plains. Many studies have shown an increasing trend in temperature in Ganga Basin.

59. In an article which appeared in New-York Times written by George Black under the caption 'What it Takes to Clean the Ganges' dated 25.7.2016, it has been stated that hundreds of millions of Hindus, in India and around the world, worship the Ganga. The Ganga is not just a river but also a goddess. The sixteenth-century Mogul emperor Akbar called it "the water of immortality," and insisted on serving it at court. In 1615, Nicholas Withington, one of the earliest English travellers in India, wrote that water from the Ganga "will never stinke, though kept never so long, neyther will anye wormes or vermine breede therein." Like most Indian municipalities, Uttarkashi—a grimy cement-and-cinder-block town of eighteen thousand—has no proper means of disposing of garbage. Instead, the waste is taken to an open dump site, where, after a heavy rain, it washes into the river. The Ganga absorbs more than a billion gallons of waste each day, three-quarters of it raw sewage and domestic waste and the rest industrial effluent, and is one of the ten most polluted rivers in the world.

60. In an article which appeared in the *Newsweek* under the title '*The Ganga River is Dying under the Weight of Modern India*', written by *Cameron Conaway*, it stated

that Mark Twain, upon visiting in the 1890s, quipped that it is “older than history, older than tradition, older even than legend, and looks twice as old as all of them put together!” The Ganga River basin, according to Colorado State University fluvial geoscientist Ellen Wohl, supports a staggering 10 percent of the world’s population. This includes all ways in which the water is used for survival: for growing rice and other crops, bathing, drinking, providing fish and other animals as a food source, and more. The pollution has also slowed down or made stagnant many once free-flowing areas of the Ganga. Stagnation is where the mosquitoes thrive, and with mosquitoes comes malaria. The deadliest form of malaria, *Plasmodium falciparum*, is on the rise in India, and the worst may be yet to come.

61. In addition to the above, the Court can also take judicial notice of the fact that there is no proper disposal of garbage strewn on the river banks. It is the duty cast upon the municipal bodies to dispose of the garbage in a scientific manner by setting up Garbage Treatment Plants. Accordingly, the Municipal Bodies, throughout the State of Uttarakhand, are directed to dispose of the garbage in scientific lines by setting up Garbage Treatment Plants under the Municipal Solid Wastes (Management & Handling) Rules, 2000.

62. Their Lordships of Hon. Supreme Court in the case of ‘*M.C. Mehta v. Union of India & others*’ (1987) 4 SCC 463, in a public interest litigation filed against Ganga Water Pollution, have held that pollution of the river Ganga is affecting the life, health and ecology of the

Gangetic Plan. It is the sacred duty of all those who reside or carry on business around the river Ganga to ensure the purity of Ganga. The tanneries are polluting the river Ganga in a big away. Their Lordships, in paragraph nos.2, 19, 20 and 21, have held as under:-

“2. Water is the most important of the elements of the nature. River valleys are the cradles of civilization from the beginning of the world. Aryan civilization grew around the towns and villages on the banks of the river Ganga. Varanasi which is one of the cities on the banks of the river Ganga is considered to be one of the oldest human settlements in the world. It is the popular belief that the river Ganga is the purifier of all but we are now led to the situation that action has to be taken to prevent the pollution of the water of the river Ganga since we have reached a stage that any further pollution of the river water is likely to lead to a catastrophe. There are today large towns inhabited by millions of people on the banks of the river Ganga. There are also large industries on its banks. Sewage of the towns and cities on the banks of the river and the trade effluents of the factories and other industries are continuously being discharged into the river. It is the complaint of the petitioner that neither the Government nor the people are giving adequate attention to stop the pollution of the river Ganga. Steps have, therefore, to be taken for the purpose of protecting the cleanliness of the stream in the river Ganga, which is in fact the life sustainer of a large part of the northern India.

19. *The river Ganga is one of the greatest rivers of the world, although its entire course is only 1560 miles from its source in Himalaya to the sea. There are many rivers larger in shape and longer in size but no river in the world has been so great as the Ganga. It is great because to millions of people since centuries it is the most sacred river, it is called "Sursari" river of the Gods, Patitpawani' purifier of all sins and 'Ganga Ma' Mother Ganga. To millions of Hindus, it is the most sacred, most venerated river on earth. According to Hindu belief and Mythology to bathe in it is to wash away guilt, to drink the water, having bathed in it, and to carry it away in containers for those who may have not had the good fortune to make the pilgrimage, to it, is meritorious. To be cremated on its banks, or to die there, and to have one's ashes cast in its waters is the wish of every Hindu. Many saints and sages have pursued their quest for knowledge and enlightenment on the banks of the river Ganga. Its water has not only purified the body and soul of the millions but it has given fertile land to the country in Uttar Pradesh and Bihar. Ganga has been used as means of water transport for trade and commerce. The Indian civilization of Northern India thrived in the plains of Ganga and most of the important towns and places of pilgrimage are situated on its banks. The river Ganga has been part of Hindu civilization. Pt. Jawahar Lal Nehru who did not consider himself a devout Hindu gave expression to his feelings for the Ganga that is to be found in his will and Testament, a short extract from which is as under:*

My desire to have a handful of my ashes thrown into the Ganga at Allahabad has no religious significance, so far as I am concerned. I have no religious sentiment in the matter. I have been attached to the Ganga and the Jamuna rivers in Allahabad ever since my childhood and, as I have grown older, this attachment has also grown. I have watched their varying moods as the seasons changed, and have often thought of the history and myth and tradition and song and story that have become attached to them through the long ages and become part of their flowing waters. The Ganga, especially, as the river of India, beloved of her people, round which are intertwined her racial memories, her hopes and fears, her songs of triumph, her victories and her defeats. She has been a symbol of India's age-long culture and civilisation, ever-changing, ever-flowing, and yet ever the same Ganga. She reminds me of the snow-covered peaks and the deep valleys of the Himalayas, which I have loved so much, and of the rich and vast plains below, where my life and work have been cast.

20. *The river Ganga is the life line of millions of people of India, Indian culture and civilization has grown around it. This great river drains of eight States of India, Himachal Pradesh, Punjab, Haryana, Uttar Pradesh, Rajasthan, Madhya Pradesh, Bihar and West Bengal. The Ganga has always been an*

integral part of the nation's history, cultures and environment. It has been the source of sustenance for the millions of people who have lived on its banks from time immemorial.

21. *Millions of our people in the Ganga drink its water under an abiding faith and belief to purify themselves to achieve moksha release from the cycle of birth and death. It is tragic that the Ganga, which has since time immemorial, purified the people is being polluted by man in numerous ways, by dumping of garbage, throwing carcass of dead animals and discharge of effluents. Scientific investigations and survey reports have shown that the Ganga which serves one-third of the India's population is polluted by the discharge of municipal sewage and the industrial effluents in the river. The pollution of the river Ganga is affecting the life, health, and ecology of the Indo-Gangetic Plain. The Government as well as Parliament both have taken a number of steps to control the water pollution, but nothing substantial has been achieved. I need not refer to those steps as my learned brother has referred to them in detail. No law or authority can succeed in removing the pollution unless the people cooperate. To my mind, it is the sacred duty of all those who reside or carry on business around the river Ganga to ensure the purity of Ganga. Tanneries at Jajmau area near Kanpur have been polluting the Ganga in a big way. This Court issued notices to them but in spite of notices many industrialists have not bothered either to respond to the notice or to take elementary steps for the treatment of industrial*

effluent before discharging the same into the river. We are therefore issuing the directions for the closure of those tanneries which have failed to take minimum steps required for the primary treatment of industrial effluent. We are conscious that closure of tanneries may bring unemployment, loss of revenue, but life, health and ecology have greater importance to the people.”

63. Their Lordships of Hon. Supreme Court in case of ‘*Rural Litigation & Entitlement Kendra & others v. State of Uttar Pradesh and others*’ reported in A.I.R. (1987) Supreme Court Page 359, have held that the consequences of interference with ecology and environment have now come to be realised. It is necessary that the Himalayas and the forest growth on the mountain range should be left un-interfered with so that there may be sufficient quantity of rain. In paragraph nos.18, 19 and 20, it was held as under: -

“18. Governments both at the center and in the State- must realize and remain cognizant of the fact that the stake involved in the matter is large and far-reaching. The evil consequences would last long. Once that unwanted situation sets in, amends or repairs would not be possible. The greenery of India, as some doubt, may perish and the Thar desert may expand its limits.

19. Consciousness for environmental protection is of recent origin. The United Nations Conference on World Environment held in Stockholm in June 1972 and the follow-up action thereafter is spreading the awareness. Over thousands of years men had been

successfully exploiting the ecological system for his sustenance but with the growth of population the demand for land has increased and forest growth has been and is being cut down and man has started encroaching upon Nature and its assets. Scientific developments have made it possible and convenient for man to approach the places which were hitherto beyond his ken. The consequences of such interference with ecology and environment have now come to be realised. It is necessary that the Himalayas and the forest growth on the mountain range should be left uninterfered with so that there may be sufficient quantity of rain. The top soil may be preserved without being eroded and the natural setting of the area may remain intact. We had commended earlier to the State of Uttar Pradesh as also to the Union of India that afforestation activity may be carried out in the whole valley and the hills. We have been told that such activity has been undertaken. We are not oblivious of the fact that natural resources have got to be tapped for the purposes of social development but one cannot forget at the same time that tapping of resources have to be done with requisite attention and care so that ecology and environment may not be affected in any serious way; there may not be any depletion of water resources and long-term planning must be undertaken to keep up the national wealth. It has always to be remembered that these are permanent assets of mankind and are not intended to be exhausted in one generation.

20. We must place on record our appreciation of the steps taken by the Rural Litigation and Entitlement Kendra. But for this move, all that has happened perhaps may not have come. Preservation of the environment and keeping the ecological balance unaffected is a task which not only Governments but also every citizen must undertake. It is a social obligation and let us remind every Indian citizen that it is his fundamental duty as enshrined in Article 51A(g) of the Constitution.”

64. Their Lordships of Hon. Supreme Court in the case of *‘M.C. Mehta (II) v. Union of India’* reported in (1988) SCC Page 471, have held that the Parliament and the State legislature have enacted laws imposing duties on the Central and States Boards constituted under the Water (Prevention and Control of Pollution) Act and the municipalities under the U.P. Nagar Mahapalika Adhinyam for prevention and control of pollution of water. Many of those provisions have just remained on paper without any adequate action being taken against them. Their Lordships have also held that having regard to the grave consequences of the pollution of water and air and the need for protecting and improving the natural environment which is considered to be one of the fundamental duties under Article 51-A(g), it is the duty of the Central Government to direct all the educational institutions throughout India to teach at least for one hour in a week lessons relating to the protection and the improvement of the natural environment including forests, lakes, rivers and wildlife in the first ten classes.

Paragraph nos.7, 13, 14 and 24 of the said judgment are as under: -

“7. It is unfortunate that although Parliament and the State Legislature have enacted the aforesaid laws imposing duties on the Central and State Board and the municipalities for prevention and control of pollution of water, many of those provisions have just remained on paper without any adequate action being taken pursuant thereto.

13. It is needless to say that in the tropical developing countries a large amount of misery, sickness and death due to infectious diseases arises out of water supplies. In Lall's Commentaries on Water and Air Pollution Laws (2nd Edition) at pages 331 and 333 it is observed thus:

In the tropics, we cannot safely take such a limited view. Such water-borne diseases as malaria, schistosomiasis, guinea worm and yellow fever are either terrible scourges of, or threats to, many tropical populations. The hazards from bad water are thus much greater. Poverty is much more serious for many tropical areas; in the rural areas - where most people live - and around the edges of the cities, which are the fastest-growing communities, most people cannot afford a conventionally good water supply at present, and the choice in the short run may be between doing nothing and providing somewhat improved supply. If an ideal water system is not possible, there are options as to what needs should be met by the partial improvements. To make the right decisions

we need again the broad picture of water-related diseases. So, because of these two tropical characteristics -warmth ad poverty - a wider view than in temperate lands is necessary. (P.331)

Water-borne diseases - The classical water-borne diseases are due to highly infective organisms where only rather few are needed to infect someone, relative to the levels of pollution that readily occur. The two chief ones have a high mortality if untreated and are diseases which a community is very anxious to escape: typhoid and cholera. Both are relatively fragile organisms whose sole reservoir is man.

These two diseases occur most dramatically as the "common source out-break" where a community water supply gets contaminated by faces from a person suffering from, or carrying, one of the infections. Many people drink the water and a number of these fall ill from the infection at about the same time.

Typhoid is the most cosmopolitan of the classical water-borne infections. In man it produces a severe high fever with generated systemic, more than intestinal, symptoms. The bacteria are ingested and very few are sufficient to infect. The typhoid patient is usually too ill to go out polluting the water and is not infective prior to falling sick. However, a small proportion of those who recover clinically continue to pass typhoid bacteria in their faces for months or years; these carriers are the source of water-borne infections. Gallstones predispose to the

carrier state as the bacteria persist in the inflamed gall bladder. In the tropics, lesions of Schistosoma haematobium in the bladder also act as node of infection, producing urinary typhoid carriers, whilst rectal schistosomiasis combined with typhoid leads to a persistent severe fever lasting many months. Typhoid bacteria survive well in water but do not multiply there.

Cholera is in some ways similar to typhoid, but its causative bacteria are more fragile and the clinical course is extremely dramatic. In classical cholera the onset of diarrhea is sudden and its volume immense so that the untreated victim has a high probability of dying from dehydration within 24 hours or little more.

Several other infections are water borne but are less important than typhoid and cholera. Leptospirosis, due to a spirochaete, has its reservoir in wild rodents which pollute the water. Leptospis can penetrate the skin as well as being ingested. They produce jaundice and fever, called 'Weil's disease, which is severe but not common.

14. *The amount of suffering which the members of the public are likely to undergo by using highly polluted water can be easily gathered from the above extract.*

24. *Having regard to the grave consequences of the pollution of water and air and the need for protecting and improving the natural environment which is considered to be one of the fundamental duties under the Constitution [vide Clause (g) of*

Article 51A of the Constitution] we are of the view that it is the duty of the Central Government to direct all the educational institutions throughout India to teach atleast for one hour in a week lessons relating to the protection and the improvement of the natural environment including forests, lakes, rivers and wild life in the first ten classes. The Central Government shall get text books written for the said purpose and distribute them to the educational institutions free of cost. Children should be taught about the need for maintaining cleanliness commencing with the cleanliness of the house both inside and outside, and of the streets in which they live. Clean surroundings lead to healthy body and healthy mind. Training of teachers who teach this subject by the introduction of short term courses for such training shall also be considered. This should be done throughout India.”

65. Their Lordships of Hon. Supreme Court in case of ‘*Subhash Kumar v. State of Bihar & others*’ reported in (1991) 1 SCC Page 598, have held that the right to pollution-free water and air for full enjoyment of life, is covered under Article 21 of the Constitution of India. In paragraph no.6 of the judgment, it was held as under: -

“6. On a perusal of the counter-affidavit filed on behalf of the Respondents Nos. 4 and 5 it appears that the Petitioner has been purchasing slurry from the Respondents Nos. 4 and 5 for the last several years. With the passage of time he wanted more and more slurry, but the Respondent-company refused to

accept his request. The Petitioner is an influential businessman, he had obtained a licence for coal trading, he tried to put pressure through various sources on the Respondent-company for supplying him more quantity of slurry but when the Company refused to succumb to the pressure, he started harassing the Company. He removed the Company's slurry in an unauthorised manner for which a Criminal Case No. 178 of 1987 Under Sections 379 and 411 of the Indian Penal Code read with Section 7 of the Essential Commodities Act was registered against the Petitioner and Pradip Kumar his brother at Police Station Mandu, which is pending before the Sub-Judge, Hazaribagh. One Shri Jugal Kishore Jayaswal also filed a criminal complaint Under Sections 379 and 411 of the Indian Penal Code against the Petitioner and his brother Pradip Kumar in the Court of Judicial Magistrate, First Class, Hazaribagh, which is also pending before the Court of Judicial Magistrate, 2nd Class Hazaribagh. The Petitioner initiated several proceedings before the High Court of Patna Under Article 226 of the Constitution for permitting him to collect slurry from the raiyati land. These petitions were dismissed on the ground of existence of dispute relating to the title of the land. The Petitioner filed a Writ Petition C.W.J.C. No. 887 of 1990 in the High Court of Patna for taking action against the Deputy Commissioner, Hazaribagh for implementing the Full Bench judgment of the Patna High Court in Kundori Labour Co-operative Society Ltd. v. State of Bihar : AIR 1986 Pat. 242, wherein it was held that the slurry was neither coal nor mineral

instead it was an industrial waste of coal mine, not subject to the provisions of the Mines and Mineral (Regulation and Development) Act, 1957. Consequently the collection of slurry which escaped from the washeries could be settled by the State Government with any person without obtaining the sanction of the Central Government. The Petitioner has been contending before the High Court that the slurry which was discharged from washeries did not belong to the Company and he was entitled to collect the same. Since the Respondent-company prevented the Petitioner from collecting slurry from its land and as it further refused to sell any additional quantity of slurry to him, he entertained grudge against the Respondent-company. In order to feed fat his personal grudge he has taken several proceedings against the Respondent-company including the present proceedings. These facts are quite apparent from the pleadings of the parties and the documents placed before the Court. In fact, there is intrinsic evidence in the petition itself that the primary purpose of filing this petition is not to serve any public interest instead it is in self interest as would be clear from the prayer made by the Petitioner in the interim stay application. The Petitioner claimed interim stay application. The Petitioner claimed interim relief from this Court permitting him to arrest/collect sludge/slurry flowing out of the washeries of the Respondents Nos. 4 and 5 and with a direction to the State of Bihar, its officers and other authorities for not preventing him from collecting the sludge/slurry and transporting the same. The prayer for the interim relief made by the

Petitioner clearly indicates that he is interested in collecting the slurry and transporting the same for the purposes of his business. As already stated a Full Bench of the Patna High Court held that the slurry was not coal and the provisions of the Mines and Mineral (Regulation and Development) Act, 1957 were not applicable, the State Government was free to settle the same and the Tata Steel & Iron Co. had no right to collect the slurry which escaped from its washeries. The Respondent-company filed an appeal before this Court. During the pendency of the aforesaid appeal, the Petitioner filed the present petition. The appeal preferred by the Tata Iron & Steel Co. Ltd. and Bharat Coking Coal Ltd. was allowed by this Court and the judgment of Patna High Court was set aside. The judgment of this Court is reported in JT (1990) 3 (SC) 533, wherein it has been held that the slurry/coal deposited on any land continues to be coal and the State Government has no authority in law to deal with the same and the slurry deposited on the Company's land belongs to the Company and no other person had authority to collect the same.”

66. Their Lordships of Hon. Supreme Court in ‘*Virender Gaur & others v. State of Haryana and others*’ (1995) 2 SCC Page 577, have held that Articles 21, 47, 48-A and 51-A(g) of the Constitution of India, comprehend right to hygienic environmental protection. The Government as well as Municipality are obliged to maintain and protect environment, manmade as well as natural. In paragraph no.7 of the judgment, it was held as under: -

“7. Article 48A in part IV (Directive Principles) brought by the Constitution 42nd Amendment Act, 1976, enjoins that "the state shall endeavour to protect and improve the environment and to safeguard the forests and wild life of the country". Article 47 further imposes the duty on the State to improve public health as its primary duty. Article 51A imposes "a fundamental duty" on every citizen of India to protect and improve the natural "environment" including forests lakes, rivers and wild life and to have compassion for living creatures". The word 'environment' is of broad spectrum which brings within its ambit "hygienic atmosphere and ecological balance". It is, therefore, not only the duty of the State but also the duty of every citizen to maintain hygienic environment. The State, in particular has duty in that behalf and to shed its extravagant unbridled sovereign power and to forge in its policy to maintain ecological balance and hygienic environment. Article 21 protects right to life as a fundamental right. Enjoyment of life and its attainment including their right to life with human dignity encompasses within its ambit, the protection and preservation of environment, ecological balance free from pollution of air and water, sanitation without which life cannot be enjoyed. Any contra acts or actions would cause environmental pollution. Environmental ecological, air, water, pollution, etc. should be regarded as amounting to violation of Article 21. Therefore, hygienic environment is an integral facet of right to healthy life and it would be impossible to live with humane dignity without a

human and healthy environment. Environmental protection, therefore has now become a matter of grave concern for human existence. Promoting environmental protection implies maintenance of the environment as a whole comprising the man-made and the natural environment. Therefore, there is a constitutional imperative on the State Government and the municipalities, not only to ensure and safeguard proper environment but also an imperative duty to take adequate measures to promote, protect and improve the environment man-made and the natural environment.”

67. Their Lordships of Hon. Supreme Court in ‘*Indian Council for Enviro-Legal Action v. Union of India and others*’ (1996) 5 SCC Page 281, have held that High Courts must shoulder greater responsibilities in taking up local issues of which they can have closer awareness and easy monitoring such as ecological matters in their respective States in the light of law laid down by the Supreme Court. This would ensure that the orders passed are effective and complied with. Their Lordships further held that the enactment of a law, but tolerating its infringement, is worse than not enacting law at all. The continued infringement of law, over a period of time, is made possible by adoption of such means which are best known to the violators of law. Continued tolerance of such violations of law not only renders legal provisions nugatory but such tolerance by the Enforcement Authorities encourages lawlessness and adoption of means which cannot, or ought not to, be tolerated in any civilized society. Their Lordships have further held that

with rapid industrialisation taking place, there is an increasing threat to the maintenance of the ecological balance. The primary effort of the Court, while dealing with the environmental related issues, is to see that the enforcement agencies, whether it be the State or any other authority, take effective steps for the enforcement of the laws. The Courts, in a way, act as the guardian of the people's fundamental rights but in regard to many technical matters, the Courts may not be fully equipped. In paragraph nos.26, 28 and 41, it was held as under: -

“26. Enactment of a law, but tolerating its infringement, is worse than not enacting law at all. The continued infringement of law, over a period of time, is made possible by adoption of such means which are best known to the violators of law. Continued tolerance of such violations of law not only renders legal provisions nugatory but such tolerance by the Enforcement Authorities encourages lawlessness and adoption of means which cannot, or ought not to, be tolerated in any civilized society. Law should not only be meant for law abiding but is meant to be obeyed by all for whom it has been enacted. A law is usually enacted because the Legislature feels that it is necessary. It is with a view to protect and preserve the environment and save it for the future generations and to ensure good quality of life that the Parliament enacted the Anti-Pollution Laws, namely, the Water Act, Air Act and the Environment (Protection) Act, 1986. These Acts and Rules framed and the Notification issued

thereunder contain provisions which prohibit and/or regulate certain activities with a view to protect and preserve the environment. When a law is enacted containing some provisions which prohibits certain types of activities, then, it is of utmost importance that such legal provisions are effectively enforced. If a law is enacted but is not being voluntarily obeyed, then, it has to be enforced. Otherwise, infringement of law, which is actively or passively condoned for personal gain, will be encouraged which will in turn lead to a lawless society. Violation of anti-pollution laws not only adversely affects the existing quality of life but the non-enforcement of the legal provisions often results in ecological imbalance and degradation of environment, the adverse affect of which will have to be borne by the future generations.

28. *There is no challenge to the validity of main Notification. Counsel for all the parties are agreed that the main Notification is valid and has to be enforced. Instances have been given by the petitioner as well as some of the interveners where in different States, infringement of the main Notification is taking place but no action has been taken by the authorities concerned. The courts are ill-equipped and it is not their function to see day to day enforcement of law. This is an executive function which it is bound to discharge. A public interest litigation like the present, would not have been necessary if the authorities, as well as the*

people concerned, had voluntarily obeyed and/or complied with the main Notification or if the authorities who were entrusted with the responsibility, had enforced the main Notification. It is play the failure of enforcement of this Notification which has led to the filing of the present petition. The effort of this Court while dealing with public interest litigation relating to environmental issues, is to see that the executive authorities take steps for implementation and enforcement of law. As such the Court has to pass orders and give directions for the protection of the fundamental rights of the people. Passing of appropriate orders requiring the implementation of the law cannot be regarded as the Court having usurped the functions of the Legislature or the Executive. The orders are passed and directions are issued by the Court in discharge of its judicial function namely; to see that if there is a complaint by a petitioner regarding the infringement of any Constitutional or other legal right, as a result of any wrong action or inaction on the part of the State, then such wrong should not be permitted to continue. It is by keeping the aforesaid principles in mind that one has to consider as to what directions should be issued to ensure, in the best possible manner, that the provision of the main Notification which has been issued for preserving the coastal areas are not infringed.

41. *With rapid industrialisation taking place, there is an increasing threat to the maintenance of*

the ecological balance. The general public is becoming aware of the need to protect environment. Even though, laws have been passed for the protection of environment, the enforcement of the same has been tardy, to say the least. With the governmental authorities not showing any concern with the enforcement of the said Acts, and with the development taking place for personal gains at the expense of environment and with disregard to the mandatory provisions of law, some public spirited persons have been initiating public interest litigations. The legal position relating to the exercise of jurisdiction by the Courts for preventing environmental degradation and thereby, seeking to protect the fundamental rights of the citizens, is now well settled by various decisions of this Court. The primary effort of the Court, while dealing with the environmental related issues, is to see that the enforcement agencies, whether it be the State or any other authority, take effective steps for the enforcement of the laws. The Courts, in a way, act as the guardian of the people's fundamental rights but in regard to many technical matters, the Courts may not be fully equipped. Perforce, it has to rely on outside agencies for reports and recommendations whereupon orders have been passed from time to time. Even though, it is not the function of the Court to see the day to day enforcement of the law, that being the function of the Executive, but because of the non-functioning of the enforcement agencies, the Courts as of necessity have had to

pass orders directing the enforcement agencies to implement the law.”

68. Their Lordships of Hon. Supreme Court in ‘Vellore Citizens’ Welfare Forum v. Union of India and others’ (1996) 5 SCC Page 647, have held that while the industries are vital for country’s development, but having regard to pollution caused by them, principle of Sustainable Development has to be adopted as a balancing concept. “Precautionary Principle” and “Polluter Pays Principle” are acceptable as part of the law of country and should be implemented. The precautionary environmental measures should be taken by the State Government and statutory authorities and lack of scientific certainty cannot be a ground for postponing such measures where there are serious threats to ecology. The discharge of untreated effluent by tanneries in the State renders the river water unfit for human consumption, contaminating the subsoil water and spoiling the physico-chemical properties of the soil making it unfit for agricultural purposes. Such an industry cannot be permitted to continue their operation unless they set up pollution control devices. Their Lordships, in paragraph nos.9, 10, 11, 12, 13, 14, 20 and 24, have held as under: -

“9. It is no doubt correct that the leather industry in India has become a major foreign exchange earner and at present Tamil Nadu is the leading exporter of finished leather accounting for approximately 80% of the country's export. Though the leather industry is of vital importance to the country as it generates foreign exchange and

provides employment avenues it has no right to destroy the ecology, degrade the environment and pose as a health hazard. It cannot be permitted to expand or even to continue with the present production unless it tackles by itself the problem of pollution created by the said industry.

10. *The traditional concept that development and ecology are opposed to each other, is no longer acceptable. "Sustainable Development" is the answer. In the International sphere "Sustainable Development" as a concept came to be known for the first time in the Stockholm Declaration of 1972. Thereafter, in 1987 the concept was given a definite shape by the World Commission on Environment and Development in its report called "Our Common Future". The Commission was chaired by the then Prime Minister of Norway Ms. G.N. Brundtland and as such the report is popularly known as "Brundtland Report". In 1991 the World Conservation Union, United Nations Environment Programme and World Wide Fund for Nature, jointly came out with a document called "Caring for the Earth" which is a strategy for sustainable living. Finally, came the Earth Summit held in June, 1992 at Rio which saw the largest gathering of world leaders ever in the history - deliberating and chalking out a blue print for the survival of the planet. Among the tangible achievements of the Rio Conference was the signing of two conventions, one on biological diversity and another on climate change. These conventions were signed by 153 nations. The*

delegates also approved by consensus three non binding documents namely, a Statement on Forestry Principles, a declaration of principles on environmental policy and development initiatives and Agenda 21, a programme of action into the next century in areas like poverty, population and pollution. During the two decades from Stockholm to Rio "Sustainable Development" has come to be accepted as a viable concept to eradicate poverty and improve the quality of human life while living within the carrying capacity of the supporting ecosystems. "Sustainable Development" as defined by the Brundtland Report means "development that meets the needs of the present without compromising the ability of the future generations to meet their own needs". We have no hesitation in holding that "Sustainable Development" as a balancing concept between ecology and development has been accepted as a part of the Customary International Law though its salient features have yet to be finalised by the International Law jurists.

11. *Some of the salient principles of "Sustainable Development", as culled-out from Brundtland Report and other international documents, are Inter-Generational Equity, Use and Conservation of Natural Resources, Environmental Protection, the Precautionary Principle, Polluter Pays principle, Obligation to assist and cooperate, Eradication of Poverty and Financial Assistance to the developing countries. We are, however, of the view that "The Precautionary Principle" and "The Polluter Pays"*

principle are essential features of "Sustainable Development". The "Precautionary Principle" - in the context of the municipal law - means :

(i) Environmental measures - by the State Government and the statutory authorities - must anticipate, prevent and attack the causes of environmental degradation.

(ii) Where there are threats of serious and irreversible damage, lack of scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

(iii) The "Onus of proof is on the actor or the developer/industrialist to show that his action is environmentally benign.

12. *"The Polluter Pays" principle has been held to be a sound principle by this Court in Indian Council for Enviro - Legal Action v. Union of India, J.T. (1996) 2 196. The Court observed, "We are of the opinion that any principle evolved in this behalf should be simple, practical and suited to the conditions obtaining in this country". The Court ruled that "Once the activity carried on is hazardous or inherently dangerous, the person carrying on such activity is liable to make good the loss caused to any other person by his activity irrespective of the fact whether he took reasonable care while carrying on his activity. The rule is premised upon the very nature of the activity carried on". Consequently the polluting industries are "absolutely liable to compensate for the harm caused by them to villagers in the affected area, to the soil and to the*

underground water and hence, they are bound to take all necessary measures to remove sludge and other pollutants lying in the affected areas". The "Polluter Pays" principle as interpreted by this Court means that the absolute liability for harm to the environment extends not only to compensate the victims of pollution but also the cost of restoring the environmental degradation. Remediation of the damaged environment is part of the process of "Sustainable Development" and as such polluter is liable to pay the cost to the individual sufferers as well as the cost of reversing the damaged ecology.

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. Article 47 48A and 51A(g) of the Constitutional are as under :*

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 from medicinal purposes of intoxicating drinks and of drugs which are injurious to health.

48A. Protection and improvement of environment and safeguarding of forests and wild life. - The State shall endeavour to protect and improve the

environment and to safeguard the forests and wild life of the country.

51A(g). To protect and improve the natural environment including forests, lakes, rivers and wild life, 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. 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 later part of this judgment.

14. *In view of the above mentioned constitutional and statutory provisions we have no hesitation in holding that the precautionary principle and the polluter pays principle are part of the environmental law of the country.*

20. *It is thus obvious that the Environment Act contains useful provisions for controlling pollution. The main purpose of the Act is to create an authority or authorities under Section 3(3) of the Act with adequate powers to control pollution and protect the environment. It is a pity that till date no authority has been constituted by the Central Government. The work which is required to be done by an authority in terms of Section 3(3) read with other provisions of the Act is being done by this Court and the other Courts in the country. It is high time that the Central Government realises its responsibility and statutory duty to protect the degrading environment in the country. If the conditions in the five districts of Tamil Nadu, where tanneries are operating, are permitted to continue then in the near future all rivers/canals shall be polluted, underground waters contaminated, agricultural lands turned barren and the residents of the area exposed to serious diseases. It is, therefore, necessary for this Court to direct the Central Government to take immediate action under the provisions of the Environment Act.*

24. *The Board has the power under the Environment Act and the Rules to lay down standards for emissions or discharge of environmental pollutants. Rule 3(2) of the Rules even permit the Board to specify more stringent standards from those provided under the Rules. The NEERI having justified the standards stipulated by the Board, we direct that these standards are to be maintained by the tanneries and other industries in the State of Tamil Nadu.”*

69. Their Lordships of Hon. Supreme Court in ‘*M.C. Mehta v. Kamal Nath and others*’ (2000) 6 SCC Page 213, have held that causing disturbance to ecological balance would be hazardous to ‘life’ within the meaning of Article 21 of the Constitution of India. It was further held that even exemplary damages can be imposed as a deterrent for causing pollution and environment degradation. In paragraph no.24, Their Lordships held as under: -

“24. *Pollution is a civil wrong. By its very nature, it is a Tort committed against the community as a whole. A person, therefore, who is guilty of causing pollution has to pay damages (compensation) for restoration of the environment and ecology. He has also to pay damages to those who have suffered loss on account of the act of the offender. The powers of this Court under Article 32 are not restricted and it can award damages in a PIL or a Writ Petition as has been held in a series of decisions. In addition to damages aforesaid, the person guilty of causing pollution can also be held*

liable to pay exemplary damages so that it may act as a deterrent for others not to cause pollution in any manner. Unfortunately, notice for exemplary damages was not issued to M/s. Span Motel although it ought to, have been issued. The considerations for which "fine" can be imposed upon a person guilty of committing an offence are different from those on the basis of which exemplary damages can be awarded. While withdrawing the notice for payment of pollution fine, we direct a fresh notice be issued to M/s. Span Motel to show cause why in addition to damages, exemplary damages be not awarded for having committed the acts set out and detailed in the main judgment. This notice shall be returnable within six weeks. This question shall be heard at the time of quantification of damages under the main judgment."

70. About 300 billion liters of untreated sewage flows into river Ganga per day. It is the sixth most polluted river in the world. People urinate and defecate on the banks of river. Cattle owners bring their animals for bathing in river Ganga. People spit on the Ghats. Mark Twain famously said: "Benares is older than history, older than tradition, older even than legend, and looks twice as old as all of them could together".

71. The presence of beggars is also a disgusting site. There about 100 towns and thousands of villages situate along the banks of Ganga. There is an emergent need to restore ecological flow of water and to prevent waste water i.e. sewage and industrial wastes from entering the river. River Ganga covers 26 percent of

country's landmass and supports 23 percent of its population. The launching of schemes to clean Ganga, till, date, have not delivered any tangible result. There is lack of monitoring of all the ongoing projects and the multiplicity of bodies/authorities has further impeded the Clean Ganga Projects. Rhetoric alone is not sufficient to clean the Ganga. The agencies, working to save Ganga, must have an umbrella organization. There is an urgent need for Inter-governmental Consultation to save river Ganga. Article 263 of the Constitution of India provides for Inter-State Council. It reads as under: -

“263. Provisions with respect to an inter State Council- *If any time it appears to the President that the public interests would be served by the establishment of a Council charged with the duty of*
(a) inquiring into and advising upon disputes which may have arisen between States;
(b) investigating and discussing subjects in which some or all of the States, or the Union and one or more of the States, have a common interest; or
(c) making recommendations upon any such subject and, in particular, recommendations for the better co-ordination of policy and action with respect to that subject, in shall be lawful for the President by order to establish such a Council, and to define the nature of the duties to be performed by it and its organisation and procedure.”

72. Article 263 of the Constitution visualizes for the setting up of an inter-State Council for settlement of disputes between the Union and the States as well as between the States. The President is empowered to establish an inter-State Council if, at any time, it appears to him that the public interest would be served thereby.

73. In the report of the National Council to Review the Working of the Constitution (submitted to the Government in March, 2002), the Committee

recommended for setting up of an inter-State Council called “Inter-Governmental Council (IGC)” which should be charged with the duties set out in clauses (a) and (b) of Article 263, other than socio-economic planning and development.

74. In order to save Ganga from extinction, it is desirable to have an inter-State Council under Article 263 of the Constitution of India to consider and recommend the guiding policies in regard to the matters concerning the pollution of river Ganga including preventive as well as remedial environmental ecological matters. River Ganga originates from the State of Uttarakhand, then it flows down to the States of Uttar Pradesh, Jharkhand, Bihar and West Bengal. All the Chief Ministers of the riparian States can be inducted as members of the inter-State Council along with various experts in the field of ecology, environment, irrigation etc. The Council, so constituted, shall be responsible for making recommendations to the Central Government. It shall always be open to the Central Government to consider the recommendations made by the Council to save river Ganga in the right perspective. Their Lordships of Hon. Apex Court in the case of *‘Dabur India Ltd. & another v. State of U.P. & another’* (1990) 4 S.C.C. Page 113, have observed that the government should consider feasibility of setting up of a machinery under a Council to be formed under Article 263 of the Constitution to adjudicate and adjust the dues of the respective governments. Their Lordships have held as under: -

“31. Before we part with this case, two aspects have to be adverted to — one was regarding the allegation of the petitioner that in order to compel the petitioners to pay the duties which the petitioners contended that they were not liable to pay, the licence was not being renewed for a period and the petitioners were constantly kept under threat of closing down their business in order to coerce them to make the payment. This is unfortunate. We would not like to hear from a litigant in this country that the government is coercing citizens of this country to make payment of duties which the litigant is contending not to be leviable. Government, of course, is entitled to enforce payment and for that purpose to take all legal steps but the government, Central or State, cannot be permitted to play dirty games with the citizens of this country to coerce them in making payments which the citizens were not legally obliged to make. If any money is due to the government, the government should take steps but not take extra-legal steps or manoeuvre. Therefore, we direct that the right of renewal of the petitioner of licence must be judged and attended to in accordance with law and the occasion not utilised to coerce the petitioners to a course of action not warranted by law and procedure. Secondly, in a situation of this nature, we are of the opinion that the government should consider feasibility of setting up of a machinery under a Council to be formed under Article 263 of the Constitution to adjudicate and adjust the dues of the respective governments. In these peculiar facts, it appears that the dispute is under two different

Central legislations and under one the State authorities will realise and impose the taxes on finding on certain bases and under the other the same transaction may be open to imposition by Central Government authorities on a particular view of the matter. In such a situation, how and wherein the refund should be made of any duty paid in respect of part of a transaction to one of the authorities, the State or the Centre, to be adjusted should be the subject matter of a settlement by the Council to be set up under Article 263 of the Constitution. This is a matter on which we draw the attention of the concerned authorities for examination because Section 3 of the 1955 Act and Section 3 of the 1944 Act may overlap similar transaction in certain cases.”

75. Billions of rupees have been spent for restoration of quality of water of river Ganga. However, the fact of the matter is that the quality of water of river Ganga, instead of being restored as per the norms, has further deteriorated.

76. All the rivers have the basic right to maintain their purity and to maintain free and natural flow. River Ganga is flowing since time immemorial. It has provided us drinking water and irrigated our lands. River Ganga is the soul of India. In our National Anthem, there is a reference of most sacred rivers Ganga and Yamuna, which shows our respect and cultural values for the rivers. However, the fact of the matter is that we have polluted her soul by permitting the pollutants to be discharged into the river without treatment. We have to change our

rituals with the passage of time in order to maintain the purity of water of river Ganga. One or two generations cannot be permitted to pollute the rivers and to destroy their free and natural flow. The rivers must exist in their pristine glory for coming generations. The Courts cannot permit impairment of water quality of rivers.

77. The legislation, till now, has not helped to save Ganga. We need a comprehensive legislation at the national level dealing with the Ganga alone. The implementation of laws is as important as framing of laws. Whosoever pollutes the rivers, infringes the human rights of others. There is an urgent need not to promote water based heavy industries like sugarcane, pulp paper etc. in the close vicinity of river Ganga. Henceforth, no commercial establishment should be permitted on the river banks where more than fifty persons are employed without Sewage Treatment Plants (STPs) or Effluent Treatment Plants. We should not permit throwing of cloth, plastic and huge quantity of flowers in the rivers. The State is required to make endeavour to protect and improve the environment and to safeguard the forests and wild life of the country under Article 47 of the Constitution of India. It is the fundamental duty of all of us, under Article 51-A of the Constitution of India, to protect and improve the natural environment including forests, lakes, rivers and wild life, and to have compassion for living creatures.

78. The Court, though, cannot direct the Legislature to frame the laws, but since, there is an emergency to protect the river Ganga from extinction, the

Court can, at least, make a suggestion to the Union of India to make national law to protect river Ganga.

79. Accordingly, the present petition is disposed of by issuing the following mandatory directions: -

- A. The Union of India is directed to establish the inter-State Council under Article 263 of the Constitution of India for all the riparian States through which river Ganga flows i.e. Uttarakhand, Uttar Pradesh, Jharkhand, Bihar and West Bengal, within a period of three months from today, for making recommendations to the Central Government in order to clean/rejuvenate river Ganga on the analogy of National Water Development Agency as well as Water Resources Development Council. The inter-State Council shall make recommendations to the Central Government, within a period of three months after its constitution, to the Central Government. The Central Government, shall consider the same within a further period of three months and take necessary measures to restore river Ganga to its pristine glory.
- B. Respondent no.5- Director, National Mission for Clean Ganga is directed to accord sanction of Rs.266.09 crores, as per the DPR sent to it by the State Programme Management Group (SPMG), within a period of six weeks from today. The funds shall be used exclusively by the Uttarkhand Peyjal Nigam for interception and diversion of leftover drains for existing Sewage Treatment Plants (STPs), new STPs and other

effluent works at Haridwar. The State Government is directed to enhance the capacity of Sewage Treatment Plants at Haridwar and Rishikesh, within a period of three months from today, taking into consideration the sewage load in these two towns.

- C. Bharat Heavy Electricals Ltd. (BHEL) is directed to install Sewage Treatment Plant of having capacity of 11 MLD, as per the direction issued by respondent no.2-Uttarakhand Environment Protection & Pollution Control Board on 21.12.2015, within six months from today, if not already installed.
- D. All the 21 Hydroelectric Projects located in the mainstream of River Ganga are hereby directed to install Sewage Treatment Plants of appropriate capacity during construction phase and thereafter, at operational phases, within a period of six months from today.
- E. Director, National Mission for Clean Ganga, is directed to install the Sewage Treatment Plant, having capacity of 40 MLD, at Jagjeetpur, sanctioned by it on 29.9.2015, by completing the process within three months from today.
- F. Respondent No.2-Uttarakhand Environment Protection & Pollution Control Board is directed to take action against those 180 Industries, to whom the Show cause Notices have been issued in the Year 2015-16 as per Annexure No.4, and

to complete the same within three months from today.

- G. Industries mentioned at Serial Nos.1 to 44, to whom Closure Notices have already been issued in the Year 2014-15, are hereby ordered to be closed/shut forthwith by the concerned District Magistrate.
- H. 106 Industries, to whom Closure Notices have been issued in the Year 2015-16, are also ordered to be closed/shut forthwith by the concerned District Magistrate.
- I. The State Government is directed to take appropriate action against the respondent no.2 – State Environment Protection & Pollution Control Board under Section 62 of the Act of 1974 within a period of six months from today, since it has failed to discharge its statutory duties under the State Act.
- J. The Union of India is also directed to issue necessary directions to the respondent no.2 – Board to strictly implement the environmental laws in order to protect and preserve River Ganga and in case, the respondent no.2-State Board fails to comply with the directions and a grave emergency arises due to further degradation of water quality in Ganga, the Central Government may order the Central Pollution Board to perform the functions of the State Board in the entire stretch of area covering River Ganga and its other tributaries in the State of Uttarakhand.

- K. The competent authorities are also directed to initiate criminal proceedings against the defaulters for contravention of the provisions of Water (Prevention and Control of Pollution) Act, 1974 as well as the Environment (Protection) Act, 1986 within three months.
- L. It is made clear that the Ashrams at Haridwar would be ordered to be sealed and closed down by the District Magistrate/Senior Superintendent of Police of the area, where these Ashrams are located, in case the untreated sewage is permitted by them to flow in the Ganga directly without treatment.
- M. After three months, no industry/hotel/commercial establishment/educational institution shall discharge untreated sewage/industrial effluents in River Ganga without its treatment. In case of failure, the competent authority is directed to take stern action against these commercial establishments. All the drains opening into the river Ganga shall be sealed and closed after three months.
- N. The most pollutant units situated on the banks of river Ganga are ordered to be re-located by following the norms laid down by the Their Lordships in the judgments, quoted hereinabove.
- O. No person shall litter/defecate/urinate, in open, within a radius of 500 meters on both sides of river Ganga. The State Government is directed to make suitable amendments in the municipal laws

by imposing stringent fines including imprisonment. Any person found littering/urinating/defecating in open on the banks of river Ganga, shall be imposed a fine of Rs.5,000/-. The concerned District Magistrates of the State shall be personally responsible to carry out these directions. The District Magistrates of the concerned district are directed to put up suitable number of Notice Boards on all the Ghats and religious places, falling in their territorial jurisdiction, about these directions. The Sub Divisional Magistrates are permitted to take cognizance of the matter till the municipal laws are suitably amended. Suitable number of Mobile Magistrates shall remain posted on Har-ki-Pauri at Haridwar.

- P. It is further directed that there shall be a total ban of sale, use and storage of plastic carry bags throughout the State of Uttarakhand w.e.f. 01.01.2017. No person shall be permitted to bring carry bags in the State of Uttarakhand by any means of transport, including the bus, trains and air. The State Government shall launch a special campaign to make the people aware to use paper or Jute bags to save the environment.
- Q. The State Government is directed to ensure that the people should not use soap, oil and shampoo while taking a bath in river Ganga. Bathing of cattle in river Ganga is also banned forthwith.
- R. Begging is also prohibited in all the holy places in the State of Uttarakhand.

- S. The State Government is directed to provide Skimmers in sufficient numbers to clean Ganga at Haridwar, Rishikesh and downstream.
- T. The Forest Research Institute is directed to prepare the fresh D.P.R. for afforestation for the basin and banks of river Ganga.
- U. The Municipal Bodies, throughout the State of Uttarakhand, are directed to dispose of the garbage in scientific lines by setting up Treatment Plants, as provided under the Municipal Solid Wastes (Management & Handling) Rules, 2000 within six months.
- V. There shall also be a direction not to permit new industries based on water like Sugarcane, Pulp/Paper Industries, Distilleries, Textile Industries etc. within a radius of two kilometres from the banks of river Ganga. No new commercial establishment employing more than 50 persons including the hotels, having capacity of more than 50 guests, shall be permitted to operate henceforth, without setting up Effluent Treatment Plant or Sewage Treatment Plan. This direction shall also be applicable for big Ashrams housing more than 100 devotees.
- W. We recommend/suggest the Union of India to frame the law exclusively for River Ganga to save it from extinction.
- X. The Municipal Corporation, Haridwar as well as the Municipal Council, Rishikesh are directed to construct sufficient number of toilets, based on

the technology employed in the toilets used in aeroplanes in order to maintain hygiene in the religious places.

- Y. The State Government should declare “River Conservation Zones” where no construction activity should be permitted on the banks of river Ganga from the highest flood plain by private as well as governmental agencies.
- Z. The Comptroller and Auditor General is directed to conduct a special audit of all the Centrally Financed Schemes launched to rejuvenate river Ganga as well as the amount spent by the State Governments for rejuvenation of river Ganga, within a period of six months and to place the same before His Excellency, the President of India.

Let us Save Ganga to Save Civilization

(Alok Singh, J.)

(Rajiv Sharma, J.)