

Report Code: 011_GBP_IIT_PLG_DAT_01_Ver 1_Dec 2011

Mapping of Legislations *Applicable to the Ganga River Basin*

GRB EMP : Ganga River Basin Environment Management Plan

by

Indian Institutes of Technology



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Preface

In exercise of the powers conferred by sub-sections (1) and (3) of Section 3 of the Environment (Protection) Act, 1986 (29 of 1986), the Central Government has constituted National Ganga River Basin Authority (NGRBA) as a planning, financing, monitoring and coordinating authority for strengthening the collective efforts of the Central and State Government for effective abatement of pollution and conservation of the river Ganga. One of the important functions of the NGRBA is to prepare and implement a Ganga River Basin: Environment Management Plan (GRB EMP).

A Consortium of 7 Indian Institute of Technology (IIT) has been given the responsibility of preparing Ganga River Basin: Environment Management Plan (GRBEMP) by the Ministry of Environment and Forests (MoEF), GOI, New Delhi. Memorandum of Agreement (MoA) has been signed between 7 IITs (Bombay, Delhi, Guwahati, Kanpur, Kharagpur, Madras and Roorkee) and MoEF for this purpose on July 6, 2010.

This report is one of the many reports prepared by IITs to describe the strategy, information, methodology, analysis and suggestions and recommendations in developing Ganga River Basin: Environment Management Plan (GRB EMP). The overall Frame Work for documentation of GRBMP and Indexing of Reports is presented on the inside cover page.

There are two aspects to the development of GRB EMP. Dedicated people spent hours discussing concerns, issues and potential solutions to problems. This dedication leads to the preparation of reports that hope to articulate the outcome of the dialog in a way that is useful. Many people contributed to the preparation of this report directly or indirectly. This report is therefore truly a collective effort that reflects the cooperation of many, particularly those who are members of the IIT Team. Lists of persons who have contributed directly and those who have taken lead in preparing this report are given on the reverse side.

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1. Preamble

The river Ganga is of unique importance ascribed to reasons that are geographical, historical, social-cultural and economic giving the status of National River. The river system is undergoing rapid changes due to human interventions that include excessive use of river resources, discharge of domestic and industrial effluents, encroachment of river space, modifications in river course, etc. In order to bring positive changes in the river system, it is necessary to examine present legislative framework. The concerned Central and State legislations broadly fall into following subjects areas.

- ‘Sanitation’: this is an important aspect in the entire course of Ganga and includes issues like:
 - a) ‘activities of civic bodies’ which also includes all types of domestic waste and religious activities like cremation; and
 - b) ‘industrial wastes’ which lead to river pollution
- ‘Agriculture’: this is a pertinent issue in middle and lower stretches of Ganga. A huge amount of river water gets diverted for the agricultural purpose and channels have been cut from the river for the convenience of the agriculture.
- ‘Industrial pollution’: it is one of the most significant sources of river pollution which is increasing day by day. The Central legislations like Water (Prevention and Control of Pollution) Act, 1974 and Environment Protection Act, 1986 cover issues regarding this area.
- ‘Commercial use of water ways’: the river water is used for many purposes like, fishing, navigation, etc. These issues are most significant in ‘middle and lower stretches’.
- ‘Dams and diversion’: this is an important aspect in the entire course of Ganga affecting the natural flow of the river.

2. Mapping of Legislations

The report is based on different Central and State legislations relating to industrial pollution, sanitation, agriculture and dams. The work touches upon the presence of law and related provisions on the abovementioned aspects of river.

The study is divided upon the flow of Ganga from Up North to Down East and has been categorized as Upper Stretch covering the region of Uttrakhand, Middle Stretch covering the regions of UP and Bihar and Lower Stretch covering the region of West Bengal. The categorization is largely based upon the use of Ganga.

Before identifying different legislations touching upon qualitative and quantitative aspects of problems of Ganga, the paper attempts to examine the scheme of the Constitution in order to present holistic view of problem.

3. Scheme of the Constitution

Article 48 A – states that “The State shall endeavor to protect and improve the environment and to safeguard the forests and wildlife of the country”.

In furtherance of federal structure of governance, the Constitution has divided subject matter in three different lists limiting the jurisdiction of Central Government and State governments in accordance with the enlisting of subjects.

3.1 Union List (List I)

The list houses the subject matters on which only Centre can legislate. The relevant subject matters are as follow:

- a) Entry 24- Shipping and navigation on inland waterways, declared by Parliament by law to be national waterways
- b) Entry 52- Industries, the control of which by the Union is declared by Parliament by law to be expedient in the public interest
- c) Entry 56- Regulation and development of inter-state rivers and river valleys to the extent to which the regulation and development under the control of the Union is declared by Parliament by law to be expedient in the public interest.
- d) Entry 57- Fishing and ferries beyond territorial waters.
- e) Entry 97- Any other matter not enumerated in List II or List III including any tax not mentioned in either of those lists.

3.2 State List (List II)

The list houses the subject matters on which only State can make laws. The relevant subject matters are as follow:

- a) Entry 5- Local Government, that is to say, the constitution and powers of Municipal Corporation
- b) Entry 6- Sanitation
- c) Entry 10- Burials and burial grounds; cremation and cremation grounds
- d) Entry 13- Communications, that is to say, ferries, and other means of communication not specified in List I...inland waterways...subject to the provisions of List I and List III with regard to such waterways
- e) Entry 14- Agriculture
- f) Entry 16- Ponds
- g) Entry 17- Water, that is to say, water supplies, irrigation and canals, drainage and embankments, water storage and water power subject to the provision of entry 56 of List I.
- h) Entry 21- Fisheries
- i) Entry 24- Industries subject to the provisions of entries 7 and 52 of List I.

3.3 Concurrent List (List III)

The list houses subject matter on which both Centre and State governments can make laws. The relevant entries are as follow:

- a) Entry 17 A- Forests
- b) Entry 32- Shipping and navigation on inland waterways as regards mechanically propelled vessels and the rule of the road on such waterways.
- c) Entry 36- Factories

4. Analysis

1. The provision of the Constitution reflects the commitment of States to undertake all necessary steps to preserve and protect environment.
2. Inter-State rivers and river valleys are Central subject whereas subjects such as agriculture, canals, agriculture, water are State subjects. There is a need to bring coherence in laws which touches upon these aspects relating to Ganga River.
3. In the matter of Ground Water, there is an authority established under EP Act for the purpose of regulation and development of groundwater management. It is to be noted that ground water is interconnected with issues of river, irrigation, agriculture.
4. Sanitation as a state subject warrants examining the conflict/uniformity in different legislations.
5. Industry is primarily a state subject; therefore there is a need to examine the conflict/uniformity in different legislations.
6. Local Government is a State subject; however, this institution is primarily responsible for treating sewage and effluents and drainage of pollutants in river. It will be pertinent to examine that the power and function of different municipal corporations regarding sewage treatment and accountability of non-compliance with the rule/norms. Financial support will be another important issue in this regard.

5. Other Legislations

On review of the literature, the legal team decided to concentrate on the handpicked issues in the different life cycles and different stretches of the river. Below is the synoptic view on this:

Stretches	Issues
Upper Stretches	Sanitation including the cremation activities
Middle Stretches	Sanitation including the cremation activities
	Industrial Pollution
	Agriculture
	Dams and Diversions
Lower Stretches	Ecology (Gangetic Dolphin)
	Sanitation including the cremation activities
	Agriculture
	Commercial use of Water Ways and pollution
	Dams and Diversions
	Ecology (Gangetic Dolphin)
	State Border Disputes on change of river Course
Land Encroachment	

Based on the findings of the preliminary issues in the different stretches we were mapping the applicable legislations in the different stretches of river. In doing so, the reports of GAP I and GAP II have been taken into consideration.

6. Upper Stretch

Issues	Relevant Legislations, Regulations and By-laws (soft law)	Comments
	Environment Protection Act 1986 - Umbrella legislation. (Central Legislation)	a. The Act deals with the subject of sanitation by prohibiting discharge of environmental pollutants in excess of the standards and making it mandatory for complying with procedural safeguards in case of hazardous substances.
Sanitation		Being a state subject, State has got a prime responsibility to address issues of sanitations.
	Uttarakhand State Ganga River Conservation Authority, vide SO 1111(E), 14th August 2010- Central Notifications	a. Take measures interalia, and augmentation of sewerage infrastructure, catchment area treatment, decentralized sewage treatment systems and regulation of activities aimed at the prevention, control or abatement of pollution in the river Ganga. b. Monitor and review implementation of various programmes or activities taken up by the implementing agencies for

		<p>prevention, control and abatement of pollution in river Ganga.</p> <p>c. Enter and inspect under sec. 10 of the said Act and power to take sample under sec. 11 d. Issuance of the direction under sec. 5 of the said Act for the purpose of exercising and performing functions envisaged for this Authority</p> <p>d. To combine regulatory and developmental functions keeping in view the powers vested with the State Government and their institutions</p> <p>e. Not exercise power inconsistent with the provision of EP Act</p>
	<p>Uttar Pradesh Municipalities Act (Uttanchal Sansodhan) Act, 2001.</p>	<p>a. The Nagar Panchayat or a Municipal Council is responsible for the acts stated under the legislation.</p>
	<p>The Uttranchal River Valley (Development and Management) Act, 2005</p>	<p>a. For the sustainable development and proper management of river valley, with special reference to the Bhagirathi River Valley, Up and Down stream of Tehri Dam including its catchment and command areas in the State of Uttranchal.</p> <p>b. Formulation and execution of development plan for proper maintenance of river Bhagirathi.</p>

7. Middle Stretch

Issues	Relevant Legislations, Regulations and By-laws (soft law)	Comments
	Environment Protection Act 1986- Umbrella legislation (Central Legislation)	
Sanitation		Being a state subject, State has got a prime responsibility to address issues of sanitation
	Uttar Pradesh State Ganga River Conservation Authority, vide SO 2493(E), 30th Sep. 2009- Central Notifications	The review of these authorities revealed that they are having similar power, functions, institutions, etc that of Uttrakhand State Ganga River Conservation Authority. Therefore, the observation written above under the heading of Sanitation may be read under this heading also.
	Uttar Pradesh Water Supply and Sewerage Act, 1975	<p>a. The Act was enacted to establish the corporation, authorities and organisations for the development and regulation of water supply and sewerage services.</p> <p>b. The authority performs Sewerage Treatment and disposal and treatment of trade effluents on regular basis.</p>
Industrial Pollutions	Environment Protection Act, 1986 (Central Law)	
	Water (Prevention and Control of Pollution) Act, 1974 (Central Law)	<p>a. Provides for the constitution of Central and State Pollution Control Board with the objective to promote cleanliness of streams and wells.</p> <p>b. The Central Board jurisdiction extends to different areas of states whereas the State Board jurisdiction confines to the state only.</p>
	Water (Prevention and Control of Pollution) Rules, 1975	Rules made by the Central Government after consultation with Central Board for the Prevention and Control of Water Pollution.
	Water (Prevention and Control of Pollution) Cess Act, 1977	An Act enacted for the levy and collection of a cess on water consumed by persons carrying on certain industries and by local authorities, with a view to augment the resources of the Central Board and the State Boards for the

		prevention and control of water pollution constituted under the Water. (Prevention and Control of Pollution)
	Water(Prevention and Control of Pollution) Cess Rules,1978	Provides for the control of water pollution.
	The Hazardous Waste (Management and Handling) Rules, 1989 Amendment 2000	<p>a. The Hazardous Waste (Management and Handling) Rules, 1989 have been responsible for proper collection, treatment, transport, storage and disposal of hazardous wastes listed in the schedule annexed to these Rules.</p> <p>b. The principle thrust of the Hazardous Waste (Management and Handling) Rules, 1989 is that every occupier or any other person treated hazardous wastes will do so only with authorization from the State Pollution Control Board (SPCB).</p>
Agriculture		Agriculture is a State subject
	River Board Act, 1956 (Central Law)	<p>a. An Act to provide for the establishment of River Boards for the regulation and development of inter-State rivers and river valleys.</p> <p>b. The Act provides for establishment of River Board by the Central Government for the purpose of advising the governments interested in relations to such matters concerning the regulation or development of an inter-state river and river valley.</p> <p>c. The power of the Board is to advise the Governments on regulation or development and coordination- related to following matters, interalia-</p> <ul style="list-style-type: none"> • Conservation, control and optimum utilisation of water resources of Inter-state River. • Promotion and operation of schemes of agriculture, water supply or drainage, • Promotion and operation of schemes for the development of hydro- electric power.

		<ul style="list-style-type: none"> • Promotion of afforestation and control of soil erosion. • Prevention of pollution of the waters or Inter-state River. <p>The power of the board includes monitoring progress of the work, undertaking research work.</p>
	<p>Bihar Irrigation Act, 1997</p>	<p>a. Aims to provide for and consolidate the law relating to agriculture embankment, drainage, levy & assessment of water rates, better contribution and matters related therewith.</p> <p>b. The Act established an authority called Canal Officer with the following powers, inter alia,</p> <ol style="list-style-type: none"> 1. Entry for enquiry or examination with the application or use of the water of any agriculture work for the purpose of regulation, supply or storage of water. 2. Power to inspect and regulate the water supply on account of which any water rate is chargeable, for the purpose of inspecting or regulating the use of the water supplied, or of measuring the lands irrigated thereby or chargeable with a canal revenue and of doing all things necessary for the proper regulation and management of the agriculture work from which such water is supplied. 3. Further, whenever it appears to the State Government that injury to the public health or public convenience or to any agriculture work or to any land for which irrigation from a canal is available, has arisen or may arise from the encroachment of any river, stream or natural-drainage course, the State Government may prohibit, the formation of any such encroachment, or may order the removal or other modification

		of such encroachment.
	Uttar Pradesh Minor Irrigation Works Act, 1920	The Act provides for the 'Minor Irrigation Work', which means an irrigation, submersion, drainage or protective work, that works natural or artificial of which is constructed and maintained by the State Government.
	Uttar Pradesh State Tube-Wells Act, 1936	The Act provides provisions for the construction, improvement and maintenance on State Tube-well irrigation works by the Government.
	Uttar Pradesh Participatory Irrigation Management Act, 2009	To allow water users association to play effective role in irrigation management
	The UP Fisheries Act, 1948	The Act provides for the prohibition of destruction or attempt to destroy fish by any means and poisoning the water
	Indian Fisheries Act 1897	Subject to the provisions of the General Clauses Act 1887, this Act shall be read as supplemental to any other enactment for the time being in force relating to fisheries in the territories to which this Act extends.

Dam and Diversions

	National Waterway (Allahabad-Haldia Stretch of the Ganga-Bhagirathi, Hooghly River) Act 1982	The Act provides the declaration of the Allahabad-Haldia Stretch of the Ganga-Bhagirathi-Hooghly river to be a national waterway and also to provide for the regulation and development of that river for purposes of shipping and navigation on the said waterway.
	River Boards Act, 1956	As referred in Agriculture
	Prevention of Damage to Public Property Act, 1984	The Act deals with the subject of damage to Public property, where it is clearly mentioned that if any one causes any damages or mischief to the public property then that person should be punished under law.
	Bihar Irrigation Act, 1997	Empower the Canal Officer to make temporary dams

Ecology (Gangetic Dolphin)

	Wildlife Protection Act 1972	Under the Schedule I of the Act the Gangetic Dolphins have been declared as the 'endangered species. Gangetic Dolphins comes under the 'Part I' which comes in the category of the Mammals.
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8. Lower Stretch

Issues	Relevant Legislations, Regulations and By-laws (soft law)	Comments
Sanitations		Being a state subject, State has got a prime Responsibility to address issues of sanitations.
	West Bengal State Ganga River Conservation Authority, vide SO 2494(E), 30th Sep. 2009 – Central Notifications	The review of these authorities reveals that they are having similar power, functions, institutions, etc that of Uttrakhand State Ganga River Conservation Authority. Therefore, the observation written above under the heading of Sanitation may be read under this heading also.
	The Bengal Agricultural and Sanitary Improvement, 1920	<p>a. A law relating to construction of drainage and other works for the improvement of agricultural and sanitary conditions in certain areas of Bengal.</p> <p>b. Collector can take cognizance, on his own or on application from local authorities any person, of work undertaken for improvement or prevention of deterioration of agricultural and sanitary condition in any area.</p>
	The Calcutta Burials Board Act, 1881	Provide for constitution of the Board to regulate, manage and control government burial grounds.
	The Calcutta Metropolitan Water and Sanitation Authority Act, 1966	To provide for the establishment of an Authority for the maintenance, regulation and development of water-supply, sewerage and drainage services and for the collection and disposal of garbage.
	The Howrah Municipal Corporation Act, 1980	The act provides the better administration of the municipal affairs of Howrah by the establishment of Municipal Corporation.
	The Kolkata Municipal Corporation Act, 1980	The Act deals with the municipal affairs as well as the issues relating to solid waste management, drainage and water supply

Agriculture		
	River Board Act, 1956	Refer to the comment given for Middle Stretch
	Bengal Irrigation Act, 1876.	An act to provide for agriculture in the province subject to the lieutenant governor of Bengal. <ul style="list-style-type: none"> • In matters of construction, maintenance and regulation of canals for the supply of water there from and levy of rates for water so supplied
	West Bengal Closing of Canals Act 1959	The Act provides for the collection of Tolls and control of the line, construction and improvement of navigation
	The West Bengal Irrigation (Imposition of Water Rates for Damodar Valley Corporation Water) Act, 1958	The Act provides for the imposition of water rate in areas in West Bengal where the water is supplied by the Damodar Valley Corporation for the purpose of agriculture.
	The WB Irrigation (Imposition of Water Rate) Act, 1974	The Act provides for the imposition of water rate in areas where the water supplied from agriculture works executed, maintained and controlled by the State government.
	The WB State Tube Well and Lift Irrigation Act, 1974	The Act provides for the development of agricultural lands in West Bengal by Tube-well and Lift irrigation projects and for the imposition of levy or levies in respect of lands served by any such irrigation projects
	The West Bengal Fisheries (Requisition and Acquisition) Act 1965	The Act provides the requisition and speedy acquisition of fisheries for the purposes of improvement and development of such fisheries and supplying fish to the public.
	Indian Fisheries Act 1897	Subject to the provisions of the General Clauses Act 1887, this Act shall be read as supplemental to any other enactment for the time being in force relating to fisheries in the territories to which this Act extends.
Dams and Diversions		
	Bengal Embankment Act 1882	To make better provision for the construction, maintenance and management of embankments and water-courses

	Bengal Drainage Act 1880	The Act was enacted for the regulation of embankments and drainage works. This act provided for the better drainage systems and improvement of lands inside the embankments area.
Industrial Pollution		
	Water (Prevention and Control of Pollution Act), 1974. (Central Law)	<p>a. Provides for the constitution of Central and State Pollution Control Board with the objective to promote cleanliness of streams and wells.</p> <p>b. The Central Board jurisdiction extends to different areas of states whereas the State Board jurisdiction confines to the state only.</p>
Ecology (Gangetic Dolphin)		
	Wildlife Protection Act 1972	Under the Schedule I of the Act the Gangetic Dolphins have been declared as the 'endangered species. Gangetic Dolphins comes under the 'Part I' which comes in the category of the Mammals.
State Border Disputes on change of river Course		No established Laws are available. At present there are no disputes
International Border Disputes on change of river Course	1977 Agreement between India and Bangladesh	<p>a. Both the Agreements were made to solve the dispute raised regarding the water supply after the construction of the Farakka Dam. The water supply reduced 50% than the Pre-Farakka.</p> <p>b. In 1977 Agreement, water sharing was based on 75% availability of flow at Farakka from 1948 to 1973.</p>
	1996 Treaty between India and Bangladesh	<p>a. In 1996 Treaty the water flow at Farakka was calculated on the basis of average flow at Farakka for the period 1949 to 1998 and the water sharing decreased to 61%.</p> <p>b. Bangladesh is looking for the revision of some part of the Treaty which discusses the 75% availability of Farakka rather than average of the total flow.</p>

Commercial Water-Ways		
	Bengal Water-Ways Act, 1934	An act to provide for the maintenance and improvement of water-ways in Bengal.
	The WB Fisheries (Requisition and Acquisition) Act, 1965	An Act to provide for the requisition and speedy acquisition of fisheries for the purposes of improvement or development of such fisheries and supplying fish to the public
	The Canals Act, 1864	The Act provides for the amendment and consolidation of the law relating to the collection of tolls on Canals and other lines of navigation, and for the construction and improvement of lines of navigation, within the provinces under the control of the Lieutenant Governor of Bengal.
	The Calcutta Port Act, 1890	The Act deals with the Laws relating to the Port of Calcutta and to the appointment of the Commissioner of the port.

9. Analysis of Legislations Applicable in Upper, Middle and Lower Stretches of Ganga

9.1 Part I- Upper Stretch

9.1.1 Uttar Pradesh Municipalities Act (Uttranchal Sansodhan) Act, 2001

a) Relevant provisions:

Sections 1 and 2

Under the Act the State Government may appoint a Municipal Council or a Nagar Panchayat for the purpose of the Act.

b) Power and functions

The Nagar Panchayat is responsible for the acts stated under the legislation and they may perform any duty require for the purpose of the legislation. The Act applies to the whole state of Uttranchal. It is directly not related with the Ganga Basin management.

c) Analysis

The Act basically deals with the administrative structure and function of the Uttranchal Municipalities.

9.1.2 The Uttranchal River Valley (Development and Management) Act, 2005

a) Relevant provisions

Section 3: Establishment of River Valley Development Authority

Section 8: Functions of the Authority

Section 10: preparation of Master Plan

Section 11: preparation of Sectoral plan and regulation of Development in the River valley

b) How the Law deals with the subject of sanitation

The Uttranchal River Valley Act deals with the sustainable development and proper management of River Valley of the River Bhagirathi within the up and down stream of Tehri Dam which also includes the basin.

c) Power and functions

The River valley authority for the sustainable development and proper management of river valley, regularly maintain the Up and Down stream of Tehri Dam including its catchment and command areas in the State of Uttranchal.

- i) the Authority performs many technical functions, like:
 - a. preparation of master plan, which defines the carrying capacity of basin;
 - b. outline the development schemes;
 - c. implementation of sectoral plan and development of the river valley
- ii) the authority has the power to prohibit any construction and mining in the river valley;

d) Analysis

Though the Act deals with the basin management but it dint cover the area of Basin Contamination Measurement System and Maintenance of minimum flow & Environmental Flow of the River.

9.2 Part II- Middle Stretch

9.2.1 Sanitation

Uttar Pradesh State Ganga River Conservation Authority, vide SO 2493(E), 30th Sep. 2009 – Central Notifications

a) Power and Functions

1. Take measures, augmentation of sewerage infrastructure, catchment area treatment, decentralised sewage treatment systems and regulation of activities aimed at the prevention, creating public awareness, control or abatement of pollution in the river Ganga.
2. Monitor and review implementation of various programmes or activities taken up by the implementing agencies for prevention, control and abatement of pollution in river Ganga.
3. Enter and inspect under sec. 10 of the Environment Protection Act and power to take sample under sec. 11
4. Issuance of the direction under sec. 5 of the Environment Protection Act for the purpose of exercising and performing functions envisaged for this Authority.

5. To combine regulatory and developmental functions keeping in view the powers vested with the State Government and their institutions.

b) Support

The technical and financial support to authority is to be provided by the State Government (Department of Drinking as a Nodal Department).

c) Institutions formed under the law

State Executive Committee: It shall oversee and monitor the implementation of various programmes and projects of the Authority and give necessary directions to the implementing agencies.

The Executive Committee shall exercise the powers and performs such other functions as delegated by the Authority.

d) Analysis

The State Government of Uttar Pradesh constitutes State Executive Committee Authority for the purpose of preserving and conserving Ganga.

Uttar Pradesh Water Supply and Sewerage Act, 1975

a) Relevant provisions

Section 3: establishment of the Jal Nigam

Section 4: constitution of the Jal Nigam

Section 14: Function of the Jal Nigam

Section 15: Power of the Jal Nigam

Section 18: Establishment of Jal Sansthan

Section 20: constitution of Jal Sansthan

Section 24: Function of Jal Sansthan

Section 25: Power of a Jal Sansthan

Section 65: supply of water by Jal Sansthan

Section 71: Prohibition of wastage of water

Section 74: Right of owner or occupier to obtain sewer connection

Section 75: Power to require owner to have sewer connection

Section 77: prohibition of construction of building over sewer

Section 78: power to affix shaft etc, for ventilation of sewer cesspool

Section 79: power to examine and test sewer etc, believed to effective

Section 84: General penalty

Section 85: offence by companies

b) How the law deals with the subject of sanitation

The Act was enacted to establish the corporation, authorities and organisations for the development and regulation of water supply and sewerage services. For the purposes of controlling and managing the water supply and sewerage the Act delegates certain powers to different authorities established under the Act. Jal Nigam (the corporation) and Jal

Sansthan are two authorities constituted by the State Government for the purpose of the Act.

The main power and function of the Authorities include Sewage Treatment and disposal and treatment of trade effluents. Under Section 25(2)(iii) the Jal Sansthan has the power to abstract water from any natural sources and dispose of waste water. In the State of Uttar Pradesh the main source of natural water is River Ganga. Under the Act here it is mentioned the source of natural water and the place of disposal of waste water.

The Act delegates power to authorities to control the sewerage system and water supply of whole Uttar Pradesh (except cantonment area) and the urban cities of U.P like Kanpur, Allahabad, and Varanasi are being situated on the banks of the river Ganga. So the sewerage system of the water is more or less connected with Ganga through Channels, canals, pipes etc. in connection to the project there is an emergence need of analysing this legislation.

c) Institutions formed under the law

The State Government of Uttar Pradesh constitutes Jal Nigam Corporation and Jal Sansthan for the purpose of improvement of water supply and sewerage service in any local area. The Nigam shall appoint a Chairman (appointed by State Government). The other members are-

- i) a Managing Director (appointed by State Government)
- ii) a Finance Director (appointed by State Government)
- iii) the Secretary to the State Government in the Finance Department, ex-officio
- iv) the Secretary to the State Government in charge of the Water Supply Department, ex-officio
- v) the Secretary to the State Government in Planning Department, ex-officio the Director of local bodies (U.P. ex-officio)
- vi) the director of Medical and health service (U.P. ex-officio)
- vii) five elected heads of local bodies in the State (nominated by the State Govt)

Jal Sansthan also constituted a Chairman who shall be the Nagar Pramukh of the Nagar Mahapalika (ex officio), and the other members' are-

- i) a General Manager, appointed by the Nigam , approved to the State Government
- ii) a joint Director of Medical and Health Services to be nominated by the Director of Medical and Health Services, U.P.
- iii) three Sabhasad of the Nagar Mahapalika nominated by the State Government
- iv) two representatives of the Nigam
- v) the Director of local bodies,
- vi) the Mukhya Nagar Adhikari of the Nagar Mahapalika

d) Powers granted under the law

In this Act power has been referred in different modes, power of the Jal Nigam as follows-

- 1) to inspect all water supply and sewerage facilities in the State
- 2) to provide training for its own personnel as well as employees of local bodies.
- 3) Prepare various schemes for water supply and sewerage.
- 4) to lay down the schedule of fees for all services rendered by the Nigam to the State Government
- 5) If Nigam thinks fit for any functions to enter into contract or agreement with any person, firm or institutions
- 6) to adopt its own budget annually
- 7) to approve tariff for water supply and sewerage services applicable to respective local areas of Jal Sansthan

Power of the Jal Sansthan, as follows-

- 1) Exercise all power relating to the water supply, sewerage and sewage disposal of the area which lies within its jurisdictions.
- 2) To carry any water or sewerage works through under or over any highway, road, street, or other place after reasonable notice from to the owner or occupier under any land or building.
- 3) To abstract water from any natural source and dispose of waste water.
- 4) To participate in any contract or agreement with any person or body, if Jal Sansthan thinks necessary
- 5) To adopt its own budget annually
- 6) To maintain tariff for water supply and sewerage services and collected tax also;

Section 81 of this Act deals with the Power of entry, survey etc. any officer of the Nigam or Jal Sansthan has the power to enter upon any premises in order-

- a) to make any inspection, survey, measurement, valuation or inquiry;
- b) to take level;
- c) to dig or bore into sub-soil;
- d) to set out boundaries and intended lines of work;
- e) to mark such levels, boundaries and lines by placing marks and cutting trenches;
- f) to do any other thing for the purposes of this Act.

e) Penalties

Without the complaint of Jal Nigam or Sansthan no court shall take any cognizance of any offence under this Act. If any person or body corporate fails to comply any notice or requisition issued under this Act, shall be punished with fine, which may extend to one thousand rupees and delay of fine extend to fifty rupees every day after the first conviction.

f) Analysis

In this Act no such jurisdictional conflict has been stated. The Act elaborates the sewage treatment and the disposal of untreated effluents but it did not speak about the effect of direct water pollution.

9.2.2 Agriculture

Bihar Irrigation Act, 1997

a) Relevant provisions

Section 3: Rights of the State Government in Water,

Section 4: Irrigation work to vest in Government

Section 5: Survey of lands used for obtaining earth for repairs

Section 7: Power to inspect and regulate the water supply

Section 10: Power to make temporary roadway, water channel or dam

Section 13: Prohibition of obstructions

Section 16: Notification for construction of drainage work

Section 17: Execution of drainage schemes

Section 18: Execution of embankment work

Section 48: Divisional Canal Officer may construct field drains on behalf of owners or occupier

b) How the law deals with the subject of agriculture

Bihar irrigation schemes are generally classified into three classes:

- Major and medium schemes, surface schemes irrigating over 2,000 hectares;
- Minor surface schemes diversion or reservoir schemes irrigating less than 2,000 hectares;
- Life schemes – tube well or small river lift irrigation schemes.

Section 4 of the Bihar Irrigation Act, 1997, deals with Agriculture work to vest in Government. Every agriculture work and all land, earth, pathways, gates, beams and hedges belonging to, or forming part of or standing on any such agriculture work and every embarked tow path along the embankment maintained by the State Government shall vest in the State Government.

Section 12 of this Act states about Notification when water to be supplied for public purposes, Water of any river or stream flowing in a natural channel or of any lake or any other natural collection of still water or ground water or part thereof is received for agriculture work constructed by the State Government.

The Act established an authority Canal Officer, he may duly empowered under this Act shall cause public notice to be given at convenient places, stating that the State Government intends to apply or use the water referred to in that sub-section. Where the State Government is of the opinion that in the interest of proper agriculture from any irrigation work constructed or proposed to be constructed it is necessary to control the construction of wells for any purpose other than exclusively domestic use, either on personal or

community basis, in any area or areas the State Government may by notification specify such area or areas, and there upon no person shall within such area or areas construct any such well except with previous sanction of the State Government or other authority authorised by the State Government in this behalf, and subject to such conditions as the State Government or such authority may impose.

State Government when show the interest upon of proper agriculture from any irrigation work constructed or proposed to be constructed it is necessary to regulate the operation of the existing wells for any purpose other than exclusively domestic use, either on personal or community basis, in any area or areas, the State Government may by notification specify such area or areas and impose such conditions as it many deem fit with regard to extraction of water there from. There upon no person shall within such area or areas extract water from such well except according to conditions which the State Government may impose.

c) Institutions formed under the law

Section 6 of this Act deals with entry for enquiry, when it becomes necessary to make any enquiry or examination in connection with a projected irrigation work or its construction or with the maintenance of an existing irrigation work or with the application or use of the water of any irrigation work for the purpose of regulation, supply or storage of water, a Canal officer is appointed and he empowered in his behalf. He may enter upon such land and structure or anything attached to land as he may think necessary for the purpose, he may dig and bore the sub soil , if enquiry cannot completed then cut down and clear away any part of any standing crop, fence or jungle .

d) Powers granted under the law

Section 7 of this Act, deals Power to inspect and regulate the water supply. Any Canal Officer or any person acting under his general or special orders in this behalf may enter upon any land, building, village channel on account of which any water rate is chargeable for the purpose of inspecting or regulating the use of the water supplied, or of measuring the lands irrigated thereby or chargeable with a canal revenue and of doing all things necessary for the proper regulation and management of the irrigation work from which such water is supplied.

Section 9 deals, any Engineer may make repairs and proper maintenance of any irrigation work and other work executed under the provision of this act. Section 10 ,states about Power to make temporary roadway, water channel or dam, if any person desire that any temporary roadway shall made over an irrigation work or water channel should be made over any public embankment or temporary dam should be constructed over any embankment river or public water channel he shall apply to the Executive Engineer in charge.

Whenever take necessary repair any irrigation work, embankment or water channel maintain by the State Government, it shall be lawful for the Executive Engineer, or any person authorised in that behalf, to enter in and upon any land and take possession of,

appropriate and remove any earth or other material there from, and use the same for the purposes of such repairs.

Section 17 of this Act, states about the State Government may cause a scheme for such works to be drawn up and carried into execution, and the Divisional Canal Officer or any officer authorised by the State Government to draw up and execute such scheme may exercise in connection therewith all or any of the powers conferred on canal officers and shall be liable to any or all of the obligations imposed upon canal officers.

Section 18 of Bihar Irrigation Act 1997, deals with Execution of embankment works. Divisional Officer executed the work that any embankment which connects public embankments or forms by function with the part of a line of embankments, or that any embankment or water channel which is necessary for the protection or drainage of the neighboring country, should be taken charge of and maintained by the officers of Government, that any embankment, or any obstruction of any kind, which endangers the stability of a public embankment or the safety of any town or village, or which is likely to cause loss of property by interfering with the general drainage or flood drainage of any tract of lands, should be removed or altered. If any line of public embankment is changed or new embankment constructed or any embankment is constructed for the protection of any land or for the improvement of any water- channel, or that a sluice in any public embankment should be made; any sluice or water channel should be made, or that any public water channel should be altered for the improvement of the public health or for the protection of any village or cultivable land, The concerned Divisional Officer shall cause to be prepared estimates of the cost of such works together with plans and specifications of the same as may be required, he shall also cause to be prepared from the survey map of the district, a map showing the boundaries of the lands likely to be affected by the said acts and work, and he shall cause a general notice to be given on his intention to cause such works to be executed;

Section 48 of this Act, entitled Divisional Canal Officer may construct field drains on behalf of owners or occupier. Divisional Canal Officer may cause a scheme for field drain to be drawn up. Every scheme drawn up under sub-section (1) of sec 16, amongst other matters shall set out the estimated cost thereof, the alignment of the proposed field drain or realignment of the existing field drain, as the case may be, the particulars of the owners or occupiers to be benefited and other persons who may be benefited thereby and sketch plan of the area proposed to be covered by the scheme.

e) Analysis

The Bihar Irrigation Act passed in 1997 aims to provide for and consolidate the law relating to irrigation embankment, drainage, levy & assessment of water rates, better contribution and matters related therewith. The act also empowers the State Government to pass a notification when water is to be supplied for public purposes. The application or use of the said water or the application or use of water of any agriculture work under the management or control of the State Government shall be regulated according to the provisions of this act.

Whenever it appears to the State Government that injury to the public health or public convenience or to any agriculture work or to any land for which irrigation from a canal is available, has arisen or may arise from the encroachment of any river, stream or natural-drainage course, the State Government may prohibit, the formation of any such encroachment, or may order the removal or other modification of such encroachment. A large proportion of the water used eventually goes as recharge into the subsoil layers through the cultivated fields. The entire quantity of water used comes from the net balance amount of the rain water received every year after deduction on account of the loss by evaporation and transpiration. In course of movement of water, either overland or below the surface, various chemical compounds get dissolved in such water. Some of such extraneous chemical constituents are derived from the residues of pesticides and chemical fertilizers, which are added to the soil every year for better yield of crops. Besides irrigation water, fertilizers, insecticides and pesticides are continuously being added to the soils of the Ganga basin.

Uttar Pradesh Minor Irrigation Works Act, 1920

a) Relevant provisions

Section 3: Preliminary order of the State Government.

Section 8: Power of the officer preparing draft scheme.

Section 9: Compensation for damage caused by entry under section 8

Section 15: Appointing Officer-in-charge

Section 16: Power of officer in charge.

Section 32: Offences

Section 39: Compensation relating to water courses.

b) How the law deals with the subject of agriculture

Minor Irrigation Work means an irrigation, submersion, drainage or protective work, that works natural or artificial of which is constructed and maintained by the State Government. The Collector (appointed by the State Government) has to make inquiry whether it is desirable to undertake the construction or maintenance of a minor irrigation work in any local area. The Collector or any other person, who is appointed by the State Government, has to publish a notice in villages for the proposed land for construction and maintenance. all the interested person shall invite to submit any objection or suggestion , after that inquiry proceeding shall started if the officers thinks fit , publish a notification in the directing the preparation of a draft scheme of construction or maintenance.

c) Institutions formed under the law

In this Act the State Government appoint Collector or any other person as a inquiry officer, if the collector and the other person thinks fit then desirable to undertake the construction or maintenance of minor irrigation work of any description in specified local area.

The State Government also appoints an officer to be in charge of the construction or maintenance of a minor irrigation work in respect of which an approved scheme has been published.

d) Powers granted under the law

The State Government appointed an officer who has power to prepare a draft scheme. When a notification by the State Government directing after the publication in a general or special order may allow any other person to enter upon, any land within the specific area or any land (Section 8)

The State Government also appoints an officer-in Charge. The officer-in-charge or his subordinate shall have such powers:

- to exercise with reference to the work
- if any person doing anything in his opinion diminished the efficiency of the work , to prohibit the order
- to require by order in writing any owner or occupier of land within the benefited area where possession is necessary for the preservation or maintenance of the work.
- to authorise any person for any land for the purpose of construction or maintaining the work, or any inspecting or regulating of water supplied or measuring lands irrigated by the work.
- to require , in any urgency matter any owner or occupier of land receiving benefit from the work to assist at market rates such labour as may be necessary for maintenance of the work. When divisional canal officer issues an order to the persons who are the using any water course to construct bridges, culverts across any public road, canal or drainage channel in use before the said water course was made or repair any works on the failure of the person to whom order has been issued to comply within a proper time, take the required action and shall be revocable U/S 28.

The State Government under section 47 has power to make certain rules, which are:

1. The nature, scope and extent of works, which is undertaken in this Act
2. Conduct an inquiry relating to preparation of a draft scheme.
3. To publication and service the relevant notice.
4. The relevant documents and particulars submitted with a draft scheme.
5. To collect levy from the owners from the time of payment

e) Penalties

If without proper authority anybody voluntarily does any of the following acts shall be liable on conviction before the Magistrate, to imprisonment not exceeding one month and fine not exceeding fifty rupees or both. The acts are:

- i) Damages, alters, enlarge of any work.
- ii) Any disturbances create on supply of water or create any work.
- iii) Any corruptions and fouls the water of any work.

- iv) Destroy or moves any water mark or water gauge by the authority of the public servant.
- v) Passes any vehicles or animals across any work, contrary rules made under this Act.
- vi) Violate or breach any rules under this Act, is liable for punishment.

f) Analysis

The Act does not deal on the area of restriction on Mining activities on River basin which lead to Soil erosion and also did not provide any specific provision on the amount of usage of water for the purpose of agriculture.

The U.P. Tube- Wells Act, 1936

a) Relevant provisions

Section 4: appointment of tube well officer

Section 7: power to construct underground pipelines etc.

Section 8: notice to owner or occupier of land.

b) How the law deals with the subject of agriculture

In this Act to make provisions for the construction, improvement and maintenance on State Tube-well irrigation works by the Government. Also includes all necessary goods or mechanism which is used on tube well water works. In this Act such application use of underground water for the purpose of State Tube Well.

c) Institutions formed under the law

In this Act State Government of Uttar Pradesh appointed Tube well Officers time to time. He performs within the local limits as an authorised officer. The officer has the power to direct all or any other works imposed to sub ordinate officers (Section 4). The Authority may appoint another officer under the Act, like Superintending Engineer, Divisional Officer, and Sub-Divisional Officer.

d) Powers granted under the law

Section 7 of this Act said about the power to construct underground pipelines etc, the tube well officer who is appointed by the State Government or any other authorised person acting as officer he may serve the order, where the place dig, examine, repair, alter, maintain, or remove the tube well pipeline, and also tube well borrow, pits, under, over or upon any immovable property may, open or break up the soil and any such purposes enter upon such property at any time.

In this Act, under section 9 said about power to make rules.

e) Analysis

No such conflict regarding the jurisdictional matter has been stated. There is no specific provision on water pollution present in this Act.

Bihar Emergency Cultivation & Irrigation Act, 1955

a) Relevant provisions

Section 3: Power of collector to settle cultivable land laying fallow for the purposes of cultivating food crops

Section 8: Power of collector to order land to be irrigated from any irrigation work.

Section 9: Power of collector to order land to be irrigated from any natural stream or river or chaur.

Section 10: Preparation of scheme of irrigation and system of rotation.

Section 13: Penalty

b) How the law deals with the subject of agriculture

The State Government may appoint a district collector or any officer. Agriculture work is any work constructed, altered or maintained artificially for the purpose of securing the supply, removal or storage of water for agriculture purposes, it includes any water courses, channel or reservoir for the supply, removal or storage of water for agriculture purposes. Any work, embankment, structure or supply or escape any channel with such water courses, also includes a head work, dam, weir, outlet and sluices as well as a well or tank which is used for agriculture purpose. The collector has settled the cultivable land purpose of cultivation after the finished all inquiry related to cultivated land.

c) Power and Function

- (i) In this Act the State Government appointed a Collector or any officer, Collector has the power to arrangement the land for cultivation, any cultivable land was laying fallow continuously for during two years, if all the inquires as he think fit, collector was settled that land for cultivation purpose (Section 3).
- (ii) If the collector is satisfied after inquiry of proposed cultivated land and if he thinks fit the land benefited by any irrigation work, he may give the order that such land shall be irrigated from such work, on such subject of terms and conditions. (Sec.8). The Collector assesses the amount as fair and equitable to be paid by the person whose lands will be irrigated from such work to the owner of the irrigation work [Section 8(1)].
- (iii) If the Collector has satisfied after such inquiry as he think fit, that certain land is benefitted by agriculture from any natural stream or river or chaur he may make an order that such land shall be irrigated from such stream or river or chaur (Section 9).
- (iv) After that Collector shall prepare a scheme of agriculture or a system of rotation regulating the time of such land shall be irrigated stream or natural stream or chaur or river modify from time to time [Section 10(2)].

d) Penalties

Any person create obstruction an emergency tenant from cultivating the land settled with him or obstruct the irrigation of any land against the order of Collector, shall be punishable with imprisonment which is extend of six months or fine which may extend to two hundred rupees or both.

e) Analysis

The Act deals with the subject matter of agriculture and usage of water from the river. But under the Act there is no specific provision about the water pollution caused by the cultivation wastes.

9.2.3 Commercial Use of Waterways

The U.P. Fisheries Act, 1948

a) Relevant provisions

Section 3: Prohibition and licensing of fishing in selected water by rules

Section 4: Power to prohibit sale of fish

Section 5: Penalties

Section 6: Arrest without warrant for offences under the Act

b) How the law deals with the subject of agriculture

This Act mainly provides the matters relating to the fisheries in the whole state of Uttar Pradesh. Here State Government is the authorised body, and makes such rules for declare the waters to which all or any of them shall apply. The rules are-

- (a) Prohibit or regulate the erection and use of fix engine, the construction, temporary or permanent of weirs, dams and bunds.
- (b) Prohibit the destruction or attempt to destroy fish by gun or bow and arrows and other instrument which is poisoning the river water or pollution of waters by trade effluents.
- (c) Prohibit the fishing except under license, the charges of fees,
- (d) Prohibit fishing in any specified water for specified period.
- (e) Require the owner, mortgage with possession or lease of any tank or jheel for the stocking of such tanks with any class of fishes.

c) Institution formed under the law

In this Act, the State Government means the government of U.P. is the highest authority, the state government appoint the “fishery officer”, this officer carry out all or the purposes of this Act or to do anything required by this Act or any rule made there under. Provided that no police officer below the rank of a sub–inspector shall be appointed in the post.

d) Power granted under the law

In this Act, the State Government appoint fishery officer .any fishery officer or Police officer in minimum sub inspector rank, or any other person specially empowered by the U.P State

Government in his behalf arrest without warrant any person who committing or attempting to commit any fishing offence.

Any police officer who's rank not below the sub-inspector and fishery officer has the same power for any search and investigation relating to fishing offence.

e) Penalties

The breach of any rule which is made under section 3 of this Act shall be punished under the law.

(v) on first conviction with imprisonment of either description for a term which may extend to two months or with fine which may extend to two hundred rupees or both,

(vi) every subsequent conviction with imprisonment with imprisonment of either description for a term which may extend to twelve months or with fine up to five hundred rupees or with both.

f) Analysis

In the U.P. Fisheries Act, 1948 the functions of the Authority are not clearly said and there is no provision stated about Ganga pollution.

The Ganges Tolls Act, 1867

a) Relevant Provisions

Section 3: Rules for measurement of burden.

Section 5: Appointment of Collector of tolls.

Section 8: Payment of tolls how enforced.

Section 14: Power to prohibit construction of bandhels.

Section 15: Penalty for causing obstruction to navigation.

Section 16: rules relating to navigation.

b) How the law deals with the subject of commercial water-ways

The Act discussed about the tolls in various boat, steamer, flats which are navigating on the river Ganges. This Act authorises the levy of the tolls for the improvement of the navigation of the Ganga.

The burden of steamers, boat and flats would be liable to pay the port dues within the limits of the port of city, this method shall be used for determining in mounds, according to actual floatage or displacement, and the boats are liable to pay tolls under this Act.

c) Institutions forms under the Law

In this Act, the State Government of Uttar Pradesh appoints a Toll Collector, and may from time to time remove any such person and appoint another person instead. Every person so appointed shall collect the tolls leviable under this Act by himself, or by an officer in his establishment whom he shall appoint in this behalf.

d) Power and Function

- The person authorised to collect the tolls payable under this Act at any such places, in his own name. The authority may sue for recover, on behalf of the State Government, the amount of any tolls payable to him under this act, by suit in any of the Civil Courts against the owner or master of any steamer, boat or flat is liable.
- The construction of any bandhel or other contrivance for fishing or for any other purpose, in any part of the Ganges below Allahabad, it is cause to obstruction of free and safe navigation of such area, the authorised officer may by notice to be served the owner or person in charge of such bandhel or other contrivance, if owner is not found then to be affix at same conspicuous place in the nearest village, prohibit the construction of such bandhel or other contrivance.

e) Penalties

Anyone who willfully disobey any prohibition or willfully cause or aid in causing any obstruction to the navigation of the Ganges below Allahabad or who willfully omit to remove such obstruction after being lawfully required, shall be punished on conviction before a Magistrate with imprisonment which may extend to one month or with fine extend up to fifty rupees or both.

f) Analysis

The Act stated about mainly on toll and levy of taxes and navigation matters.

9.3 Part III- Lower stretch of Ganga

9.3.1 Basin Management

West Bengal State Ganga River Conservation Authority, vide SO 2494(E), 30th Sep. 2009- Central Notifications

a) Power and functions

- Take measures, *interalia*, and augmentation of sewerage infrastructure, catchment area treatment, decentralised sewage treatment systems and regulation of activities aimed at the prevention, control or abatement of pollution in the river Ganga.
- Monitor and review implementation of various programmes or activities taken up by the implementing agencies for prevention, control and abatement of pollution in river Ganga.
- Enter and inspect under sec. 10 of the E P Act and power to take sample under sec. 11
- Issuance of the direction under sec. 5 of the E P Act for the purpose of exercising and performing functions envisaged for this Authority.
- To combine regulatory and developmental functions ...keeping in view the powers vested with the State Government and their institutions.
- Not exercise power inconsistent with the provision of EP Act.

b) Support

The technical and financial support to authority is to be provided by the State Government (Department of Drinking as a Nodal Department).

c) Institution

State Executive Committee: It shall oversee and monitor the implementation of various programmes and projects of the Authority and give necessary directions to the implementing agencies.

The Executive Committee shall exercise the powers and performs such other functions as delegated by the Authority.

d) Analysis

A dedicated Authority created for the purpose of preserving and conserving Ganga is a welcome step. However, the conflict in functioning of the Authority with the provincial government or institutions like Local Bodies appears to be imminent. Therefore, it is essential to avoid jurisdictional or otherwise overlap or conflict in the legal framework. The extent of overlap or conflict will be examined through field study and analysis of bye-laws/subordinate legislation dealing with the subject matter.

9.3.2 Sanitation

The Sarais Act, 1867

a) Relevant Provisions

Section: 3 - Notice of this Act to be given to keepers of sarais.

Section: 7 - Duties of keepers of sarais,

Section: 9 - Power to shut up, secure, clear and clean deserted sarais.

Section: 14- Penalty for infringing Act or regulations.

b) How the Law Deals With the Subject of Sanitation

The Sarais Act, 1867, Section 2 deals with the meaning of sarai, “means any building used for the shelter and accommodation of travelers, and includes, in any case in which only part of a building is used as a sarai, the part so used of such building. It also includes a purao so far as the provisions of this Act are applicable thereto: The provision lays down that for the regulation of sanitation and drainage works the applicable law will be the law which is for time being regulating the construction and maintenance of public embankments, rivers and outlets.

Section 7 Duties of keepers of sarais

1. When any person in such sarai is ill of any infectious or contagious disease, or die of such disease, to give immediate notice thereof to the nearest police-station:
2. at all times when required by any Magistrate or any other person duly authorized by the Magistrate of the District in this behalf, to give him free access to the sarai and allow him to inspect the same or any part thereof :

3. to thoroughly cleanse the rooms and varandahs, and drains of the sarai, and the wells, tanks, or other sources from which water is obtained for the persons or animals using it, to the satisfaction of, and so often as shall be required by, the Magistrate of the District, or such person as he shall appoint in this behalf :
4. to remove all noxious vegetation on or near the sarai, and all trees and branches of trees capable of affording to thieves means of entering or leaving the sarai:
5. to keep the gates, walls, fences, roofs and drains of the sarai in repair :
6. to provide such number of watchmen as may, in the opinion of the Magistrate of the District, subject to such rules as the State Government . may prescribe in this behalf, be necessary for the safety and protection of persons and animals or vehicles lodging in, halting at or placed in the sarai: and
7. to exhibit a list of charges for the use of the sarai at such place and in such form and languages as the Magistrate of the District shall from time to time direct.
8. Section 9: Power to shut up, secure, clear and clean deserted sarais

If any sarai by reason of abandonment or of disputed ownership shall remain untenanted, and thereby become a resort of idle and disorderly persons, or become in a filthy or unwholesome state, or be complained of by any two or more of the neighbours as a nuisance, the Magistrate of the District, after due enquiry, may cause notice in writing to be given to the owner or to the person claiming to be the owner, if he be known and resident within the district, and may also cause such notice to be put on some conspicuous part of the sarai, requiring the persons concerned therein, whoever they may be, to secure, enclose, clean or

clear the same; and if such requisition shall not be complied with within eight days, the Magistrate of the District may cause the necessary work to be executed, and all expenses thereby incurred shall be paid by the owner of the sarai, and shall be recoverable like penalties under this Act, or, in case of abandonment or disputed ownership of the sarai, by the sale of any material found therein.

Section 14: Penalty for infringing Act or regulations

If the keeper of a sarai offend against any of the provisions of this Act or any of the regulations made in pursuance of this Act, he shall for every such offence be liable on conviction before any Magistrate to a penalty not exceeding twenty rupees, and to a further penalty not exceeding one rupee a day for every day during which the offence continues: Provided always that this Act shall not exempt any person from any penalty or other liability to which he may be subject irrespective of this Act. All penalties imposed under this Act may be recovered in the same manner as fines may be recovered under Section 61 of the Code of Criminal Procedure (25 of 1861).

c) Analysis

Though the Act does not deal with subject of public health and sanitation directly but in the view of social customs and rituals followed The Act enjoined upon a keeper of Serai or an inn to keep a certain quality of water fit for consumption by “persons and animals using it” to the satisfaction of the District magistrate or his nominees. Failure for maintaining the standard entailed a liability of rupees twenty.

The Bengal Agricultural and Sanitary Improvement Act, 1920

a) Relevant provisions

Section 28: Drainage works subject to laws relating to public embankments.

Section 35: Power of Government to make rules.

Section 5: Engineer to prepare Scheme.

Section 17: Report by Engineer on completion of work.

Section 9: Procedure in the case of major schemes Appointment of committee.

Section 2(7): "Major Schemes".

b) How the law deals with the subject of sanitation

The Bengal Agricultural and sanitary improvement act, 1920 under section 28 deals with the subject of sanitation by determining the applicable law for its regulation. The provision lays down that for the regulation of sanitation and drainage works the applicable law will be the law which is for time being regulating the construction and maintenance of public embankments, rivers and outlets.

Section 28 - All outlets and water-channels, natural or artificial, included in a scheme under this Act, whether reconstructed, cleared, altered, enlarged, excavated or cut under this Act or not, and the construction and maintenance of embankments and dams and works therein, or connected therewith, shall be subject to the law for the time being in force regulating the construction and maintenance of public embankments, rivers, channels and outlets.

c) Institutions Formed under the law

Under Section 9 of the Act a commissioner is authorised to appoint a committee. The provision states- "In the case of major schemes, the Collector shall, as soon as possible after the receipt of the scheme, in addition to the publication required by section 6, refer it to the Commissioner, and the Commissioner shall forthwith appoint a committee, to be constituted in the prescribed manner, with the Collector as Chairman, representing the local authorities and the landowning, cultivating and other interests of the area to which the scheme relates."

d) Powers Granted under the law

The act grants power to the government to make rules under section 35. The major powers granted to government relating to sanitation are-

- i) Section 35(f) determining the constitution of the committee referred to in section 9, and regulating the conduct of business at meetings of the committee;

- ii) Section 35(k) prescribing the conditions subject to which lands and works shall vest in a local authority, or person under section, 29;
- iii) Section 35(l) for the maintenance of works under section 30;
- iv) Section 35(m) determining the manner in which the sums referred to in section 31 (for maintenance) shall be administered;
- v) Section 35(n) Prescribing the forms of accounts, surveys, plans, maps, estimates, statements, and reports;
- vi) Section 35(o) regulating the powers and duties of any officer, or person under the Act.

e) Sub-delegation of powers

Under section 5 of the Act, Collector is authorised to direct an engineer to prepare a scheme. The provision is as follows

- Sec 5(1) Whenever it has been decided under section 4 to proceed with any work, the Collector shall direct the Engineer to prepare a scheme.
 - 5(2) When the Engineer has prepared any such scheme, he shall forward it to the Collector, who may, subject to such rules as may be prescribed in this behalf, make such modifications therein as he may deem necessary.
 - The report so forwarded by an engineer should comply with section 17 which states as under-
- i) On the completion of any work executed under this Act, the Engineer shall forthwith submit to the Collector a report accompanied by-
 - a) a statement of the items of the cost of the work referred to in sub-clauses (a), (b) and (d) of clause (2) of section 2; and
 - b) a copy of the map prepared in the prescribed manner of the local area benefited by the improvement."

f) Analysis

The act deals with the subject of drainage and sanitation related issues and laws time being in force regulating public embankments etc. The act further talks about appointment of committees in case of major schemes. The term major scheme is defined under section 2(7) as- "major scheme" means scheme

- i) in which the estimated cost of the work involved exceeds the prescribed amount, or
- ii) in which more than one independent local authority is concerned, or which the Collector has certified should be treated, in such circumstances as may be prescribed, as a major scheme;

Further it grants power to government for the formation of rules and delegation of power to engineers to assist them in formation of schemes. Hence, The Bengal agricultural and sanitary improvement act, 1920 lays down a detailed procedure for regulation of sanitation in Bengal.

The Calcutta Metropolitan Water and Sewerage Sanitation Authority act, 1966

a) Relevant provisions

Section 3: Establishment of Authority.

Section 8: The functions of the Calcutta Metropolitan Water and Sanitation Authority.

Section 9: Powers of Calcutta Metropolitan Water and Sanitation Authority.

Section 18: Appointment of General Manger.

Section 21: Delegation of Power by General Manager.

Section 23: vesting of the responsibilities for sewerage services of the Municipality of Howrah in the Authority.

Section 57: Sewage and Drainage.

Section 70: Prosecution.

Section 72: Penalty.

b) How the act is dealing with subject of sanitation

The Calcutta metropolitan water and sanitation authority act, 1966 deals with the subject of sanitation by assigning the function of sanitation and drainage to The Calcutta metropolitan water and sanitation authority under section 8. The provision is as follows:

Section 8- The functions of the Authority shall be the following, namely-

(1) The promotion and operation of schemes for:

- supply of water,
- sewerage,
- drainage,
- sewage treatment and disposal, and
- collection and disposal of night-soil in areas yet to be sewered;

(2) Matters connected with and incidental to the functions mentioned in clause (1);

(3) Such other functions as may be entrusted to the Authority by the State Government by notification.

c) Institutions formed under the law

The Act provides for the establishment of Calcutta metropolitan water and sanitation authority under section 3 and declares it to be a body corporate.

Section: 3

(1) With effect from such date as the State Government may, by notification, appoint in this behalf, there shall be established for the Calcutta Metropolitan District an Authority by the name of the Calcutta Metropolitan Water and Sanitation Authority.

(2) The Authority shall be a body corporate having perpetual succession and a common seal, and shall by the said name sue and be sued.

Further the constitution of the authority is given under section 4(1) as-

(1) The Authority shall consist of-

- i) a Board of Directors, and
- ii) a General Council."

d) Powers granted under the law

Under section 9 of the Act the clauses granting powers to Authority relating to sanitation are-

- i) to take over all existing municipal responsibilities, powers, controls, facilities, services, and administration within the District relating to water-supply, sewerage, drainage, and collection and disposal of night-soil and to manage them so as to provide all the people of the area with water, sewerage and drainage services and services of collection and disposal of night-soil until sewerage constructed throughout the District;
- ii) to extend, expand and develop existing facilities and to construct and operate new ones for providing sewerage and drainage services;
- iii) to adopt schemes for water-supply, sewerage, drainage and night-soil collection and disposal services;
- iv) to prevent pollution of any water including any water source, water-course or channel within the District;
- v) to regulate the treatment of industrial wastes before discharge thereof into any sewer, canal, river or other water channel within the District;

e) Sub-delegation of powers

- 1) The Board of directors so constituting the Authority shall appoint an Engineer as General Manager for carrying out the administrative functions under section 18 of the Act. The board can further delegate its power to the General Manager in compliance of the provision under section 18. It reads as:
- 2) The Board shall appoint for the Authority a General Manager, who shall have administrative experience and be preferably an engineer. He shall have, in addition to the functions and duties specified elsewhere in this Act, such functions and duties as may be provided by regulations.
- 3) The General Manager shall be the chief executive officer of the Authority who shall be accountable to the Board for his actions.
- 4) The Board may appoint such other officers and employees as it considers necessary for the efficient performance of the functions of the Authority: Provided that, in respect of officers and employees whose maximum salary does not exceed Rs. 1,000 per month, the Board may delegate its power to appoint to the General Manager. Further, under sec 21 General Manger can delegate his powers to other employees.

f) Provision in case of non-compliance of the act

The Act provides for prosecution of a person under section 71, only when a complaint is made by an officer authorised by the Authority to do so and not otherwise.

Further the penalty for violation of the provisions of the Act and any rules made under it is defined under section 72 as imprisonment which may extend to one year and fine which may extend to rupees one thousand.

g) Analysis

The act provides for the establishment of an authority to regulate the drainage and sanitation related issues. It also lays down detailed procedure for functioning of the authority and its constitution. The powers and functions of the Act are wide enough to effectively regulate the sanitation of Kolkata Metropolitan Area defined in its Schedule-I.

The Calcutta Burial Boards Act, 1881

a) Relevant Provisions

Section 2: Appointment of Burial Board.

Section 4: Appointment of Chairman by State Government.

Section 8: Power to make rules.

b) How the act is dealing with subject of sanitation

The Act is not dealing with the subject of sanitation directly but it plays an important role in maintenance of sanitation by providing regulations for dead body burials.

In India as river Ganga is considered sacred it is a common practice among some religious communities to drain the dead bodies of their relatives in river Ganga. The Act however provides for regulation of burial in order to curb the pollution of river by drainage of bodies in it.

c) Institutions formed under the law

Under section 2 of the Act the state government may appoint a burial board. The provision is as follows:

The [State Government] of [West Bengal] may, by a notification published in the [Official Gazette], appoint Burial Board for the Town and suburbs of Calcutta

Further section 3 of the act lays down that one of the members of the board is “the [the Executive Officer of the Corporation of Calcutta] the Health officer of Calcutta”.

d) Powers granted under the law

Under section 8 of the Act, the powers of the Board are enumerated

Section 8

The Board may, with the sanction of the [State Government] of '[West Bengal]', from time to time make such rules consistent with the purposes of this Act, as they may think necessary for any of the following purposes; that are to say:

- for regulating the times when the Board shall meet and the procedure to be observed at such meetings;
- for securing the preservation, repair or removal of existing monuments and for regulating the dimensions and erection of new monuments , in any burial-grounds under their charge;

- for regulating the mode of payment of fees, charges and other dues in respect of interments in any such burial-grounds for expenditure of the same;
- for directing the manner in which and the persons by whom all works within any such burial-ground shall be executed; and
- for otherwise carrying out the purposes of this Act; and may from time to time, with the sanction aforesaid vary, alter or revoke any such rules so made.

All rules so made and variations, alterations or revocations of rules shall be published in the official Gazette.

e) Sub-delegation of powers

The Chairman of the Board which will be nominated by the State Government in accordance with section 4 of the Act can further appoint subordinate officers and clerks for carrying out the work under this Act.

Section 7- "The Board may from time to time appoint all such overseers, Subordinate clerks, subordinate officers and servants as they shall think necessary and proper to assist in carrying out the purposes of this Act, and may from time to time remove any of such persons and appoint others in their place."

f) Analysis

Though the Act does not deal with subject of sanitation directly but in the view of social customs and rituals followed in India the role of Burials Board is important in maintaining and regulating the sanitation to some extent on river embankment.

The Howrah Municipal Corporation Act, 1980

a) Relevant provision (effecting sanitation)

Section 3: Municipal Authorities

Section 4(1) & 4(2): The Corporation

Section 5(1): Constitution of Corporation

Section 6 (1): Constitution of Mayor-in-Council

Section 13: Officers appointed by The Corporation

Section 21, 22, 23: Powers of Municipal Authorities

Section 28: Delegation of Powers.

Section 140(1): Public drains to vest in Corporation.

Section 148: No polluting substance to be discharged in water sources.

Section 157(1): Position of Cesspools.

b) How the act is dealing with subject of sanitation

The Act vests all power relating to constructions and maintenance of public drains and drains alongside public streets within municipal area. The Act provides for maintenance and development of sewers and sewage plants in order to promote sanitation and in turn control the pollution of river Ganga.

1. Section 140 of the Act states as under- "Section140 (1) All public drains, and all drains in, alongside or under any public street. Whether made at the charge of the

Municipal Fund or otherwise, and all work, materials and things appertaining thereto which are situate at Howrah, shall vest in the Corporation;

Provided that the Corporation may with the approval of the State Government make over the trunk-sewer, sewage plants, pumping stations and others utilities to a separate and independent agency for maintenance and development and it shall be lawful for such agency to construct trunk sewers, sewage treatment plants, pumping stations or other utilities.”

2. The most important provision under this Act for curbing pollution of river Ganga is section 148 which directly prohibits discharge of any kind of polluting substance in any water source or river. It also provides for setting a treatment standard for wastes before their disposal in a water source. The Provision is as follows-
Section 148 (1) No person shall throw, empty or otherwise discharge into any water source, channel or municipal drain within or outside Howrah any matter, refuse, or trade effluent or waste so as to cause pollution, health Hazard or nuisance prejudicial to environment. Subject to the provisions of any other law for the time being in force the Corporation may by regulation provide for treatment standard to be maintained before discharge of any industrial waste or foul water or refuse into any river, water source, channel or municipal drainage and sewerage system.
3. In addition to this provision another provision dealing with hygiene of water sources and rivers is given under section 157 of the Act. The provision prohibits construction of any kind filth receptacles and cesspools near or around any kind of water source and river. In case any person has contravened the provision and constructed a cesspool he may be directed to fill it up by the commissioner under clause 2 of the section. Section 157 states as under
 - (a) No person shall construct a cesspool-
 - i) beneath any part of any building or within 15 meters of any tank, reservoir, water source or well, or
 - ii) upon any site or in any position in Howrah which has not been approved in writing by the Commissioner; or
 - iii) upon any site or in any position in Howrah which has not been so approved and is situated within ninety meters of any reservoir used for storage of filtered water to be supplied to Howrah.
 - iv) The Commissioner may at any time by a written notice require the owner of the premises in which any cesspool has been constructed in contravention or the provision of sub-section (1) to remove such cesspool and to fill such cesspool with such materials as may be approved by him”.
 - c) Institutions formed under the law**
Under Section 3 of the Act three kinds of authorities have been enumerated to look into the subject matter of the Act.

These Authorities are

1. The Corporation
2. The Mayor - in –Council.
3. The Mayor.

Under section 4(1) of the Act, State government may appoint a Corporation known as Municipal Corporation of Howrah. The Corporation is declared to be a body Corporate. The provision is as follows.

“Section 4(1) with effect from such date as the State Government may, by notification, appoint, there shall be a Corporation charged with the municipal government of Howrah, to be known as the Howrah Municipal Corporation.

(2) The Corporation shall be a body corporate with perpetual succession and a common seal, and may by its name sue and be sued.”

The constitution of the Committee so formed under section 4 of the Act is given under section 5 of the Act as under-

Section 5- “(1) The Corporation shall consist of the following: members, namely:-

- (a) Fifty elected Councilors, and
- (b) Such persons having special knowledge or experience in municipal administration as the State Government may nominate from time to time:

Provided that such persons shall not have the right to vote in the meetings of the Corporation”

The constitution of mayor-in-council is give as under-

Section 6(1) there shall be a Mayor-in-Council consisting of the Mayor, the deputy Mayor and such number of elected members of the Corporation not exceeding five as the State Government may from time to time determine.

d) Powers granted under the law

The powers of the authorities formed under the Act are enumerated under section 21, 22 and 23. The powers so granted are both administrative and executive in nature.

e) Power of Corporation

Section 21- Subject to the provisions of this Act and the rules and the regulations made there under the municipal government of Howrah shall vest in the Corporation.

f) Power of Mayor-in-council

Section 22- (1) Subject to the provisions of this Act and the rules and the regulations made there under, the executive power of the Corporation shall be exercised by the Mayor-in-Council.

(2) All executive actions of the Mayor-in -council shall be expressed to be taken in the name of the Corporation.”

g) Power of Mayor

“Section 23:

- 1) The Mayor shall exercise such powers and discharge such functions as are conferred on him by or under this Act.
- 2) The Mayor shall preside over a meeting of the Mayor-in-Council which shall meet at such place and at such time as the Mayor may direct.
- 3) The matters to be discussed at a meeting of the Mayor-in-Council shall be prepared under the direction of the Mayor and shall be circulated to the members' or the Mayor-in-Council in such manner as the Mayor may determine.
- 4) The Mayor shall allot among the members of the Mayor-in- Council such business of the Corporation and in such manner as he thinks fit.
- 5) The Mayor may, if he is of opinion that immediate execution of any work (which ordinarily requires the approval of the Corporation or the Mayor-in-Council) is necessary, direct the execution of such work. Provided that the Mayor shall report forthwith to the Corporation or the Mayor-in-Council as the case may be, the action taken under this sub-section and the reason there for.”

h) Sub-delegation of powers

The Corporation can sub-delegate its powers to Mayor-in-Council who can further delegate such powers to Mayor and commissioner under section 28 of the Act.

The provision states as under-

“Section 28(1) The Corporation may by resolution delegate, subject to such conditions as may be specified in the resolution, any of its powers or, functions to the Mayor-in-Council

(2) The Mayor-in-Council may by order delegate, subject to such conditions as may be specified in the order, any other powers or functions to the Mayor or to the Commissioner.”

In addition to delegation of powers The Corporation can also appoint the following officers under section 13 to carry on its work-

- The Commissioner,
- The Controller or Finances,
- The Chief Auditor,
- The Chief Engineer,
- The Chief Architect.
- The Health Officer, and
- The Secretary.

i) Analysis

The Howrah Municipal Corporation Act, 1980 is a very comprehensive piece of legislation dealing with the subject of sanitation in detail, complete with all the required measures vital for the maintenance of sanitation and cleanliness of river Ganga. Various provisions of the Act have ruled out any possibility of polluting the river Ganga by not only prohibiting direct waste disposal in Ganga but also prohibiting construction of any filth receptacles or cesspools near the river. But the problem of pollution in Ganga does not end with the enactment of this Act, as we can still observe the reckless disposal of polluting substances in Ganga even after its enactment, due to its poor implementation. Therefore, if the Act is effectively implemented in the lower stretch of the river Ganga which lying in the Bengal region could be cleaned.

Calcutta Municipal Corporation Act, 1980

a) Relevant Provisions

Section 234: Corporations duty to supply water.

Section 257: water pipes etc, not to be placed where water will be polluted.

Section 260: municipal water supply, sewerage and drainage code.

Section 268: power to close or restrict use of water from polluted sources of supply.

Section 277: corporation to provide drainage, sewerage and outfall.

Section 321: rules as to drainage, sewerage, cesspools, privies and urinals.

Section 500: prohibition of public bathing.

Section 502: prohibition of corruption of water by chemicals etc.

b) Analysis

The Kolkata Municipal Corporation (KMC) and the State Irrigation Department locking horns over the maintenance of the city's sewerage system from last few years, the roads were all set to be submerged this monsoon. The rains fell just after Full Moon when tidal upsurges were causing backflow in the Canals and thus disturbing flush out of sewerage water. So the official view is that this disaster was caused by unprecedented heavy rain combined with failure of sewerage system. According to KMC officials, they have done their bit in upgrading the pumping stations, and now it's the turn of the state irrigation department to contribute their share. The Calcutta Municipal Corporation admits the choked canals were a major cause of the prolonged water logging. During the British colonial period when three tiny settlements became Calcutta, the canals served as a means of transport and also drainage. When the Eastern Metropolitan Bypass was being built (in the 1970s) environmentalists had warned that the road would block the natural drainage of the city which slants towards the east.

Today, the catchment area around the Bypass is also the hub of numerous housing colonies, built at the cost of much of the wetlands, and adding to the drainage problem. All private

connection of premises to the service for the corporation of supply water thereto, all pipes, taps and other water fitting used for such supply shall be made, maintained and regulate in accordance with the subject to such regulations as may be made in this behalf and such regulations shall be form a part of a Municipal Water Supply, Sewerage and drainage code.

If Municipal commissioner is of opinion that the water from any tank ,well or other sources of supply not vested in the corporation, which is used for domestic purposes or for the preparation of food or drink for human consumption is become so polluted as to be prejudicial to health , the Municipal Commissioner may, after giving the owner or the occupier of the premises which the sources of supply is situated a reasonable opportunity of being heard , by order direct that the source of supply be permanently or temporarily closed or cut off the water there from be used for certain purposes only or make such order necessary to prevent injury or danger to the health of person using the water or consuming food or drink prepared therewith.

The corporation shall construct and maintain drains sewers and provide a safe and sufficient outfall , in or outside Kolkata for effectual drainage and proper discharge of storm water and sewage of Kolkata in such manner as not to cause any nuisance , whether by flooding any part of Kolkata or of the country surrounding the outfall or in another way.

No person engaged in any trade manufacturer shall willfully cause or suffer to be brought or to flow into any lake, tank or river well, ditch any animal vegetable or mineral matter likely to render the water there of offensive or dangerous to health. The Municipal Commissioner shall provide and maintain in proper and convenient places a sufficient latrines and urinals.

9.3.3 Agriculture

River Boards Act, 1956

a) Relevant provisions

Section 4: Establishment of Boards

Section 5: Composition of Board

Section 13: Matters in respect of which a Board may be authorised to tender advice

Section 14: Function of Board

Section 16: General Powers of Board

Section 24: Delegation of powers

b) How the law deals with the subject of agriculture

The River Boards Act under section 13(a) (vii) empowers a Board to advise the government to take measures for the prevention of water-pollution in interstate rivers.

Section 13- A Board may be empowered under sub-section (1) of section 14 to perform all or any of the following functions, namely:-

(a) advising the Governments interested on any matter concerning the regulation or development of any specified inter-state river or river valley within its area of operation and

in particular, advising them in relation to the coordination of their activities with a view to resolve conflicts among them and to achieve maximum results in respect of the measures undertaken by them in the inter-State river or river valley for the purpose of - (vii) Prevention of pollution of the waters of inter-State river;

Section 13 is the main section under River Boards Act, 1956 dealing with the issue of sanitation. As the Act is a central legislation it is applied to all the states. Its relevance is most in the states where the river Ganga flows as it plays a vital role in regulation of pollution and other activities related to inter-state rivers.

c) Institutions formed under the law

Section 4 of the Act deals with the establishment of River Boards by The Central Government on the request of State Governments. The Act further declares the Board as body corporate with perpetual successions.

“Section 4 (1) The Central Government may, on a request received in this behalf from a State Govt. or otherwise, by notification in the Official Gazette, establish a River Board for advising the Governments interested in relation to such matters concerning the regulation or development of an inter-State river or river valley or any specified part thereof and for performing such other functions as may be specified in the notification, and different Boards may be established for different inter State rivers or river valleys :

Provided that no such notification shall be issued except after consultation with the Governments interested with respect to the proposal to establish the Board, the persons to be appointed as members thereof and the functions which the Board may be empowered to perform.

(2) A Board may be established under such name as may be specified in the notification under sub-section (1).

(3) Every Board so established shall be a body corporate having perpetual succession and a common seal, and shall by the said name sue and be sued.

(4) Every Board shall exercise its jurisdiction within such limits of the river (including its tributaries, if any) or river valley as may be specified in the notification under sub-section (1) and the area so specified shall be called the area of operation of the Board.”

The Act further provides under Section 5 the Composition of Board, which mainly consists of a Chairman and other members with special knowledge in the field of irrigation, electrical engineering, flood control, navigation, water conservation, soil conservation, administration or finance.

d) Powers granted under the law

The board can perform all the functions enumerated under section 13 specially under section 13(a) (vii) dealing with pollution control. Provided that there is a notification by

Central Government regarding such empowerment. This provision is given under section 14 as following-

Section 14 (1) The Central Government, after consultation with the Governments interested, may, by notification in the Official Gazette, empower the Board to perform all or such of the functions under section 13 as may be specified in the notification.

(2) The Board shall exercise its powers and perform all the functions which it is empowered to do by or under this Act within its area of operation.

(3) In performing its functions under this Act, the Board shall consult the Governments interested at all stages and endeavor to secure, as far as may be practicable, agreement among such Governments.

There are certain other general powers of the Board relating to investigation and surveys etc which are necessary for the Board in order to serve its purpose. These general powers are enumerated under section 16 of the Act.

“Section 16 For the purpose of efficiently performing its functions under this Act, every Board may, within its area of operation:-

- acquire, hold and dispose of such property, both movable and immovable, as it deems necessary;
- undertake such preliminary investigation or surveys or other measures as it deems necessary;
- inspect or cause to be inspected any works undertaken by any Government interested concerning the regulation or development of the inter-State river or river valley ;
- conduct and co-ordinate research on various aspects of the conservation, regulation or utilisation of water resources, such as water power generation, irrigation, navigation, flood control, soil conservation, land use and connected structural and design features;
- collect such topographical, meteorological, hydrological and sub-soil water data as it deems necessary;
- publish statistics or other information relating to the various aspects of the regulation or development of the inter-State river or river valley;
- require any Government interested to furnish such information as the Board may require in relation to:
 - i) the measures undertaken by that Government for the regulation or development of the inter-State river or river valley;
 - ii) the topographical, meteorological, hydrological and subsoil water data;
 - iii) Such other matters as may be prescribed.

e) Sub-delegation of powers

The Board can delegate its powers for its proper functioning to the Chairman and any other member through a written order by the virtues of section 24.

“Section 24 The Board may, by general or special order in writing, delegate to the Chairman or any other member or any officer of the Board, subject to such conditions and limitations, if any, as may be specified in the order, such of its powers and functions under this Act as it may deem necessary for the efficient running of the day-to-day administration of the Board.”

f) Analysis

The River Board Act does not deal with the issue of irrigation primarily but it certainly provides for the formation of a River Board empowered to regulate pollution in inter-state rivers. Therefore, it plays a definitive role in control of pollution in River Ganga which covers eight states during its course.

Bengal Irrigation Act, 1876

a) Relevant provisions

Section 4: Exemption from Bengal Embankment Act,

Section 10: Power to require statement as to name and interests; Penalty for failure to comply; Persons require making statements legally bound to do so.

Section 11: Damage for which compensation shall not be awarded. Matter in respect of which compensation may be awarded, compensation for loss of tolls lawfully levied, Diminution in market value to be considered.

Section 12: Compensation for loss of drinking water.

Section 34: Power to inspect and regulate water supply.

Section 35: Power to enter for repairs, and to prevent accident.

Section 37: Compensation for damage to land.

Section 39: Government to provide means of crossing of canals and of drainage.

Section 43: When drainage works necessary, State Government may order scheme to be drawn up and carried out.

Section 93: Offences and Penalties.

b) Law deals with the subject of agriculture

The Bengal Irrigation Act, 1876 under section 4: Nothing contained in the Bengal embankment Act, 1883, shall apply to any canal or flood embankment as defined in this act.

Section 10 deals with power to require statement as to name and interests. Penalty for failure to comply person require to make statements legally bound to do so, the collector may also require any person on whom a notice may be served under the last preceding sec, and who makes a claim for compensation in accordance therewith, to deliver to him a

statement containing, name of other person possessing any interest in the property affected or any part thereof sub proprietor, mortgage, tenant and other rents of profit received or receivable on account thereof for the year next preceding the date of the statement.

If any person shall fail to comply within the fixed by the notice with a requisition made under this section, the collector may impose upon him such daily fine as he think fit, not exceeding fifty rupees. such fine shall be payable daily until the requisition is complied with, and the Collector may proceed from time to time to levy the amount which has become due in respect of any such fine, notwithstanding that an appeal against the order imposing such fine may be pending:

Provided that, whenever the amount levied under any such order shall have exceeded five hundred taka the Collector shall report the case specially to the Commissioner, and no further levy in respect of such fine shall be made otherwise than by authority of the Commissioner.

c) Damage for which compensation shall not be awarded

Under Section 11: No compensation shall be awarded for any damage caused by-

- stoppage or diminution of percolation or floods;
- deterioration of climate or soil;
- stoppage of navigation or of the means of rafting timber or watering cattle

But compensation may be awarded in respect of any of the following matters:

- stoppage or diminution of supply of water through any natural channel to any defined artificial channel, whether above or underground, in use at the date of the issue of the notification under section 6;
- stoppage or diminution of supply of water to any work erected for purposes of profit on any channel, whether natural or artificial, in use at the date of the said notification;
- stoppage or diminution of supply of water through any natural channel which has been used for purposes of irrigation within the five years next before the date of the said notification;
- damage done in respect of any right to a water-course or the use of any water to which any person is entitled under the Limitation Act, 1908, Part IV;
- Any other substantial damage, not falling under any of the above clauses (a), (b) or (c), and caused by the exercise of the powers conferred by this Act, which is capable of being ascertained and estimated at the time of awarding such compensation.

d) Compensation for loss of drinking water

Under Section 12, if any supply of drinking-water is substantially deteriorated or diminished by any works undertaken in accordance with a declaration made by the Government under section 6, the canal-officer shall be bound to provide within convenient distance an adequate supply of good drinking-water in lieu of that so deteriorated or diminished, and no

person shall be entitled to claim any further compensation in respect of the said deterioration or diminution.

e) Power to inspect and regulate water-supply

Under Section 34, such canal-officer or other person may also enter upon any land, building or village-channel on account of which any water-rate is chargeable for the purpose of inspecting or regulating the use of the water supplied, or of measuring the lands irrigated thereby or chargeable with a water rate, and of doing all things necessary for the proper regulation and management of the canal from which such water is supplied.

f) Power to enter for repairs, and to prevent accidents

Under section 35, in case of any accident being apprehended or happening to a canal or flood-embankment, any canal-officer, or any person acting under his general or special orders in this behalf, may enter upon any lands adjacent to such canal or flood-embankment, and may execute all works which may be necessary for the purpose of preventing such accident, or repairing any damage done.

g) Compensation for damage to land

Under Section 37, in every case of entry upon any land or building under section 7, section 33, section 34 or section 35, the canal-officer or person making the entry shall ascertain and record the nature of any crop, tree, building or other property to which damage has been done, and the extent of the damage done to any such property, and shall tender compensation to the proprietors or occupiers for all damage done to the same by the entry or by any works executed.

If such tender is not accepted, the canal-officer shall refer the matter to the Collector, who shall thereupon give notice in writing to the person interested in such land and to the canal-officer, requiring them to attend before him, on a date to be fixed in the notice, for the purpose of making inquiry as to the amount of compensation.

h) Government to provide means of crossing canals and of drainage

Under Section 39, suitable means of crossing canals constructed or maintained at the cost of Government shall be provided at such places as the Government thinks necessary for the reasonable convenience of the inhabitants of the adjacent lands; and suitable bridges, culverts or other works shall be constructed to prevent the drainage of the adjacent lands being obstructed by any canal.

i) When drainage works necessary, Government may order scheme to be drawn up and carried out

Under section 43, whenever it appears to the Government that any drainage works are necessary for the public health, or for the improvement or proper cultivation or irrigation of any lands in districts to which the provisions of the Embankment and Drainage Act, 1952, do not, apply, or that protection from floods or other accumulations of water, or from erosion by a river, is required for any lands, the Government may cause a scheme for such works to be drawn up and carried into execution, and the persons authorized by the

Government to draw up and execute such scheme may exercise in connection therewith all or any of the powers conferred on canal-officers by sections 33, 34 and 35, and shall be liable to any or all of the obligations imposed upon canal-officers by sections 36 and 37.

j) Offences under act penalty

Section 93 reads as “Whoever, voluntarily and without proper authority, does any of the acts following, that is to say:

- 1) damages, alters, enlarges or obstructs any canal or drainage-work;
- 2) interferes with, increases or diminishes the supply of water in, or the flow of water from, through, over or under any canal or drainage-work, or by any means raises or lowers the level of the water in any canal or drainage work;
- 3) being responsible for the maintenance of a village- channel, or using a village-channel, neglects to take proper precautions for the prevention of waste of the water thereof, or interferes with the authorized distribution of the water there from, or uses such water in an unauthorized manner;
- 4) corrupts or fouls the water of any canal so as to render it less fit for the purposes for which it is ordinarily used;
- 5) destroys, defaces or moves any level-mark or water-gauge fixed by the authority of a public servant;
- 6) destroys or removes any apparatus, or part of any apparatus, for controlling or regulating the flow of water in any canal or drainage-work;
- 7) passes, or causes animals or vehicles to pass, in or across any of the works, banks or channels of a canal contrary to rules made under this Act after he has been desired to desist therefore;
- 8) without the permission of the canal-officer causes, or knowingly and wilfully permits, any cattle to graze upon any flood-embankments, or tethers, or causes or knowingly and wilfully permits any cattle to be tethered upon any such embankments, or roots up any grass or other vegetation growing on any such embankments, or removes, cuts or in any way injures or causes to be removed, cut or otherwise injured, any trees, bushes, grass or hedge intended for the protection of such embankment;
- 9) Violates any rule made under the Act, for breach where of a penalty may be incurred. In case the offence shall not amount to mischief within the meaning of the Penal Code, and on conviction before a Magistrate, be liable to a fine not exceeding fifty taka or to imprisonment for a term not exceeding one month, or to both.

k) Analysis

This Act applies to exemption of embankment act, dealings with the Bengal irrigation procedure, village canals, flood embankment, drainage, compensation for loss of drinking water, water supply, compensation of damage land etc.

Bengals Canal Act, 1864

a) Relevant provisions

Section 2: What navigable channels may be rendered subject to provisions of Act;

Section 3: By whom navigable channels may be made

Section 4: Bar of suit against Government

Section 6: State Government may fix and alter rates of tolls.

Section 9: Payment of tolls how enforced

Section 10: Penalty for evasion of toll

Section 11: Rules relating to lines of navigation

Section 13: Appointment of supervisor with power to remove obstruction

Section 14: Mode of exercising such power.

Section 15: Supervisor may forbid construction of bandels, etc.

Section 18: Offences by whom punishable

b) Law deal with the subject of agriculture

The Canals Act under section 2 and 3 empowers Board to advise the government to take measures for the prevention of water-pollution in interstate rivers.

Section 2, It shall be lawful for the Government from time to time, by notification to that effect published in the official Gazette, to declare that the provisions of this Act shall apply to any navigable channel specified in such notification; and from and after such publication the provisions of this Act shall apply to, and be in force as regards, such navigable channel.

Section 3, It shall be lawful for the Government from time to time, to authorize any person to make and open any navigable channel, or to clear and deepen any navigable channel, and to stop any watercourse, or make any tracking path, or do any other act necessary for the making or improvement of any such channel; and any navigable channel made under this section shall be rendered subject to the provisions of this Act in the manner prescribed in the last preceding section.

c) Institutions formed under the law

Section 4, No action or suit shall be brought against the Government in respect of any injury or damage caused by, or resulting from, any act done under the last preceding section.

Section 5 says Tolls, at such rate as shall be fixed in manner hereinafter mentioned, shall be paid in respect of all vessels entering upon, or passing along, any of the lines of navigation subject to the provisions of this act, provided that such tolls shall be payable only so long as such line of navigation shall be open.

Section 6, the Government may fix, and from time to time alter the rates at which such tolls shall be levied, provided that no toll shall be levied, and no alteration of any rate of toll shall have effect, until notice shall have been published in the official Gazette, for such period as the Government may fix, of the intention to levy or alter such tolls, and of the rate or place at which such toll is to be levied.

d) Power granted under the law

- Section 11, It shall be lawful for the Government from time to time to make rules not repugnant to any law in force, and to repeal, alter and amend the same, for the management of any line of navigation subject to this Act, and for regulating the conduct of persons employed for any of the purposes of this Act; and the Government may affix fines as penalties for the infringement of such rules not exceeding fifty taka for any one infringement, or five taka a day for any continuing infringement.
- Such rules may contain directions for any of the following amongst other matters: for determining the tonnage of vessels and their measurement; for fixing the number and the width of vessels to be allowed to pass into, or out of, or through, any line of navigation at one time or abreast; for determining the length of time during which vessels may remain stationary on any line of navigation and the amount of demurrage to be paid by vessels remaining stationary beyond such time; for regulating the mode in which and the places at which tolls are to be levied under this Act; for the removal of sunken vessels and obstructions; and for the storing and disposal of the cargo of vessels seized under this Act.
- Section 14, Whenever such supervisor shall consider that the cutting down and removal of any tree or the removal of any other obstruction is necessary he may in cases of emergency at once remove the same, and may for that purpose enter on any private property.
- In cases not of an emergent nature, he shall serve a notice in writing on the owner or occupier of such private property, directing him to remove the same within a reasonable time.
- If the owner or occupier cannot be found, notice may be served by notification to be affixed in some conspicuous place in the nearest village. If the owner or occupier shall not remove the obstruction within the time given in the notice, the supervisor may proceed to remove it himself and may for that purpose enter on any private property. Payment of all expenses of such removal may be enforced by the sale of the thing removed in the manner provided for the recovery of tolls in section 9 of this Act.

e) Sub delegation of powers

- Section 13, It shall be lawful for the Government to appoint any person to be the supervisor of any line of navigation subject to the provisions of this Act; and such person shall be empowered to cut down and remove any tree which may have fallen or may be likely to fall into such line of navigation, and to remove any sunken vessel, and to prevent or remove any other nuisance or obstruction to navigation, of whatever description, whenever he may think it necessary.
- Section 15, Whenever in the opinion of such supervisor the construction of any bandel or other contrivance for fishing, or for any other purpose, in any line of navigation is likely to cause obstruction to the free and safe transit of such line of navigation, he may,

by a notice in writing to be served on the owner or person in charge of such bandel or other contrivance, or (if such owner or other person cannot be found) to be affixed at some conspicuous place in the nearest village, forbid the construction of such bandel or other contrivance.

- Section 15 A, Notwithstanding anything contained in this act, the engineer or the supervisor or any other person duly authorised by the Engineer or the supervisor ,as the case may be, in this behalf may remove, dismantle or demolish any embankment, fishery, fishing contrivance, huts, buildings, sluices, obstructions encroachments or any other construction, in the opinion of the engineers or the supervisors is likely to interfere with, counteract or impede any canal, line of navigation any manner.

f) Provisions in case of non compliance of the act

- Section 16, Any person who shall willfully cause or shall aid in causing any obstruction to any line of navigation, or any damage to the banks or works of such line of navigation, or who shall willfully omit to remove such obstruction after being lawfully required so to do, shall be punished on conviction before a Magistrate with simple imprisonment which may be extend to one month, or with fine which may extend to fifty taka, or with both, and shall also be liable to pay such fine as may be sufficient to meet all reasonable expenses incurred in abating or removing such obstruction, or in repairing such damage.
- Section 18, If any person shall be guilty of an offence against the provisions of this Act on any line of navigation subject to this Act, such offence shall be punishable by any Magistrate having jurisdiction over any district or place adjoining such line of navigation, or adjoining either side of that part of the line of navigation in which such offence shall be committed; and, such Magistrate may exercise all the powers of a Magistrate under this Act, in the same manner, and to the same extent, as if such offence had been committed locally within the limits of his jurisdiction, notwithstanding the offence may not have been committed locally within such limits; and, in case any such Magistrate shall exercise the jurisdiction hereby vested in him, the offence shall be deemed, for all purposes, to have been committed locally within the limits of his jurisdiction.

g) Analysis

The act provides for the establishment of an authority to regulate the obstruction, navigation issues. It also lays down detail about water ways procedure for functioning of the authority and construction.

West Bengal Closing of Canals Act, 1959

a) Relevant provisions

Section 3: Closing and filling up of canals and closing up of canal side roads to traffic.

Section 4: No compensation for damage.

b) Analysis

Canal means a circular canal or new cut canal. Circular canal is the still water locked canal commencing from its junction with the river Hooghly across the Chitpur lock in the eastern water line of the Hooghly and terminating as its junction with the new cut canal near dhapa, together with the whole of the canal more or less 1,328 feet in length commonly known as the "Orange Soorah" and includes all lands on the banks of the canal which have been acquired by the State Government for the purpose of the canal.

New cut canal is the line of navigation which takes off from the circular canal at ultadanga and terminates at its outfall into the central lake channel near dhapa lock and includes all land on the banks of the canal which have been acquired by the state govt. for the purpose of canal. Ganga is the most important river of the country and beyond doubt is closely connected with the history of civilization as can be noticed from the location of the ancient cities of Hardwar, Prayag, Kashi and Patliputra at its bank. To millions of people it is sustainer of life through multitude of canal system and agriculture of the wasting load. Hundreds of the villages and even the big cities depend for their drinking water on this river. It is believed, a fact which has also been observed, that the water of Ganga never decays even for months and years when water of other rivers and agencies begins to develop bacteria and fungi within a couple of days.

This self purification characteristic of Ganga is the key to the holiness and sanctity of its water. There has been a steady deterioration in the quality of water of Indian rivers over several decades. India's fourteen major, 55 minor and several hundred small rivers receive millions of liters of sewage, industrial and agricultural wastes. Most of these rivers have been rendered to the level of sewage flowing drains. There are serious water quality problems in the cities, towns and villages using these waters. Water borne diseases are rampant, fisheries are on decline, and even cattle are not spared from the onslaught of pollution. It is expedient for the public interest to close and fill up the circular canal and new cut canal for the promotion of public health in the city of Calcutta and neighboring area.

Notwithstanding anything contained in any other law for time being any force or contract, custom or usage having the force of law , it shall be lawful for the state govt. at any time after the expiry of one month from the date of commencement of this Act, any canal or part there be permanently closed and filled up by such agency as the Stat Govt. may think fit to employ and the roads by the side of such canal or part ,which are the property of the State Govt. be closed to traffic either permanently or temporarily .

No suit or other legal proceeding shall lie against the State Govt. in respect of any injury or damaged caused by or resulting from stoppage of navigation in the canals or use of canal side road or any act done under this Act.

West Bengal Irrigation (Imposition of Water Rates for Damodar Valley Corporation Water) Act, 1958

a) Relevant provisions

Section 4: imposition of water rates

Section 5: liability for payment of the water rate.

Section 9: free passage of water for agriculture or drainage to be afforded through or over all lands.

Section 10: penalty for diversion of normal flow of canal water by obstruction, etc.

Section 12: proceeds of water rate to be distributed between the state Government and the Corporation.

b) Analysis

The rapid growth of population and industry has caused large-scale pollution of the rivers and other water bodies of India. Kanpur, the largest city in Uttar Pradesh, has been called the “Manchester of the East” due to the large number of industries that it supports especially cotton and textile industries. The leather industry is particularly important in Kanpur and Calcutta, there are approximately 350 leather industries concentrated mainly in the Jajmau area, many of which release their effluent directly into the Ganga. Leather industries produce a large amount of effluent concentrated with pollutants, particularly the toxic heavy metal Chromium. In addition, the Jajmau tanneries produce about 400 tonnes of solid waste daily, contaminated with toxins from the leather making process and this waste is improperly disposed of.

Ganga, which is considered to be the lifeline of millions and the holiest river in the world, has become the victim of industrial development, growth of civilization along the riverbank and its own religious significance. In addition to the industrial pollutants described above, Ganga is the recipient of large amounts of untreated sewage and human waste, and subject to a high intensity of agriculture (43% of the total irrigation in India takes place in the Ganga basin). Practically the entire dry weather flow is diverted to the Upper Ganga canal at Haridwar, and whatever flow is regenerated between Haridwar and Aligarh is again diverted to the Lower Ganga Canal near Aligarh. As a result, the heavy inflow of pollutants at Kanpur meets a very slow flowing river during the dry season. The polluted water directly or indirectly enters the human system through the food chain causing health hazards like cancer, respiratory disease, renal failure and much other water borne or water related diseases.

Whenever State Government said about the lands in any area within the limits of the Damodar valley or within the area of operation of the corporation are benefited by agriculture during kharif season and Rabi season. water supplied through canals the State Govt. by notification declare its intention to impose such area a water rate for rupees thirty two for an area of .4047 hectares for kharif season , rupees forty eight for an area of .4047 hectares for rabi season and rupees one hundred and sixty for an area of .4047 hectares for summer season. The imposition of water rate within one month of publication of

notification or the rate is intended to be imposed or to the inclusion of such land in the area in respect of which the declaration has been made.

That such rate shall ,in respect of any land for which water is obtained for irrigation by lift agriculture arrangement maintained and operated by the occupier there of, be one half of the rate specified in the notification.

Notwithstanding anything to the contrary contained in any other law for the time being in force or in any custom, usage or contract, the liability for payment of the water rate shall be on the occupiers of the lands included in the notified area. Provided further that when water rate is paid by the owner of any land cultivated by a bargadar, the owner shall be entitled to recover from the bargadar half of the amount paid by him as water rate.

Sec. 9 of this Act said that for the purpose of agriculture or drainage of land in the notified area the owners or occupiers of such lands shall be bound to afford free passage for water through or over all lands in their possession or under their control and for that purpose to allow, when so required by the Collector by order made in this behalf, the construction and maintenance of such channels as may be necessary, without causing unnecessary loss or damage to such lands.

If any person refuses to comply with an order the collector may cause the channel to be constructed or maintained and may recover the costs thereof from such person as a public demand.

Notwithstanding anything contained in any other law for the time being in force, no person shall be entitled to claim any compensation for any damage or loss which may be caused as a result of the construction or maintenance of any channel .

If any obstruction is put in any channel referred to in sec 9 or other canal or any cut is made on the bank there of then the normal flow of water through such channel or canal is diverted for the purpose of agriculture any land , collector take such measure as he may consider necessary to remove such obstruction or to close such cut, and provision of sec 7 impose penalty, which may extend to ten times the water rate assessed for kharif season, rabi season or summer season, as the case may be.

Any person aggrieved by an order imposing a penalty on him may within thirty days from the date of the order appeal to such appellate authority as may be prescribed by rules made under this Act and the decision of the appellate authority in such appeal shall be final.

9.3.4 Commercial Water Ways

Bengal Water Ways Act, 1934

a) Relevant provisions

Section 6: The Chairman.

Section 7: The Chairman or the Port Commissioners.

Section 40: The Board to control and administer navigable channels and navigation works with lands, etc., appertaining to them.

Section 41: Powers of the Board in regard to navigable channels.

Section 42: Power of State Government to control channel in certain cases.

Section 45: Power to acquire land under the Land Acquisition Act, 1894.

Section 47: Formation of a district committee.

Section 48: Appointment of member in place of Water ways Executive Engineer

Section 73: The Canals Act, 1864, to apply to navigable channels.

Section 74: The Board to discharge certain functions under the Canals Act, 1864

Section 150: Penalty for obstruction to line of navigation

b) How law deals with the subject of commercial water ways

This Act provides for the maintenance and improvement of water ways in Bengal.

Section 2(c) said, channel includes any river, beel, khal, nulla or water ways whether natural or artificial. Section 2(g), line of navigation means any navigable channel subject to the provisions of this act or canal act 1864. Section 2 (i) deals with navigable channel, it means any channel which is navigable during the whole or part of the year by a vessel of two foot draught or over, section 2(o) said about vessel , it includes any raft or craft ,timber, bamboos or floating materials ,propelled in any manner.

Section 40 deals with, 40.

The Board shall take charge of such machinery, tools, dredgers, vessels and their equipment as the [State Government] may make over to them free of cost, subject to such restriction as regards sale or disposal thereof as may be determined by the [State government], and subject to such financial arrangements as may be made between the Board and the [state government] as regards maintaining, or repairing the same. The Board shall there upon bear all necessary expenses in maintaining, repairing, altering, improving or working the same.

Provided that

1. The board shall not be liable to pay any interest on the capital cost of such articles or to repay any loan incurred by the '[stale Government]' for the purchase thereof.
2. If any such articles are employed on work Tor the [State Government], it shall pay to the Board only the actual working expenses incurred by them.
3. The [State Government] may, by notification, declare which of the navigable channels, other than canals as defined in the Bengal Irrigation Act. 1876, and the navigation works and the lands, buildings, locks, sluices and other works appertaining thereto held by or under the control of administration of the [State Government] shall, for the purposes of this Act, be controlled and administrated by the board Provided that no navigable channel within such limit as may have been declared under the Indian Ports Act, 1908, to be the limits of the '[Port of Calcutta]', and of the navigable rivers and channels leading to the [said port] shall be placed under the control and administration of the Board.

c) Institution formed under the law

Section 6 of this Act deals with, The first Chairman shall be appointed by the [State Government] The by notification and subsequent Chairman shall be appointed by the [State Government] after consultation with the Board: Provided that when the [State Government] appoints an official, he shall be an officer drawing a salary of not less than one thousand five hundred rupees a month. Section 7 Said about, The Chairman or the Port Commissioner shall be a Trustee ex- officio. With the consent, of the Port Commissioners, he may appoint another person in his place to perform his duties as a Trustee.

District Committee also formed in this Act. Section 47 deals with the formation of district committee, in every district in which the '[State Government]' as direct as district committee all be formed, consisting of the following members, namely: -

- i) the District Magistrate, ex-officio
- ii) the Chairman of the district board, ex-officio.
- iii) the District Engineer, ex-officio
- iv) the Water ways Executive Engineer, ex-officio, or a person appointed under section 48;
- v) not more than three members to be appointed by the (State Government);
- vi) four member to be elected in the manner prescribed by the rules made under section 129 by the district board to whom two shall be member of union board in the district who are not member of district board
- vii) If the districts contains any municipality which includes any navigable channel within its limits, one member to be elected. In the manner prescribed by the rules made under section 129, by the commissioner of such municipalities or municipality

Provided that the [State government] may direct that the number of municipal representatives to be elected shall be increased from one, two or three. Section 48 deals with the consent of the Board, the Water ways Executive Engineer may appoint another person perform his duties as a member of the committee.

d) Powers granted under the law

The act grants power to the government to make rules under section 41. The Board may-

with the previous sanction of the [State government] assume the control and administration of any other channel not being a canal as defined in the Bengal irrigation act- 1876, and not held by or under the control or administration of the [State government], and maintain it for the purposes of the act. Provided that if, under the provisions of the Canals Act, 1861, any local authority or person has constructed or improved a navigable channel or has been appointed to collect tolls on any line of navigation.

The Board on assuming control of such navigable channel or line of navigation shall pay such compensation to the local authority or person as the Collector may decide and shall

thereupon become entitled to collect such tolls Provided further that an appeal, shall lie to the Commissioner from a decision of the Collector on the question or compensation within sixty days from the date thereof and subject to the result of such appeal the decision of the collector shall be final.

For the purposes of this Act-

Make and open new navigable channel:

- i) Clear, widen deepen, divert or otherwise improve existing channels which are under the control and administration of the Board,
- ii) Construct locks, Sluices, Wharves, jellies, landing stages, warehouses, sheds, sidings, towpaths and other works, whether protective or otherwise

Provided dredgers and other plant,

- iii) Clear or destroy water-hyacinth in any district where there are navigable channels under the control and administration of the Board, and
- iv) Do all other acts necessary for the making and maintenance of such channels or for the safety and convenience of navigation or for improvement of waterways:

Provided that the [State government] may prohibit any such action if it considers that it is likely to cause damage or to be detrimental to agriculture or public health:

Provided also that the board shall not to do any act in contravention of the provisions of section 76 of the Bengal Embankment Act, 1882, without the previous sanction of the officer mentioned therein

- i) With the previous sanction or the [State Government], turn, divert, abandon or close any channel under the control and administration of the Board;
- ii) Construct, purchase, or hire offices, roll-houses, quarters for officers and servants and any other building required for the operations of the Board;
- iii) Control navigation and traffic upon lines of navigation which are under the control and administration of the board and employ such establishment as may be necessary for the purpose.
- iv) Contribute towards the cost of any work which is executed or to be executed by another authority and is likely to improve a line of navigation under the control of the board or to benefit navigation.

Section 42 deals with, if the State Government is of opinion that any channel which is under the control and administration or the Board under section 40 or section 41 should be under the control and administration of the State government for any purpose other than navigation, it may-

- i) Withdraw such channel from the control and administration of the Board and assume control thereof for navigation and such other purpose, or
- ii) Impose conditions for the purpose for regulating and restricting the powers of the board in respect of any channel.

- iii) Section 45 of this act states about, the board may with the previous sanction of that State Government acquire land under the provision of land acquisition Act, 1894 for carrying out any of the purposes of this act.

e) Penalties

Section 150 of this Act deals with, any person who willfully causes or aids in causing any obstruction to any line of navigation , or any damage to the banks or works of such line of navigation or who willfully omits to remove such obstruction after being lawfully required so to do , shall be punished with simple imprisonment which may extend to one month , or with fine which may to extent fifty rupees or with both and shall also be liable to pay such amount may be sufficient to meet all reasonable expenses incurred in abating or removing such obstruction or in repairing damage and such amount shall be recovered as fine.

f) Analysis

Bengal water ways Act mainly provide for the maintenance and improvement of water ways. In this act said about how a district committee is formed and their duties and liabilities and also said about the powers. How the board formation and how they work on the navigable channel and navigable works. Whereas it expedient to make better provisions for the maintenance and improvement of water ways in Bengal for purposes of navigation.

Bengal Ferries Act, 1885

a) Relevant provision

Section 6: Power to declare, establish, define and discontinue public ferries.

Section 15: Power to make rules in regard to public ferries.

Section 16: Private ferry not to ply within two miles of public ferry without sanction.

Section 27: Penalties on passengers offending.

Section 30: Penalty for rash navigation and stacking of timber.

Section 32: Magistrate may assess damage done by offender.

b) How the law deals with the subject of maintenance and improvement of water ways in Bengal

The Bengal Ferries Act, 1885 under section 6 of this act power to declare as a public ferries and the respective district in which, for the purpose they shall be deemed to be situated. Take possession of a private ferry and declare it to be a public ferry. establish a new public ferries where ,in opinion they are needed , it shall be define the limits of any public ferry and also change the course of any public ferry and discontinue any public ferry which deems unnecessary.

The law relating to administration of ferries in Bengal, the regulation vests the control of ferries in the Magistrates and joint magistrates and given them the exclusive power of framing rules for their management fixing rates of toll and appointing the superintendent persons.

c) Institutions formed under the law

Under Section 15 deals with the power to make rules in regard to public ferries. The Magistrate or the district, with the approval of the Commissioner, may from time to time make rules consistent with this Act:

- i) for the management of all public ferries within such district, and for regulating he traffic at such ferries;
- ii) for regulating the time and manner at and in which he terms in which, and the person by whom, the tolls of such ferries may be leased by auction;
- iii) for compensating persons who have compounded for tolls payable for [he use of any such ferry when such ferry has been discontinued before !he expiration of the period compounded for; and generally, to carry out the purposes of this Act: And, when he tolls of a ferry have been leased under section 9, such Magistrate may, from time to time, with such approval as aforesaid, make additional rules consistent with this Act;
- iv) for collecting rents payable for the tolls of such ferries;
- v) for regulating the returns of traffic to be, from time to time, submitted by the lessee of such ferries;
- vi) in cases in which the communication is to be established by means of a bridge of boats, pontoons or rafts, or a swing bridge, flying-bridge or temporary bridge, [or regulating the time and manner at and in which such bridge shall be constructed and maintained, and opened for the passage of vessels and rafts through the same, and in cases in which the traffic is conveyed in boats, for regulating the number and kinds of such boats and their dimensions and equipment the number of the crew to be kept by the lessee or each boat; the maintenance of such boats in good condition; the hours during which, and the intervals within which, the lessee shall be bound to ply; and the number of passengers, animals and vehicles, and the bulk and weight of other things & that may be carried in each kind of boat at one trip; and may, from time to time, with such approval as aforesaid, repeal or alter such rules. Rules made under this section shall be subject to the control of the [Slate Government], and shall be published in the [Official Gazette] in such manner as the [Slate Government] directs and shall thereupon have the Force of law.

d) Power to make rules

Section 16 of this act deals with the, No person shall, except with the sanction of the Magistrate of the district, maintain a ferry to or from any point within a distance of two miles from h e limits of a public ferry: Provided that, in the case of any specified public ferry. the State Government may, by notification, reduce or increase the said distance of two miles to such extent as it thinks fit: Provided also that nothing herein before contained shall prevent persons keeping boats to ply between two places, one of which is without, and one within, the said limits, when the distance between such two places is not less than three miles, or shall apply to boats which [he Magistrate of the district expressly exempts from the operation of this section.

e) Penalties

Section 27 of this Act deals with penalties on passengers offending, section said that, Every person crossing by any public ferry who refuses to pay Penalties on the proper toll, and every person who, with intent to avoid payment of such , fraudulently or forcibly crosses by any such ferry without paying the toll, or who obstructs any toll-collector, or lessee of the tolls of any public ferry, or any of his assistants in any way in the execution of their duty under this Act, or who, after being warned by any such toll-collector, lessee or assistant not to do so, goes, or takes any animals, vehicles or other things, into any ferry-boat. or upon any bridge at such a ferry, which is in such o l state or so loaded as lo endanger human life or property, or who refuses or neglects to leave, or remove any animals, vehicles are goods from any such ferry-boat or bridge on being requested by such roll-collector, lessee or assistant to do so, or who moors any boat, raft or other substance to, or in any way obstructs, any pan of a public ferry, I shall be punished with fine which may extend to fifty rupees.

Section 30 said about the penalty for rash navigation and stacking of timber, whoever navigates, anchors. moors or fastens any vessel or raft, or stacks any timber, in a manner so rash or negligent a to damage a public ferry, shall be punished with imprisonment for a term which may extend to three months, or with fine which may extend lo five hundred rupees, or with both; and the toll-collector or lessee of the tolls of such ferry, or any of his assistants, may seize and detain such vessel, raft or timber pending the inquiry and assessment hereinafter mentioned.

Section 32 of this act deals with penalty on Magistrate may assess damage done by offender, in every magistrate or bench of magistrate trying any offence inquire into and assess the value of the damage done or causes by the offender to the ferry concerned ,and shall order the amount of such value to be paid by him in addition to any fine imposed upon him under this act , and the amount so ordered to be paid shall be leveable as if it were a fine or when the offence is one under section 30 of by the sale of the vessel ,raft or timber causing the damage , and of anything found in or upon such vessel or raft.

The commissioner may, on the appeal of any person deeming him aggrieved by an order under this section, reduce or merit the amount payable under such order.

f) Analysis

This act mainly provide for the maintenance and improvement of waterways in Bengal. The water ways indirectly relate with the Ganga pollution. Ferries include a bridge of boats, pontoons or rafts, a swing-bridge, a flying bridge, and a temporary bridge, and a landing stage. In that case when making on any flying bridge or swing bridge or any other kind of ferries, the ingredients and the other hazards substances through to the river or mix with river water it becomes water polluted and also other materials which is dilute with the water it occurs pollution.

The West Bengal Fisheries (Requisition and Acquisition) Act, 1965

a) Relevant Provisions

Section 4: Power to requisition.

Section 5: Power to acquire requisition fishery and land.

Section 12: Power of state government over fishery and lands requisitioned or acquired.

Section 13: Power to enter upon fishery, etc.

Section 14: Penalty.

b) How the law deals with the subject of fisheries

Fishery means any land where on water is confined naturally or artificially whether periodically or throughout the year for Pisciculture or for fishing and includes a tank fishery as defined in the Explanation to clause (e) of sub-section (1) of section 6 of the West Bengal Estate acquisition Act, 1953, as also the fish in such fishery or tank –fishery, but does not include a tank not exceeding one acre in area adjoining a homestead and used for purposes of irrigation or domestic purpose.

Section 4 of this Act said about (1) if the State Government is of the opinion that any fishery with or without the adjoining lands in any area is needed or is likely to be needed for a public purpose, the state Govt. may, by order in writing, requisition such fishery and all lands within the area and may make such further order or orders as appear to it to be necessary or expedient in connection with the requisition. (2) A collector, when authorised by the State Government in this behalf, may exercise within his jurisdiction the powers conferred by subsection (1). (3) An order under sub section (1) shall be served in the prescribed manner on all owners and occupiers of the fishery and the lands. (4) if any person fails to comply with an order made under sub-sec(1), the collector or any person authorised by him in writing in this behalf ,shall execute the order in such manner as he considers expedient and may- (a) if he is a Magistrate ,enforce the delivery of possession of the fishery and the lands in respect of which the order has been made , to himself, or, (b) if he is not a Magistrate ,apply to a Magistrate and such Magistrate shall enforce the delivery of possession of such fishery and lands to him.

c) Powers Granted Under the Law

Section 5 of this act said about the power to acquire requisitioned fishery and lands, the section provides:

(1) the state government may, at any time when any requisitioned fishery with or without any lands continues to be subject to requisition under section 4, acquire such fishery and by publishing in the official gazette a notice to the effect that such Government has decided to acquire such fishery and lands in pursuance of this section. Provided that before issuing such notice, the State Government shall call upon the owner and any other person who may be interested in such fishery and lands, to show cause within forty five days why the fishery and the lands should not be acquired and after considering the cause, if any, shown and after giving the parties an opportunity of being heard , the state government may pass such order as it deems fit.

(2) When a notice as aforesaid is published in the official gazette, the requisitioned fishery and the lands, if any, shall, on and from the beginning of the day on which the notice is so published, vest absolutely in the State Government free from all encumbrances and the period of requisition of such fishery and lands shall end.

(3) a collector when authorised by the State Government in this behalf, may exercise within his jurisdiction the powers conferred by sub-sec (1)

Sub-Delegation of Powers-

In this Act, section 12, deals with powers of State Government over fishery and lands requisitioned or acquired. The section provide, subject to the provisions of any rule made in this behalf ,on requisition or acquisition of any fishery and lands under this Act, the State Government may use or deal with such fishery and lands for such public purpose or anything ancillary or incidental thereto, as may appear to it to be expedient.

Under Section 13 deals with power to enter upon fishery, etc, the provision states that, the State Government may, with a view to requisitioning any fishery or land or for the purpose of determination by the Collector of the amount of compensation payable under this act, by order- (a) require any person to furnish to such authority as may be specified in the order such information in his possession relating to the property as may be specified. (b) Authorise any person to perform in respect of any fishery or land all or any of the functions referred to in sub-sec (2) of section 4 of the Land Acquisition Act, 1894.

d) Penalty

Section 14 of this Act, deals with Penalty, if any person contravenes any order made under this Act shall be punishable with imprisonment for a term which may extend to one year or with fine which may extend to two thousand rupees or with both.

e) Analysis

This Act provides for the requisition and speedy acquisition of fisheries for the purpose of improvement or development of such fisheries and supplying fish to the public therein. Rapid urbanization, industrialization, and intensification of agriculture have all affected the rivers in different ways in India. Most Indian rivers, at present are highly regulated. Hundreds of multi-purpose reservoirs for water supply, irrigation, hydropower and fisheries have been constructed as well as numerous barrages for water diversion. Many floodplains have been cut out from rivers by embankments and the remaining riparian lands are under intensive agriculture and grazing pressure. Human settlement, deforestation, mining and other activities have degraded the river catchments and increase sediment loads of all rivers. The impact of water abstraction and consequent reduced stream flow has affected breeding and recruitment of fishes. Along the bank of Ganga thousand of villages are situated. Municipal sewage constitutes 80 percent by volume of the total waste dumped into the Ganges, and industries contribute about 15 percent. 'The majority of the Ganga pollution is organic waste, sewage, trash food and human and animal remains. The National

water policy of India stipulates that Minimum water flow should be ensured in the perennial streams for maintaining ecology and social considerations.

The Calcutta Port Act, 1890

a) Relevant Provisions

Section 68: Calcutta Corporation may be required to light, cleanse and water road.

Section 82: Powers with respect to bathing ghat and landing places.

Section 83: wharves etc not to be erected by private person without assent of Central Government.

Section 84: penalty for unlawfully erecting wharves etc.

Section 86: Commissioners provide wharves etc for use of public.

Section 87: Commissioners provide wharves etc for use of custom officers.

Section 90: Commissioner to provide for landing etc goods for sea going vessels.

Section 94: penalty for landing of shipping goods in contravention of order.

b) Analysis

The Commissioners may, without parting with the control of any road or thoroughfare which is open to the public or of the road of any dock. Wharf or jetty, call upon the Corporation of Calcutta, to light, cleanse and, if necessary, water such road ; and then forward the Corporation of Calcutta shall light, cleanse, and, if necessary, water such road.

It shall be law full for the commissioner in meeting if they consider it necessary for the purpose of this Act, to occupy or remove any bathing ghat or landing place within the port and thereafter to prohibit the public from resorting to or using the same because of the bathing ghat increase the number of people increase for bathing purpose and it directly effect from the pollution. It shall not be law full for any person or persons , save the commissioner to make ,erect or fix high watermark within the port any wharf, jetty, stage, pier erection or moving unless the assent of the central government shall have been first obtained. And the person who shall have so made erected or fixed any such matter or thing shall be liable on conviction to a fine which may extend to one hundred rupees and to a further fine which may be extend to one thousand rupees for every day during which such matter thing shall have been permitted to remain so made erected or fixed after notice to remove the same shall have been given to him, if destroy such wharf, jetty, stage, pier, erection then its directly relate with the pollution of river Ganga.

When the Central Government all, under the provisions of any Act for the regulation of duties of customs, appoint any wharf, quay, stage. Jetty or pier erected or acquired under this Act for the use of sea-going vessels to be a wharf for the landing of goods within the meaning of such enactment, the commissioner shall maintain and secure on such jetty, wharf, pier etc. In case any damage or mischief shall done any dock , wharf, pier, stage, jetty constructed or acquired by the commissioners under the provisions of this Act, by any vessel through the negligence of any person having the guidance or command and therefore if they occurred any pollution it shall be law full any Magistrate having jurisdiction in the

place where such damage or mischief occurred is alleged to have been committed on the application of the Commissioner to issue a summons to the master or agent or vessels.

9.3.5 Dams & Diversions

The Bengal Embankment Act, 1882

a) Relevant Provisions

Section 4: Deals with public embankment, etc.

Section 7: Power of collector

Section 15: Special powers which may be conferred by State Government

Section 18: Application for new sluices, embankments or drainage

Section 38: Compensation for consequential damage

Section 76: Penalty for unauthorised interference with embankments or drainage

Section 78: Penalties for diverting rivers or permitting cattle to graze on embankments, etc.

b) How the act deal with the subject of drainage issues

The Bengal Embankment Act, 1882 under section 3 embankment includes – every bank, dam wall and dyke made or used for excluding water from, or for retaining water upon any land. Every sluice, spurs, groyne, training wall, or other work annexed to or portion of, any such embankment. Every bank, dam, dyke, wall, groyne or spur made or erected for the protection of any such embankment or of any land from erosion or overflow by or of rivers, tides, waves or waters. Water course includes a line of drainage, weir, culvert, pipe, or other channel, whether natural or artificial for the passage of water.

Section - 4 deals Public embankment, etc. to vest in Govt., every public embankment and every public water course and all land, earth, pathways, gates, berms and hedges belonging to, or forming part of or standing on any such embankment or water courses and all land, earth, pathways, gates, berms, and hedges, belonging to or forming part of or standing on any such embanked two path maintained, shall vest. The embankment mentioned in schedule D annex to Bengal Act 6 of 1873 and every embankment and water- course which may be included in such schedule under sec. 43 of this act, and every embanked two path as aforesaid, shall be held on behalf and all other public embankments and water- courses shall be held on behalf of the persons interested in the lands to be protected or benefited by such embankments or water-courses, subject to the provisions of sections 87 and all moneys received on account of such lands shall be credited to the cost of the construction and maintenance of such embankments and water – courses respectively.

Section 7, power of collector,

- 1) that any embankment which connects public embankments, or forms by junction with them part of a line of embankments, or that any embankment or water-courses which is necessary for the protection or drainage of the neighboring country, should be taken charge of and maintained by the officers of Govt.

- a) That any embankment which connects public embankments or forms by junction with them part of a line of embankments or is necessary for the protection of the neighboring country should be repaired.
- 2) that any embankment or any obstruction of any kind, which endangers of stability of a public embankment or the safety of any town or village, or which is likely to cause loss of property by interfering with the general drainage or the flood drainage of any tract of land, should be removed or altered.
- 3) that the line of any public embankment should be changed or lengthened, or that any public embankment should be renewed, or that a new embankment should be constructed instead of any public embankment, or that any embankment should be constructed for the protection of any lands or for the improvement of any water-course, or that a sluice in any public embankment should be made.
- 4) That any sluice or water-course should be made or that any public water-course should be altered for the improvement the public health, or for the protection of any village or cultivable land.
- 5) That any road which interferes with the drainage of any tract of land should be altered, or that any water-course under or through such road should be constructed.

c) Powers granted under the law

Sections 15 said that Special powers which may be conferred on State Government. It reads “Notwithstanding anything contained in this part, the may be a special order passed in respect of any act or work specified in section 7, or by a general order in respect of any class of such acts or works, authorize the Collector, after holding such inquiry as is prescribed in section 10, without previous reference to any superior authority, to pass an order that such act or work or any modification thereof may be done or executed or the State Government may authorize the Commissioner to pass such order without previous reference to any superior authority”.

Section 18 said, Application for new sluices, embankments or drainage, (a) If any person desires that a sluice by made in any public embankment for the purpose of drainage or irrigation. Or, (b) if within any tract of country which has been included within a notification under section 6, any person desires that any new embankment be created, that any existing embankment be lengthened, enlarged, repaired or removed, or that that line of any embankment be altered, or that any new water-course be made, or that any water-course be obstructed or diverted.

He may make an application in writing to the Collector. The application shall contain such particulars of the land likely to be affected by the work as may enable the Collector to judge of the advantage which may be derived from the project.

If it should appear to the Collector that the work applied for is one which may probably be executed with advantage the procedure mentioned in the 7th and following section of this Act shall be followed in respect of the proposed work.

Sec. 21 deals State Government may appoint Embankment Committee, The State Government may, if think fit, appoint the Embankment committee for any district and may from time to time appoint and accept the resignation of the members of such committee, and direct that any person shall cease to be a member thereof.

Compensation for consequential damage-

Section 38 of this act said about the compensation for damages. Subject to the provisions of section 5, whenever any land other than land required or taken by the Engineer, or any right of fishery, right of drainage, right of the use of water or other right or property, shall have been injuriously affected by any act done or any work executed under the due exercise of the powers or provisions of this Act, the person in whom such property or right is vested may prefer a claim by petition to the Collector for compensation.

Provided that the refusal to execute any work for which application is made, and the refusal of permission of the collector or any other authority is required under this act, shall not be deemed acts on account of which a claim for compensation can be preferred under this section.

d) Penalties

Section 76 of that act said about Penalty for unauthorised interference with embankments or drainage

- i) Every person, who in any of the territories to which this Act extends, without the previous permission of the Collector, shall erect, or cause or willfully permit to be created, any new embankment or shall add to nay existing embankment, or shall obstruct or divert, or cause or willfully permit to be obstructed or diverted, any water-course. If such act is likely to interfere with, counteract or impede any public embankment or any public water-course.
- ii) Every person who, within the limits of the tract included in any prohibitory notification under section 6, without the previous permission of the Collector, shall erect, or cause or willfully permit to be erected, any new embankment, or shall add to any existing embankment, or shall obstruct or divert, or cause or willfully permit to be obstructed or diverted any water-course and
- iii) Every person who shall abet any such act as is mentioned in clauses (a) and (b). Section 78 deals with the penalties for diverting rivers or permitting cattle to graze on embankments, etc. Every person who shall make any dam or other obstruction for the purpose of diverting or opposing the current of a river or water-course wherein or whereon there are public embankments, without the permission of the officer in immediate charge of the embankments. Or shall refuse or neglect to

remove any such dam or obstruction so made by him when required to remove it by the Engineer, or without the permission of the Engineer previously obtained shall cut or otherwise alter the banks of any embanked river or water-course, or remove the earth from any public embankment, or drive stakes into it, or by any other willful act destroy or diminish the efficiency of such embankment

- iv) And every person who without such permission shall cause or knowingly and willfully permit any cattle to graze upon any such embankment or tether or cause or willfully permit any cattle to be tethered upon any such embankment, or root up any grass or other vegetation growing on any such embankment.

e) Analysis

This act was applicable to the states of West Bengal, Bihar and parts of Orissa. It provided for the construction, maintenance and management of embankments and watercourses. The Act vests certain powers in the Collector such as:

- Removal or alteration of any embankment or obstruction of any kind which is likely to cause loss of property by interfering with the general drainage or the flood drainage of any tract of land;
- Construction of any sluice or water course, or alteration or improvement of any public water course for the improvement of public health or protection of any village or cultivable land;
- Alteration of any road which interferes with the drainage of any tract of land or construction of any watercourse under or through such a road.
- The Collector is required to prepare estimates of the cost of such works, including the cost of establishment charges. Before execution of the work, a public notice to this effect must be given. After hearing the parties and making the appropriate inquiries, the Collector is required to submit a report to the Commissioner.

The state government may consider the report put up by the Commissioner and notify its orders in the official gazette; in the case of imminent danger to life and property, the work may begin, pending the above proceedings. The Act also provides that any person desiring a sluice to be made in any public embankment for the purposes of drainage or irrigation, or a new embankment to be erected, or existing ones to be improved, repaired or enlarged may make an application to the Collector, who decides whether the said work should be executed or not. An interesting feature of the Act is the appointment of embankment committees at the district level. The state government may direct that such a committee shall be consulted by the Collector in the discharge of any function. In the case of a difference of opinion with the committee, the Collector is required to submit the matter to the Commissioner of the division for a decision. The Act also contains elaborate provisions for recovery of costs of works from persons benefited or protected by the works or repairs executed.

Bengal Drainage Act, 1880

a) Relevant provisions

Section 4: State Government to appoint Commissioner.

Section 14: Commissioners how to ascertain that proprietors have assented.

Section 18: Power to proceed with portion of scheme.

Section 20: Power to reconsider scheme and modify it.

Section 24: Claim to compensation for damage caused in carrying out scheme or works.

Section 46: Drainage work to be subject to the laws relating to embankment

b) How the law deals with the subject of drainage and improvement of land

The Bengal Drainage Act, 1880 under section 46 deals with the subject of embankment by determining the applicable law for its regulation. The provision lays down that for the regulation of embankments and drainage works the applicable law will be the law which is for time being regulating the construction and maintenance of public embankments, rivers and outlets.

Section 46- All outlets and water channels, natural or artificial, which shall be altered, enlarged, excavated or cut under the provisions of this Act, and the construction and maintenance of embankments and of dams and works therein or connected therewith, shall, save as herein after provided, be subject to the law for the time being in force regulating the construction and maintenance of public embankments and public rivers, channels and outlets.

c) Institutions formed under the law

Under Section 4 of the Act a commissioner is authorised to appoint. The provision states- whenever it appears expedient to the Government to carry out any scheme and plans for the drainage and improvement of any tract of land, the Govt. may appoint any number of persons, not less than seven, of whom the majority shall be qualified by being holders of land to be affected by the works mentioned in the said scheme and plans, or managers behalf of such holders to be Drainage Commissioners for carrying out the provisions of this Act.

d) Powers granted under the law

The act grants power to the government to make rules under section 18. The power to proceed with portion of scheme, if the land holders of half of the area to be reclaimed and improved do not assent to such scheme, but the landholders of half of the area to be affected by some portion of such scheme assent thereto, the Commissioners may re- submit such portion of the scheme to the Govt. and may with approval proceed thereupon in manner aforesaid.

Under Section 20 of the Act, Power to reconsider scheme and modified. The provision as follows-

- 1) The commissioner may, with the previous assent of the Govt. at any time reconsider any scheme, plans or estimates adopted by them, and add to alter or modify the same. When any addition, alteration or modification has been adopted by them, they shall cause the same to be laid before the Govt. Government may sanction such addition, alteration or modification or any portion thereof, as may think fit.
- 2) The provisions of this act shall apply to such addition, alteration or modification as if had been a portion of the original scheme, plans or estimate and every such addition, alteration or modification, after it has been adopted, shall be published by the commissioner as to them shall seem fit.
- 3) No addition, alteration or modification, under clause (1), to or of any scheme which affects any lands other than those which would be affected by some scheme therefore published, shall be adopted by the commissioner until the same has been published, for not less than fifteen days, according to the provisions of section 12, in every village in which may be situate any portion of the lands to be affected by such addition, alteration or modification.

e) Compensation for damage caused carrying out scheme

Section 24 of this Act, deals with any person who alleged that damage has been caused to his property by scheme or works commenced or carried out under this act may, at any time before the expiry of the three years mentioned in clauses (1) of section 28, prefer to the commissioner a claim for compensation in respect of such damage actually caused, and of all future damage likely to be caused, to such property by such scheme of works.

f) Analysis

The act subjects the drainage and embankment related issues to laws time being in force regulating public embankments etc. The act further talks about appointment of commissioner, committees and drainage schemes. This act provided for the better drainage and improvement of lands.

9.4 Central Legislations

9.4.1 The Environment (Protection) Act, 1986

a) Relevant Provisions

Section 3: Power of central government to take measures to protect and improve environment

Section 4: Appointment of officers and their powers and functions

Section 5: power to give directions

Section 7: persons carrying on industry operation, etc., not to allow emission or discharge of environmental pollutants in excess of the standards

Section 8: persons handling hazardous substances to comply with procedural safeguards

Section 11: power to take sample and procedure to be followed in connection therewith

Section 15: penalty for contravention of the provisions of the act and the rules, orders and directions

Section 18: protection of action taken in good faith

Section 19: cognizance of offences

Section 23: powers to delegate

Section 25: power to make rules

b) How the law deals with the subject of sanitation

The Act deals with the subject of sanitation by prohibiting discharge of environmental pollutants in excess of the standards and making it mandatory for complying with procedural safeguards in case of hazardous substances.

The concerned provisions of the Act are section 7 & 8 which state as under:

“Section 7- No person carrying on any industry, operation or process shall discharge or emit or permit to be discharged or emitted any environmental pollutants in excess of such standards as may be prescribed.”

“Section 8- No person shall handle or cause to be handled any hazardous substance except in accordance with such procedure and after complying with such safeguards as may be prescribed.”

c) Institutions formed under the law

The Act provides for the constitution of authorities by Central Government for serving its purpose under Section 3(3).

Section 3(3) states as under-

“The Central Government may, if it considers it necessary or expedient so to do for the purpose of this Act, by order, published in the Official Gazette, constitute an authority or authorities by such name or names as may be specified in the order for the purpose of exercising and performing such of the powers and functions (including the power to issue directions under section 5) of the Central Government under this Act and for taking measures with respect to such of the matters referred to in sub-section (2) as may be mentioned in the order and subject to the supervision and control of the Central Government and the provisions of such order, such authority or authorities may exercise and powers or perform the functions or take the measures so mentioned in the order as if such authority or authorities had been empowered by this Act to exercise those powers or perform those functions or take such measures.”

d) Powers granted under the law

Powers of the Central Government under this Act is given under section 3.

Section 3: Power of central government to take measures to protect and improve environment

(1) Subject to the provisions of this Act, the Central Government shall have the power to take all such measures as it deems necessary or expedient for the purpose of protecting and improving the quality of the environment and preventing controlling and abating environmental pollution.

(2) In particular, and without prejudice to the generality of the provisions of sub-section (1), such measures may include measures with respect to all or any of the following matters, namely:--

- i) Co-ordination of actions by the State Governments, officers and other authorities--
 - (a) Under this Act, or the rules made there under, or
 - (b) Under any other law for the time being in force which is relatable to the objects of this Act;
- ii) Planning and execution of a nation-wide programme for the prevention, control and abatement of environmental pollution;
- iii) Laying down standards for the quality of environment in its various aspects;
- iv) Laying down standards for emission or discharge of environmental pollutants from various sources whatsoever:

Provided that different standards for emission or discharge may be laid down under this clause from different sources having regard to the quality or composition of the emission or discharge of environmental pollutants from such sources;

- v) restriction of areas in which any industries, operations or processes or class of industries, operations or processes shall not be carried out or shall be carried out subject to certain safeguards;
- vi) laying down procedures and safeguards for the prevention of accidents which may cause environmental pollution and remedial measures for such accidents;
- vii) laying down procedures and safeguards for the handling of hazardous substances;
- viii) examination of such manufacturing processes, materials and substances as are likely to cause environmental pollution;
- ix) carrying out and sponsoring investigations and research relating to problems of environmental pollution;
- x) inspection of any premises, plant, equipment, machinery, manufacturing or other processes, materials or substances and giving, by order, of such directions to such authorities, officers or persons as it may consider necessary to take steps for the prevention, control and abatement of environmental pollution;
- xi) establishment or recognition of environmental laboratories and institutes to carry out the functions entrusted to such environmental laboratories and institutes under this Act;
- xii) collection and dissemination of information in respect of matters relating to environmental pollution;
- xiii) preparation of manuals, codes or guides relating to the prevention, control and abatement of environmental pollution;

xiv) such other matters as the Central Government deems necessary or expedient for the purpose of securing the effective implementation of the provisions of this Act.

e) Power of Central Government to appoint officers for the purpose of the Act

“Section 4: (1) Without prejudice to the provisions of sub-section (3) of section 3, the Central Government may appoint officers with such designation as it thinks fit for the purposes of this Act and may entrust to them such of the powers and functions under this Act as it may deem fit.

(2) The officers appointed under sub-section (1) shall be subject to the general control and direction of the Central Government or, if so directed by that Government, also of the authority or authorities, if any, constituted under sub-section (3) of section 3 or of any other authority or officer.”

f) Power of Central Government to give directions

“Section 5: Notwithstanding anything contained in any other law but subject to the provisions of this Act, the Central Government may, in the exercise of its powers and performance of its functions under this Act, issue directions in writing to any person, officer or any authority and such person, officer or authority shall be bound to comply with such directions.

Explanation--For the avoidance of doubts, it is hereby declared that the power to issue directions under this section includes the power to direct--

- (a) the closure, prohibition or regulation of any industry, operation or process; or
- (b) stoppage or regulation of the supply of electricity or water or any other service.”

In addition to these powers under section 11, the Central Government or any other officer empowered by it in this behalf, shall have power to take, for the purpose of analysis, samples of air, water, soil or other substance from any factory, premises or other place in such manner as may be prescribed.

It is pertinent to note the powers of Central Government to make rules on the matters so enumerated under section 25(2). The matters affecting sanitation include-

- (a) the standards in excess of which environmental pollutants shall not be discharged or emitted under section 7;
- (b) the procedure in accordance with and the safeguards in compliance with which hazardous substances shall be handled or caused to be handled under section 8;
- (c) the authorities or agencies to which intimation of the fact of occurrence or apprehension of occurrence of the discharge of any environmental pollutant in excess of the prescribed

standards shall be given and to whom all assistance shall be bound to be rendered under sub-section (1) of section 9;

(d) the manner in which samples of air, water, soil or other substance for the purpose of analysis shall be taken under sub-section (1) of section 11;

(f) the functions of the environmental laboratories, the procedure for the submission to such laboratories of samples of air, water, soil and other substances for analysis or test; the form of laboratory report; the fees payable for such report and other matters to enable such laboratories to carry out their functions under sub-section (2) of section 12.

g) Sub-Delegation of Powers

The Central Government can delegate its power to state government or any other authority or officer under section 23.

“Section 23: Without prejudice to the provisions of sub-section (3) of section 3, the Central Government may, by notification in the Official Gazette, delegate, subject to such conditions and limitations as may be specified in the notifications, such of its powers and functions under this Act [except the powers to constitute an authority under sub-section (3) of section 3 and to make rules under section 25] as it may deem necessary or expedient, to any officer, State Government or other authority.”

h) Penalties

On failure to comply with the provisions of this Act, or the rules made or orders or directions issued there under, the person who is in non-compliance will be punishable with imprisonment for a term which may extend to five years and with fine which may extend to one lakh rupees, or with both, and in case the failure or contravention continues, an additional fine 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. Further, if the failure or contravention referred to in sub-section (1) continues beyond a period of one year after the date of conviction, the offender shall be punishable with imprisonment for a term which may extend to seven years. Such provision is made under section 15 of the Act.

Under section 18 no suit, prosecution or other legal proceeding shall lie against the Government or any officer or other employee of the Government or any authority constituted under this Act or any member, officer or other employee of such authority in respect of anything which is done or intended to be done in good faith in pursuance of this Act or the rules made or orders or directions issued there under.

As per section 19, no court shall take cognizance of any offence under this Act except on a complaint made by-

(a) The Central Government or any authority or officer authorised in this behalf by that Government, or

(b) Any person who has given notice of not less than sixty days, in the manner prescribed, of the alleged offence and of his intention to make a complaint, to the Central Government or the authority or officer authorised as aforesaid.

i) Analysis

The Environment (Protection) Act, 1986 is a general Act dealing with regulation and control of pollution of environment. Though the Act does not directly refer to the matter of pollution of water sources or specifically river Ganga, it has direct applicability on it. Therefore, the Act being a central legislation serves as an umbrella legislation aiding in the regulation and control of pollution in all water sources including river Ganga.

Water (Prevention and Control of Pollution) Act, 1974

a) Relevant Provisions

Section 3: Constitution of Central Board.

Section 4: Constitution of State Boards.

Section 11 A: Delegation of powers to Chairman

Section 16: Functions of Central Board

Section 17: Function of State Board.

Section 19: Power of State Government to restrict the application of the Act to certain areas

Section 20: Power to obtain information.

Section 21: Power to take sample of effluents and procedure to be followed in connection therewith.

Section 24: Prohibition on use of stream or well for disposal of polluting matter. etc.

Section 25: Restrictions of new outlets and new discharges.

Section 26: Provision regarding existing discharge of sewage or trade effluent.

Section 32: Emergency measures in case of pollution of stream or well.

Section 33: Power of Board to make application to courts for restraining apprehended pollution of water in streams or wells.

Section 33A: Power to give directions.

b) How the Act is dealing with Subject of Sanitation

The Act deals with the subject of sanitation by under chapter V where it provides for various regulations and directions for disposal of wastes and effluents in water streams. The Act empowers the State government to restrict the application of this Act to certain areas within the state under section 19. Further, the state government is also empowered to obtain information regarding any abstraction of water from a stream or disposal of waste in it, maintenance of any gauge or any other apparatus relating to a stream and survey the stream under section 20 of the Act.

The most important provision under water (prevention and control of pollution) act, 1974 regulating the pollution in water streams (river Ganga) is Section 24(1). The provision prohibits any intentional act of pollution in any water stream.

The provision states as under

“Section 24 (1) Subject to the provisions 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 3[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.”

The major drawback of this provision is that it prohibits only acts done knowingly, this particular clause in the provision can be misused by the people. It is possible for people to pollute a water stream and save themselves from liability by pleading that the act was done unknowingly. To curb pollution in more effective way the Act should out rightly prohibit any act of disposal of waste whether done knowingly or unknowingly in any water stream.

Section 24 further enumerates certain exempted activities in its sub-section 2 which do not attract the application of sub-section 1. Also under 24(3) The State Government may, exempt, by notification in the Official gazette, any person from the operation of sub-section (1).

Another important provision dealing with the issue of sanitation is under section 25 which prohibits the establishment of industry operation or any other process which is likely to discharge sewage or trade effluent in water stream without the consent of State Board. The entire provision deals elaborately with the procedure to grant consent for establishment and safeguards used before such a grant. It also deals with the situation when any establishment is made without the consent of the State Board.

“Section-25- (1) Subject to the provisions of this section, no person shall, without new outlets and 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 application for consent of the State Board under sub-section (1) shall be made in such form, contains 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 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 (J) 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 of 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 authorized 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."

Further if any discharge of effluents is been carried out by any person before commencement of this Act then he has to apply for consent in accordance with section 25(2) within a specified period.

In case a river or a water stream gets accidentally polluted, section 32 comes into operation-

"Section 32(1) Where it appears to the State Board that any poisonous, noxious or polluting matter is present in any stream or well or on land by reason Of the discharge of such matter in such stream or well or on such land] or has entered into that stream or well due to any accident or other unforeseen act or event, and if the Board is of opinion that it is necessary or expedient to take immediate action, it may for reasons to be recorded in writing, carry out such operations as it may consider necessary for all or any of the following purposes, that is to say,-

(a) removing that matter from the stream or well or on land]and disposing it of in such manner as the Board considers appropriate;

(b) Remedying or mitigating any pollution caused by its presence in the stream or well;

(c) issuing orders immediately restraining or prohibiting the persons concerned from discharging any poisonous, noxious or polluting matter into the stream or well or on land or from making in sanitary use of the stream or well.

(2) The power conferred by sub-section (1) does not include the power to construct any works other than works of a temporary character, which are removed on or before the completion of the operations."

c) Institutions formed under the law

1. Central board

The Central government has constituted a central Board in the below enumerated states, under section 3 of the Act and declared the same as a body corporate with perpetual succession.

“Section 3 (1) The Central Government shall, with effect from such date (being a date not later than six months of the commencement of this Act in the States--of Assam, Bihar, Gujarat, Haryana, Himachal Pradesh, Jammu and Kashmir, Karnataka, Kerala, Madhya Prudish, Rajasthan, Tripura and West Bengal and in the Union territories) as it may, by notification in the Official Gazette, appoint, constitute a Central Board to be called the Central Pollution Control Board to exercise the powers conferred on and perform the functions assigned to that Board under this act.”

Constitution of Central Board: The constitution of Board under sub-section 2 is as follows

1. A full-time chairman, being a person having special knowledge or practical experience in respect of matters relating to environmental protection, nominated by the Central Government;
2. Maximum five officials, nominated by the Central Government to represent that Government;
3. Maximum five members of state board nominated by the Central Government, of whom not exceeding two shall be from those referred to in clause (c) of sub- section (2) of section 4;
4. Maximum three non-officials nominated by Central Government, representing the interests of agriculture, fishery or industry or trade or any other interest which, in the opinion of the Central Government, ought to be represented;
5. Two persons to representing companies or corporations owned, controlled or managed by the Central Government, to be nominated by that Government;
6. A full-time member-secretary, possessing qualifications, knowledge and experience of scientific, engineering or management aspects of pollution control, to be appointed by the Central Government.

2. State Boards

Under Section 4(1) the State Government has constituted a State Pollution Control Board and declared it to be a body corporate.

The constitution of such a Board is as follows-

- (a) A chairman (either full-time or Whole-time) being a person having special knowledge or practical experience in respect of matters relating to environmental protection, nominated by the State Government;
- (b) Maximum five officials, nominated by the State Government to represent that Government;
- (c) Maximum five members of local authorities functioning within the state, nominated by the State Government.
- (d) Maximum three members representing the interest of agriculture, fishery or industry or trade or any other interest which, to be nominate by State Government.
- (e) Two persons to represent the companies or corporations owned, controlled or managed by the State Government, to be nominated by that Government;
- (f) A full-time member-secretary, possessing qualifications, knowledge and experience of scientific, engineering or management aspects of pollution control, to be appointed by the State Government.

d) Powers granted under the law

A. Functions of Central Board as per section 16

- (1) To promote cleanliness of streams and wells in different areas of the States.
- (2) Without prejudice to the generality of the prior function, the Central Board may perform all or any of the following functions, namely:-
 - (a) Advise the Central Government on any matter concerning the prevention and control of water pollution;
 - (b) Co-ordinate the activities of the State Boards and resolve dispute among them;
 - (c) provide technical assistance and guidance to the State Boards, carry out and sponsor investigations and research relating to problems of water pollution and prevention, control or abatement of water pollution;
 - (d) plan and organize the training of persons engaged or to be engaged in programmes for the prevention, control or abatement of water pollution on such terms and conditions as the Central Board may specify;
 - (e) Organise through mass media a comprehensive programme regarding the prevention and control of water pollution and perform such of the functions of any State Board as may be specified in an order made under sub-section (2) of section 18
 - (f) collect, compile and publish technical and statistical data relating to 'water pollution and the measures devised for its effective prevention and control and prepare manuals, codes or guides relating to treatment of water ,works for the purification thereof and the system for the disposal of sewage or trade effluents and disseminate information connected therewith;

- (g) lay down, modify or annul, in consultation with the State Government concerned, the standards for a stream or well.

Provided that different standards may be laid down for the same stream or well or for different streams or wells, having regard to the quality of water, flow characteristics of the stream or well and the nature of the use of the water in such stream or well or streams or wells;

- (h) plan and cause to be executed a nation-wide programme for the prevention, control or abatement of water pollution;
- (i) perform such other functions as may be prescribed.

The Board may also establish or recognize a laboratory or laboratories to enable the Board to perform its functions under this section efficiently, including the analysis of samples of water from any stream or well or of samples of any sewage or trade effluents.

B. Functions of State Board as per section 17

- (a) to plan a comprehensive programme for the prevention, control or abatement of pollution of streams and wells in the State and to secure the execution thereof;
- (b) to advise the State Government on any matter concerning the prevention, control or abatement of water pollution;
- (c) to collect and disseminate information relating to water pollution and the prevention control or-abatement thereof;
- (d) to encourage, conduct and participate in investigations and research relating to problems of water pollution and prevention, control or abatement of water pollution;
- (e) to collaborate with the Central' Board in organizing the training of persons engaged or to be engaged in programmes relating to prevention, control or abatement of water pollution and to organize mass education programmes relating thereto;
- (f) to inspect sewage or trade effluents, works and plants for the treatment of sewage and trade effluents and to review plans, specifications or other data relating to plants set up for the treatment of water, works for the purification thereof and the system for the disposal of sewage or trade effluents or in connection with the grant of any consent as required by this Act;
- (g) lay down, modify or annul effluent standards for the sewage and trade effluents and for the quality of receiving waters (not being water in an inter-State stream) resulting from the discharge of effluents and to classify waters of the State;
- (h) to evolve economical and reliable methods of treatment of sewage and trade effluents, having regard to the peculiar conditions of soils, climate and water resources of different regions and more especially the prevailing flow characteristics of water in streams and wells which render it impossible to attain even the minimum degree of dilution;
- (i) To evolve methods of utilization of sewage and suitable trade effluents in agriculture;

- (j) to evolve efficient methods of disposal of sewage and trade effluents on land, as are necessary on account of the predominant conditions of scant stream flows that do not provide for major part of the year the minimum degree of dilution;
- (k) to lay down standards of treatment of sewage and trade effluents to be discharged into any particular stream taking into account the minimum fair weather dilution available in that stream and the tolerance limits of pollution permissible in the water of the stream, after the discharge of such effluents;
- (l) to make, vary or revoke any order-
 - (i) for the prevention, control or abatement of discharges of waste into streams or wells;
 - (ii) requiring any person concerned to construct new systems for the disposal of sewage and trade effluents or to modify, alter or extend any such existing system or to adopt such remedial measures as are necessary to prevent control or abate water pollution;
- (m) to lay down effluent standards to be complied with by persons while causing discharge of sewage or sludge or both and to lay down, modify or annul effluent standards for the sewage and trade effluents;
- (n) to advise the State Government with respect to the location, of any industry the carrying on of which is likely to pollute a stream or well
- (o) to perform such other functions as may be prescribed or as may, from time to time be entrusted to it by the Central Board or the State Government.

The Board may also establish or recognize a laboratory or laboratories to enable the Board to perform its functions under this section efficiently, including the analysis of samples of water from any stream or well or of samples of any sewage or trade effluents.

Powers

- 1) Power of Board under section 33 to make application to courts for restraining apprehended pollution of water in streams or wells.

“Section 33(1) Where it is apprehended by a Board that the water in any stream or well is likely to be polluted by reason of the disposal or likely disposal of any matter in such stream or well or in any sewer, or on any land, or, otherwise, the Board may make an application to a court, not inferior to that of a Metropolitan Magistrate or a Judicial Magistrate of the first class, for restraining the person who is likely to cause such pollution from so causing.”

- 2) Power of Boards to give directions under section 33(A)

The power to issue directions under this section includes the power to direct-

- (a) the closure, prohibition or regulation of any industry, operation or process; or
- (b) the stoppage or regulation of supply of electricity, water or any other service.

e) Penalties

Punishment for non-compliance under this Act mainly affecting water pollution is under section 41.

“Section 41 (1) Whoever fails to comply with any direction given under sub- section (2) or sub-section (3) of section 20 within such' time as may be specified in the direction shall , on conviction, be punishable with imprisonment for a term which may extend to three months or with fine which may extend to ten thousand rupees or with both and in case the failure continues, with an additional fine which may extend to five thousands rupees for every day during which such failure continues after the conviction for the first such failure.”

f) Analysis

The Water (Prevention and Control of pollution) Act, 1974 is a very comprehensive piece of legislation dealing extensively and particularly with the subject of water pollution. Hence it is one of the most important legislations affecting the sanitation of river Ganga. One of the major drawbacks of the Act is the quantum of penalty imposed on persons who violate its provision. In prevailing era a penalty of Rupees ten thousand is highly insufficient and plays hardly any prohibitive role in control of water pollution when compared to the large benefits and profits gained by polluters who indulge in various industrial operations. Hence for more effective observance of this Act severe and prohibitive penalties are to be imposed on the violators.

The Water (Prevention and Control of Pollution) Cess Act, 1977

a) Relevant provisions

Section 3: levy and collection of cess

Section 8: crediting proceeds of cess to consolidated funds of India and application thereof

Section 9: Power of Entry

Section 11: Penalty of Amount due Under the Act

Section 14: Penalty

Section 15: Offences by Companies

Section 17: Power to Make Rules

b) Deal within the subject of Water Prevention and Control of Pollution

The Act deals with the subject of Water prevention and how to control pollution. Sections 3, 5, 6, 7 provide for various regulations and directions. There shall be levied and collected a cess for the purpose of the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974) and utilisation there under. (2) The cess under sub-section (1) shall be payable by- (a) every person carrying on any specified industry; and (b) every local authority, and shall be calculated on the basis of water consumed by such person or local authority, as the case may be, for any of the purposes specified in column (1) of Schedule II, at such rate, not exceeding the rate specified in the corresponding entry in column (2) thereof, as the Central Government may, by notification in the Official Gazette, from time to time, specify.

[(2A) Where any person carrying on any specified industry or any local authority consuming water for domestic purpose liable to pay cess fails to comply with any of the provisions of section 25 of the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974) or any of the standards laid so down by the Central Government under the Environment (Protection) Act, 1986, cess shall be and payable at such rate, not exceeding the rate specified in column (3) of Schedule II, as the Central Government may, by notification in the Official Gazette, from time to time specify.]

(3) Where any local authority supplies water to any person carrying on any specified industry or to any other local authority and such person or other local authority is liable to pay cess under sub-section (2) or sub-section (2A) in respect of the water so supplied, then, notwithstanding anything contained in that sub-section, the local authority first mentioned shall not be liable to pay such cess in respect of such water.

Explanation--For the purpose of this section and section 4, "consumption of water" includes supply of water.

In section 15 Offences by Companies:

(1) Where an offence under this Act has been committed by a company, every person who, at the time the offence was committed, was 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:

Provided that nothing contained in this sub-section shall render any such person liable to any punishment, if he proves that the offence was committed without his knowledge or that he exercised all due diligence to prevent the commission of such offence.

(2) Notwithstanding anything contained in sub-section (1), where an offence under this Act has been committed by a company and it is proved that the offence has been committed with the consent or connivance of, or is attributable to any neglect on the part of, any director, manager, secretary or other officer of the company, such director, manager, secretary or other officer shall also be deemed to be guilty of that offence and shall be liable to be proceeded against and punished accordingly.

c) Institutions formed under the law

Section 9: Any officer or authority of the State Government specially empowered in this behalf by that Government may,-

(a) with such assistance, if any, as he or it may think fit, enter at any reasonable time any place which he or it considers it necessary to enter for carrying out the purposes of this Act including the testing of the correctness of the meters affixed under section 4;

(b) do within such place anything necessary for the proper discharge of his or its duties under this Act; and

(c) exercise such other powers as may be prescribed

Section 11: Penalty of amount due under the act,

If any amount of cess payable by any person carrying on any specified industry or any Local authority under section 3 is not paid to the State (government within the date specified in the order of assessment made under section 6, it shall be deemed to be in arrears and the authority prescribed in this behalf may, after such inquiry as it deems fit, impose on such person Of, as the case may be, Local authority, a penalty not exceeding the amount of cess in arrears:

Provided that before imposing any such penalty, such person or, as the case may be, the local authority shall be given a reasonable opportunity of being heard and if after such hearing the said authority is satisfied that the default was for any good and sufficient reason, no penalty shall be imposed under this section.

d) Power granted under the law

(1) The Central Government may, by notification in the Official Gazette, add to Schedule I any industry having regard to the consumption of water in the carrying on of such industry and the consequent discharge thereof resulting in pollution of any stream and thereupon Schedule I shall, subject to the provisions of sub-section (2), be deemed to be amended accordingly.

(2) Every such notification shall be laid before each House of Parliament, if it is sitting, as soon as may be after the issue of the notification and if it is not sitting, within seven days of its re-assembly and the Central Government shall seek the approval of Parliament to notification by a resolution moved within a period of fifteen days beginning with the day on which the notification is so laid before the House of the People, and if Parliament makes any modification in the notification or directs that the notification should cease to have effect, the notification shall thereafter have effect only in such modified form or be of no effect, as the case may be, but without prejudice to the validity of anything previously done there under.

Section 17, deals with power to make rules, (1) The Central Government may make rules for carrying out the purposes of this Act. (2) Without prejudice to the generality of the foregoing power, such rules may provide for all or any of the following matters, namely:-

- (a) the standards of the meters to be affixed and the places at which such meters are to be affixed under sub-section (1) of section 4;
- (b) the returns to be furnished under section 5, the form in which and the intervals at which such returns are to be furnished, the particulars which such returns contain and the officer or authority to who or which such returns shall be furnished;
- (c) the manner in which and the time within which the cess collected shall be paid to the Central Government under sub-section (4) of section 6;

- (d) the date from which any person or local authority liable to pay cess shall be entitled to the rebate 8[and the maximum quantity of water in excess of consumption whereof any person or local authority shall not be entitled to the rebate] under section 7.
 - (e) the powers which may be exercised by the officer or authority under section 9;
 - (f) the authority which may impose penalty under section 11;
 - (g) the authority to which an appeal may be filed under sub-section (l) of section 13 and the time within which and the form and manner in which such appeal may be filed;
 - (h) the fees which shall accompany an appeal under sub-section (2) of section 13; and
 - (i) any other matter which has to be or may be prescribed.
- (3) Every rule made under this Act shall be laid, as soon as may be after it is made, before each House of Parliament while it is in session for a total period of thirty days which may be comprised in one session or in two successive sessions and if, before the expiry of the session immediately following the session or the successive sessions aforesaid, both Houses agree in making any modification in the rule or both Houses agree that the rule should not be made, the rule shall thereafter have effect only in such modified form or be of no effect, as the case may be; so, however, that any such modification or annulment shall be without prejudice to the validity of anything previously done under that rule.

e) Penalties

Section 14:

- (1) Whoever, being under an obligation to furnish a return under this Act, furnishes any return knowing, or having reason to believe, the same to be false shall be punishable with imprisonment which may extend to six months or with fine which may extend to one thousand rupees or with both.
- (2) Whoever, being liable to pay cess under this Act will fully or intentionally evades or attempts to evade the payment of such cess shall be punishable with imprisonment which may extend to six months or with fine which may extend to one thousand rupees or with both.
- (3) No court shall take cognizance of an offence punishable under this section save on a complaint made by or under the authority of the Central Government.

f) Analysis

This Act provides for the levy and collection of cess on water consumed by persons carrying on certain industries and by local authorities, with a view to augment the resources of the Central Board and the State Boards for the prevention and control of water pollution constituted under the Water (Prevention and Control of Pollution) Act, 1974.

10. Relevant Provisions of State Legislatures in Upper, Middle and Lower Stretch

10.1 Upper Stretch of Ganga

India's national River "Ganga" originates from Gangotri. "Ganga" is a trans-boundary river of India and Bangladesh. The 2,525 km (1,569 mile) river rises in the western Himalayas in the Indian state of Uttarakhand, and flows south and east through the Gangetic Plain of North India into Bangladesh, where it empties into the Bay of Bengal. By discharge it ranks among the world's top 20 rivers.

The Ganges basin is the most heavily populated river basin in the world, with over 400 million people and a population density of about 1,000 inhabitants per square mile (390/km). The Bhagirathi is considered to be the true source of Ganga and it rises at the foot of Gangotri Glacier, at Gaumukh.

The flow of Ganga in Uttaranchal is considered as the upper stretch of Ganga and Legislations has been identified which are considered as relevant to the Ganga Basin in Uttaranchal. In upper stretch the main issue of Ganga Basin is "Sanitation including the cremation activities and religious activities".

Further 'Authorities'¹ under all such legislations pointed out and their power function and jurisdictions have been discussed. The following Authorities established under the various legislations of this stretch have been examined:

1. Municipal Council or Nagar Panchayat [Uttar Pradesh Municipalities Act (Uttaranchal Sanshodhan) Act, 2001], Act {U.S- 1}
2. Gram Panchayat and State Government [The Uttar Pradesh Panchayat Raj Act 1947 (Uttaranchal Amendment) Act, 2002], Act {U.S- 2}
3. Executive Committee and Development Agency [The Uttaranchal River Valley (Development and Management) Act, 2005], Act {U.S- 3}
4. Bhagirathi River Valley Authority [The Uttar Pradesh Bhagirathi River Valley Authority Act, 1999], Act { U.S- 4}

Legislation Identification	Subject Covered	Gap
Act U.S- 1	1. Under the Act duties of the authority has not been clearly mentioned.	
Act U.S- 2	1. The duty of the Gram Panchayat is not mentioned under the Act.	

¹ "Authorities" means agency or body or individuals entrusted with the responsibility under any of the legislations.

Act U.S- 3	<ol style="list-style-type: none"> 1. The authority is empowered to look after the basin (the entire catchment area of the Valley). 2. The authority may establish botanical garden to maintain its flora and fauna 3. The authority is in process to implement water quality monitoring system 	<ol style="list-style-type: none"> 1. Basin Contamination Measurement System 2. Maintenance of minimum flow & Environmental Flow 3. Issues relating to Hydrology
Act U.S- 4	<ol style="list-style-type: none"> 1. The authority after consultation with the Ministry of Forest and Environment, appoint expert technical advisors in the fields of: <ul style="list-style-type: none"> • Environment Management • Environment Geology • Eco-System Planning • Integrated Energy Planning • Social Science • Forest Ecology 2. Preparation of a 'Master plan', which includes: <ul style="list-style-type: none"> • the carrying capacity of the basin • outline the development schemes with alternative schemes for the development of the basin • demarcate the land for various use and purposes; 	

Interestingly, the Authorities under Uttranchal River Valley Act are working on a Development Plan to achieve the optimum utilisation of natural resources and sustainable development of the River Basin. Further, they are controlling the management of the Soil erosion in the river basins of Uttranchal. The commercial mining in the catchment area of river basin, without the permission of Authority, has been prohibited. Further it has been found that no suit, prosecution or other legal proceeding shall be laid against the Authority or any member or officer thereof in respect of anything which is in good faith done or intended to be done in pursuance of the Uttar Pradesh Bhagirathi River Valley Authority Act, 1999.

Jurisdictional Aspect

As such there has not been any jurisdictional conflict recorded among the above mentioned Legislation.

To conclude, there is an attempt to legislate on the issues, relating to development, soil erosion, etc., it is highly desirable to enact a law on preservation and protection of Ganga.

10.2 Middle Stretch of Ganga

The middle stretch of Ganga flows through the States of Uttar Pradesh, Bihar and Jharkhand. The local legislations of the above mentioned States are analysed in the Middle stretch. The Legislations which have been discussed in the 'report' were chosen on the following grounds:

- Sanitation
- Industrial pollution
- Agriculture
- Commercial use of Water ways
- Dams and Diversion

'Authorities'² under all such legislations have been pointed out and their powers, functions and jurisdictions have been discussed. The following are the various 'Authorities' under all Legislations of Uttar Pradesh and Bihar.

10.2.1 Sanitation

Central Legislation

1. Central Government [The Environment (Protection) Act, 1986]

State Legislations

2. Uttar Pradesh State Ganga River Conservation Authority consisting of the Ministers of the State [Uttar Pradesh State Ganga River Conservation Authority, vide SO 2493(E), 30th Sep. 2009- Central Notifications], Notification {M.S- 1}
3. Jal Nigam and Jal Sansthan [Uttar Pradesh water Supply and Sewerage Act, 1975], Act {M.S- 2}

Legislation Identification	Sanitation Subject Covered	Gap
Notification M.S- 1	1. Authority covers the area of "sewage infrastructure, sewage treatment system and control of pollution in River Ganga".	1. Issues relating to Hydrology 2. Basin flow Monitoring System 3. Restriction of usage of basin for religious and

² "Authorities" means agency or body or individuals entrusted with the responsibility of execution under any of the legislations.

		cultural activities 4. Prevention of obstructions on flow of River
Act M.S- 2	<ol style="list-style-type: none"> 1. The authority inspects all water supply and sewerage facilities in the State 2. It may carry any water or sewerage works through, under or over any highway, road, street, or other place after reasonable notice from the authority to the owner or occupier under any land or building 3. Authority has the power to abstract water from any natural source and dispose of waste water 	1. Basin Contamination Measurement System

10.2.2 Industrial Pollution

Central legislation and Delegated legislation

1. Central and State Board [Water (Prevention and Control of Pollution) Act, 1974]
2. Assessing Authority and State Government [Water (Prevention and Control of Pollution) Cess Rules, 1978]
3. Central Pollution Control Board and State Government, [The Hazardous Waste (Management and Handling) Rules, 1989 (Amendment 2003)]

An important case in this regard has been discussed below:

M C Mehta v/s. Union of India³ (Kanpur Tanneries)

This is one of the most significant water pollution cases till date.

Fact of the case: In 1985 a writ petition has been filed under Article 32 of the Indian Constitution against the tanneries to stop polluting the Ganga with sewage and trade effluents. It was found that there were hundreds of polluters discharging their untreated wastes in the Ganga every day at Jajmau near Kanpur. The issues which rose during the case were:

- a) The polluted condition of river Ganga more than two decades after the enactment of Water Act;
- b) The basis for the court's jurisdiction under Article 32;

² AIR 1988 SC 1037

Legislations and Provisions mentioned

- Water (Prevention and Control of Pollution) Act, 1974 – sections 3, 4, 16, 20, 21, 23, 24, 32
- The Environment (Protection) Act, 1986- section 17
- Uttar Pradesh Nagar Mahapalika Adhiniyam Act, 1959- sections 3, 114, 251, 388, 396, 297, 398, 405, and 407

Judgment: Finally, the court ordered “a tannery which cannot set up a primary treatment plant couldn’t be permitted to continue to be in existence. The financial capacity of the tanneries was to be considered as irrelevant while requiring them to establish primary treatment plants. The tanneries which failed to take minimum steps required for the primary treatment of industrial effluent were closed down by Court order. This case emphasized on the protection of environment over the economic interests and creates high standards of accountability for the concerned statutory bodies.

In the year 2009, in a newspaper it has been found that several teams constituted by the UP Pollution Control Board inspected 44 tanneries in Kanpur district. The teams were constituted by the UPPCB as a follow-up to an order passed by the Allahabad High Court early in November 2009⁴.

10.2.3 Agriculture

State legislations

1. A Betterment Levy officer, a Collector, a Block development officer, Engineer, Canal Officer [Bihar Irrigation Act, 1997], Act {M.S- 3}
2. A Tube-well Officer, Superintending Engineer, Divisional Officer, Sub-Divisional Officer [The Uttar Pradesh State Tube-Wells Act, 1936], Act {M.S- 4}
3. The Collector, the Officer-in-Charge [The Uttar Pradesh Minor Irrigation Works Act, 1920], Act {M.S- 5}
4. The Collector [Bihar Emergency Cultivation & Irrigation Act, 1955], Act {M.S- 6}
5. The Fishery Officer, a Police Officer not below the rank of Sub-Inspector as a Official [The U.P Fisheries Act, 1948], Act {M.S- 7}

Legislation Identification	Agriculture Subject Covered	Gap
Act M.S- 3	<ol style="list-style-type: none"> 1. The authority controls the drainage channels and water logging within the State. 2. The Authority has the power to repair any existing irrigation work and construct any new work. 	<ol style="list-style-type: none"> 1. Restriction on usage of water from River Basin in Agriculture.

⁴ Available at <http://www.indiaenvironmentportal.org.in/category/thesaurus/kanpur-tannery-case>

	3. Authority controls the navigation as well as the flow of the village channels.	
Act M.S- 4	1. Authority may time to time place, dig, examine, repair, alter, maintain or remove a tube-well pipe line (including inter-sump, pipe stand, value chamber and outlet) earthen barrow piys, under, over, along, across, in or upon any immovable property.	
Act M.S- 5	1. The Officer-in-charge is empowered to inspect the construction and maintenance of the minor irrigation work within the state.	<ol style="list-style-type: none"> 1. Restriction on Mining activities on River basin which lead to Soil erosion 2. Restriction on usage of water from River Basin in Agriculture.
Act M.S- 6	1. The Canal Officer on the behalf of State govt has power to regulate and inspect the irrigation work of any land, building or village and village channel.	1. Restriction on usage of water from River Basin in Agriculture.
Act M.S- 7	<ol style="list-style-type: none"> 1. The authority may prohibit the destruction or attempt to destroy fish by gun or bow and arrows and other instrument which may poison the river water or pollution of waters by trade effluents. 2. Prohibit the fishing except under license. 3. Prohibit fishing in any specified water for specified period for the sake of environment balancing. 	<ol style="list-style-type: none"> 1. Issues relating to Hydrology 2. Restriction on usage of Ecological and Marine Resources

10.2.4 Commercial use of Water way

State legislation

1. The Deputy Collector, the Toll Collector, the other Officer [The Ganges Tolls Act, 1867], Act M.S- 8

Legislation Identification	Commercial use of waterways Subject Covered	Gap
Act M.S- 8	<ol style="list-style-type: none"> 1. The authority is empowered to look after the navigation in Ganges. 2. The authority has power to remove and stop any construction or fishing activities cause obstruction to the flow of River 	<ol style="list-style-type: none"> 1. Basin Contamination Measurement System 2. Basin flow Monitoring System

10.2.5 Dam and Diversions

State legislation

1. A Betterment Levy officer, a Collector, a Block development officer, Engineer, Canal Officer [Bihar Irrigation Act, 1997], Act M.S- 9 {discussed under the previous heading of Irrigation}

Some of the above mentioned 'Authorities' have similar functions however they are assigned powers under different Legislations. One such authority is "Collector". The common function of the "Collector" goes like: under some Legislation he has the power to inspect and regulate the water supply and also the power to enter into any land and inquire about the construction or maintenance of the work. Only in the Ganges Tolls Act, the Collector additionally performs the duty of collection of tolls within such prescribed area.

Apart from Collector, another potential Authority in Uttar Pradesh is U P Water Supply and Sewerage Authority. The Jal Nigam and the Jal Sansthan have been formed under the Legislation mainly to inspect all water supply and sewerage of the State of Uttar Pradesh.

Their power also extends to the disposal of the wastes and collection of water taxes.

Jurisdictional Aspect

No disputes in jurisdictional issues are located till now.

On analysis of the legislations it can be concluded that, there are some questions with regard to the efficacy of the divergent laws in preventing pollution and protecting the River Basin in the middle stretch.

10.3 Lower Stretch of Ganga

The mapping of the legislations in the lower stretch of Ganga has been done, wherein it has been revealed that there are several legislations enacted during the British raj which are still in force. These legislations were enacted generally for the purpose of approving, sanctioning and monitoring the activities either within the River beds or issues incidental thereto. After independence, the state governments have enacted several laws regarding urban sanitation and municipal activities, water supply, sewerage and irrigations etc,

Legislation, pre and post constitution, enacted by the State of West Bengal has been analysed. The following factors considered for identifying legislations in the lower stretch.

- Sanitation (including cremation activities)
- Industrial pollution
- Agriculture
- Commercial use of Water ways and Pollution
- Dams and Diversion

Further ‘Authorities’⁵ under all such legislations have been pointed out and their powers functions and jurisdictions have been discussed. The following are the various ‘Authorities’ under all Legislations of West Bengal.

10.3.1 Sanitation

State legislations

1. One Burial Board [The Calcutta Burial Board Act 1881], Act {L.S- 1}
2. The Calcutta Metropolitan Water and Sanitary Board, A Board of Directors (3 out of 6 should be whole time) and a General Council (total 17 members), [The Calcutta Metropolitan Water and Sanitation Act, 1966], Act {L.S- 2}
3. The Corporation, The Mayor and The Mayor-in-Council [The Howrah Municipal Act, 1980], Act {L.S- 3}
4. The Mayor, The Mayor-in-Council and the Corporation [The Kolkata Municipal Corporation Act, 1980], Act L.S- 4

Legislation Identification	Sanitation Subject Covered	Gap
Act L.S- 1	1. The Board has the power of preservation, repair or removal of existing monuments and for regulating the dimension and erection of new monument, in any Burial Grounds.	1. Basin Contamination Measurement System 2. Prevention of Soil Pollution

⁵ “Authorities” means agency or body or individuals entrusted with the responsibility of execution under any of the legislations.

Act L.S- 2	<ol style="list-style-type: none"> 1. The Water and sanitary Board is empowered to look into various schemes of water supply and proper Drainage system. 2. The authority has the power of collection and disposal of Night-soil within the district. 3. Authority entitled to regulate the treatment of industrial wastes before discharge into any sewer, canal, river or other water channel within the District; 4. Board also covers the area of Sewage treatment and disposal of wastes. 	1. Basin Contamination Measurement System
Act L.S- 3	<ol style="list-style-type: none"> 1. The authority is empowered to collect and dispose of Sewages on daily basis. 2. The Act covers the Disposal of Solid wastes, both domestic and industrial 	1. Basin Contamination Measurement System
Act L.S- 4	<ol style="list-style-type: none"> 1. The authority is entitled to look after all operation of Water Works within the district. 2. The Corporation covers up the Solid Wastes Management and disposal of waste outside the city. 3. Municipality has the power of scavenging, removal and disposal of filth, rubbish and other obnoxious polluted matters; 	<ol style="list-style-type: none"> 1. Basin Contamination Measurement System 2. Restrictions on Industrial usage of River water.

10.3.2 Industrial pollution

The following case can be referred regarding the above mentioned issue

M C Mehta v/s. Union of India⁶ (Calcutta Tanneries)

Fact of the Case

After the case of Kanpur tanneries the court issued various directions in relation to the Kanpur tanneries. While monitoring the said directions, the scope of the petition was enlarged and the industries located in various cities on the banks of River Ganga were called upon to stop discharging untreated effluent into the river. In Calcutta the most of the tanneries located at Tangra, Tiljala, Topsia and Pagla Danga. These areas accommodate

⁶ AIR 1985 SC 3727

about 550 tanneries. According to the examination report dated 30-9-1995 by the National Environmental Engineering Research Institute (NEERI), ninety per cent of the Calcutta tanneries use chrome based tanning process, while the remaining utilise vegetable tanning process. The observations of the NEERI were:

- Tannery units are located in highly congested habitations, offering little or no scope for future expansion, modernisation or installation of ETP(s)
- Surroundings of the tanneries are extremely unhygienic due to discharge of untreated effluents in open drains, stagnation of wastewater in low-lying areas around the tannery units, and accumulation of solid waste in tanneries

Legislations and Provisions mentioned

- Water (Prevention and Control of Pollution) Act, 1974 – sections 3, 4, 16, 20, 21, 23, 24, 26
- The Environment (Protection) Act, 1986

Judgment: In this case, the Precautionary Principle and the Polluter Pays Principle have been accepted as part of the law of the land by the court.

- Court further instructed the Calcutta tanneries to relocate themselves from their present location and shift to the new leather complex set up by the West Bengal Government. The tanneries which decline to relocate were prohibited to function at the present sites.
- The Calcutta tanneries deposited 25% of the price of the land and the subsequent instalments were paid in accordance with the terms of the allotment letters issued by the State Government.
- The tanneries who failed to deposit 25% of the price of the land as directed by court were closed from all his operation.

10.3.3 Agriculture

State legislations

1. Canal Revenue Officer and Collector [The West Bengal Irrigation (Imposition of Water Rates) Act 1974], Act L.S- 5
2. Collector and Canal Officer [The Bengal Irrigation Act, 1876], Act L.S- 6
3. Corporation, i.e., Damodar Valley Corporation and Collector [The West Bengal Irrigation (Imposition of Water Rates for Damodar Valley Corporation Water) Act, 1958], Act L.S- 7

Legislation Identification	Agriculture Subject Covered	Gap
Act L.S- 5	<ol style="list-style-type: none"> 1. The authority may grant of free passage for the purpose of Irrigation within the water course or channels. 2. The State Government may impose water rates for specific area of land in different seasons. 	<ol style="list-style-type: none"> 1. Basin flow Monitoring System
Act L.S- 6	<ol style="list-style-type: none"> 1. The State Government may prohibit any kind of formation of obstruction in the drainage limit of particular area. 2. Any authority may enter on any land and remove any obstructions, and may close any channels, and do any other thing necessary for such application or use of the said water. 	<ol style="list-style-type: none"> 1. Restriction on usage of water from River Basin in Irrigation 2. Prevention of obstructions on flow of River
Act L.S- 7	<ol style="list-style-type: none"> 1. The Corporation has the power to remove any obstruction causing the diversion of the original flow of the River. 	<ol style="list-style-type: none"> 1. Restriction on usage of water from River Basin in Irrigation 2. Basin Contamination Measurement System 3. Basin flow Monitoring System

Commercial use of Water ways and Pollution

State legislation

1. The Board (consist of 12 Trustees), [Bengal Waterways Act, 1934], Act L.S- 8
2. Commissioner [Bengal Ferries Act, 1885], Act L.S- 9
3. State Government and the Collector [The Bengal Fisheries (Requisition and Acquisition) Act, 1965], Act L.S- 10
4. The Calcutta Port Commissioner [The Calcutta Port Act, 1890], Act L.S- 11

Legislation Identification	Commercial use of Waterways Subject Covered	Gap
Act L.S- 8	<ol style="list-style-type: none"> 1. The Board controls the cleaning, diverting and improving any existing channel which are under control of the Authority 2. The authority looks after the maintenance of the Channel for better navigation 	1. Restriction on Construction over River Flood Plain
Act L.S- 9	<ol style="list-style-type: none"> 1. The authority has the power of maintenance of the public and private ferries for navigation 	1. Basin flow Monitoring System
Act L.S- 10	<ol style="list-style-type: none"> 1. The collector may control the requisition and acquisition of land for the purpose of Fishery 	
Act L.S- 11	<ol style="list-style-type: none"> 1. The Port authority may acquire land and building for the purpose of the Act 	1. Restriction on Construction over River Flood Plain

10.3.4 Dams and Diversion

State legislation

1. Collector and the Engineer [The Bengal Embankment Act, 1882], Act L.S- 1

Legislation Identification	Dams and Diversion Subject Covered	Gap
Act L.S- 12	<ol style="list-style-type: none"> 1. The authority is empowered to remove any embankment or obstruction endangering the natural flow and embankment of the River 2. The collector may establish any water course and embankment for the protection of the cultivable land 	<ol style="list-style-type: none"> 1. Prevention of obstructions on flow of River 2. Restriction on usage of water from River Basin in Irrigation

Under the above legislations, the Collector is the common authority empowered to deal with different aspects of River Basin. The common function of the “Collector” includes: the power to create an obstruction in the normal flow of the River or channels for the purpose of irrigation. Also the Collector has the power to enter and inspect any area and levy charges where require. It has been found that the functions of “Collector” basically relate to irrigation and most of the functions are quite similar. The other authority is the “Corporation”. The Mayor and the Mayor-in-Council also have some similar functions

regarding the sewerage and drainage works and regarding removal, disposal and recycling of solid wastes.

The main issue in lower stretch is, sanitation including cremation activities, agriculture, commercial use of waterways and pollution and change of water course. It has been found that the Authorities are performing such functions regarding the above mentioned issues. But after a detailed study, some gaps have been identified and to conclude, there are a few areas which require a further study such as:

- Under the 'Sanitation Issue' a common problem is 'disposal and recycling of solid wastes. But the legislation does not clarify the process involved therein.
- Then under 'agriculture' issue, the problem which has been identified, is the 'change and alteration of river course' for the purpose of agriculture. In various legislations the Authorities are allowed to cut a new canal or change the course of existing Canals under their supervision.
- No specific State Legislation or delegated legislation on prevention or abatement of pollution in lower stretch of Ganga.

11. Conclusion

In conclusion, it can be said that all the legislations of the three stretches of Ganga have covered some areas, like:

- In 'upper stretch', the basin as well as the catchment area of entire valley has been taken care of.
- In 'middle stretch' under the subject of sanitation, most of the legislations speak about the sewage treatment plans and disposal of waste waters. In agriculture the legislations speak about water channels, use of water for agricultural purpose and construction on water course. Other areas which the legislations cover are: 'removal of obstruction on the water course affecting the natural flow of the river', 'prohibition of fishing in restricted areas' etc.
- The issues on which the legislations speak about in 'lower stretch' of Ganga are much alike the 'middle stretch' of Ganga. Under sanitation, most of the legislations speak about the sewage treatment, water supply and proper drainage system and disposal of Solid wastes, both domestic and industrial. Under the subject of agriculture the common findings are: 'free passage for the purpose of agriculture within the water course or channels', 'use of water for the purpose of agriculture', 'removal of any obstruction causing the diversion of the original flow of the River'. The areas which are covered in 'commercial use of waterways' are: 'cleaning, diverting and improving any existing channel which are under control of the Authority appointed under the Act', 'maintenance of the public and private ferries for navigation' and 'requisition and acquisition of land for the purpose of Fishery', etc.

On analysis of the legislations, it can be concluded that there are some questions with regard to the efficacy of the divergent laws in preventing pollution and protecting the Ganga River Basin. In all three stretches of Ganga River, some common deficiencies have been identified and those are mostly regarding the role of the Authorities:

- Most of the legislations do not specify its role regarding water pollution and protection of river basin.
- The jurisdictions of the Authorities are not stated clearly and none of the legislations speak about “whether there is any dispute regarding the jurisdiction among the authorities or not”.
- The legislations under the subject of ‘commercial use of waterways’ speak mainly about collection of tolls and levy of taxes on navigation matter. There is no specific provision on water pollution by the process of navigation.
- A few legislation have been mapped where, there is a need to look after some issues like: disposal of agricultural wastes, soil erosion, excessive public use of river water.
- Legislations like The Kolkata Municipal Corporation Act 1980, speaks about the Solid waste management but there are no provisions which explains how the corporation is managing the wastes or recycling the wastes and also no initiative has been taken on environment management and awareness in the domestic areas, especially the localities situated near the river basin.

Under most of the legislations, the Authorities perform the necessary functions stated under the law, but interestingly no authorities are entitled to play a role in prevention of river pollution.

The concerns which arise after analysing the Authorities are:

- the efficacy of the Authorities and effectiveness of legislations;
- Their role in handling social, economical and technical matters pertaining to Ganga.

It has also been observed that no such relevant judicial opinion has been recorded under these State legislations. Finally, it can be said that with a new legislation all the issues affecting the Ganga can be reduced. A specific legislation will include all the aspects regarding the river Ganga and its basin. Then divergent central and state legislations would not be required.