Chapter-4
WATER AND ITS MANAGEMENT: LEGAL FRAMEWORK
IN INDIA

The existing legal framework concerning water and its management in India is composed of a large number of different Acts, rules and principles adopted and enacted over many decades. The evolution of legal framework related to water and its management can be studied under three broad categories: the pre-colonial, colonial and post-colonial. The pre-colonial era can be subdivided into two heads: ancient and medieval, and the post-colonial can be classified into constitutional and post-constitutional. This Chapter examines the historical development of water resources management and the existing legal framework in India. It focuses on how far existing legal framework for water management in India is able to address the critical issues and concerns relating to water owing to increasing scarcity, mismanagement and environment related problems.

4.1. Water in Ancient India

Water has been the driving force of almost every civilization from time immemorial. A great importance was attached by people to a suitable and adequate supply of water for different purposes like agriculture activities, cooking, drinking, washing etc. Our ancients had classified water into several groups depending upon the chemical and physical properties and also on a few other factors. They had also a detailed learning of various effects of conserving water belonging to different conditions. People in the past had the knowledge of the medicinal and therapeutic value of water.

In ancient India we do not have any formal laws on water and its management but these are found in different religious texts, customs and written codes. Although, we do not find any specific codes for water management in the Indus Valley civilization but it was known for its water management. The well planned cities having high standard structures of drainage, water supply, sewage and storage implies a great concern for the exploitation and management of water resources. But legal norms in respect of water use began to emerge with the inception of Vedic social order, where Dharma became the test stone for almost every action. In ancient period one witnesses the existence of legal regime of water management but it is impracticable to compile various rules, regulations and customary

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practices because during that time the socio-economic system was maintained through small republics with self-sufficient and autonomous villages. The Water law in ancient India is found in the religious texts, customs and written codes.

4.1.1. Indus Valley Civilisation

The Indus Valley Civilisation flourished around 2500 B.C. It grew along the banks of river Indus and other parts of western and northern India and had one of the most developed urban water supply and sewage systems across the world. The Indus Valley Civilisation was known for its water management. Most of the excavations have been found around the areas of the cities of Harappa, Mohanjodaro and Dholavira. They were known for their obsession with water.²

The Mohenjo-Daro and Harrapan ruins have revealed the fact that people of even that early period had given due importance to adequate water supply for various purposes like domestic, irrigation and public baths. The concern for the management of water resources is evident from the system of great baths along with well-defined drainage, jabarbas and nalas.³ The big houses had their own wells and other wells would serve groups of smaller houses.⁴ In addition to wells, archaeologists have also found remains of giant reservoirs for water storage. The people of this civilization worshipped the nature and prayed to the rivers every day. They had given divine status to the rivers. The people in Indus valley built strong levees or earthen walls to keep water out of their cities. They constructed human made islands to raise the cities above possible floodwaters. The waste flowed out through clay pipes into a drain in the street. Waste was carried away along the drains to 'soak pits' (cesspits), Cleaners dug out the pit and took the waste away. They also took away rubbish from bins on the side of houses. Each street and lane had one or two drainage channels, with brick or stone covers which could be lifted to remove obstructions in the drains.⁵

Mohenjo-Daro could boost of an excellent water supply. Almost every house had its own brick lined well. Some of those wells have been reclaimed and they are giving fresh sweet water even now.⁶ Generally, the ruins of Mohenjo-Daro showed a picture of a community in which both personal and community cleanliness was quite effectively practiced, and due importance was given to the protection of the water supply from

⁵ Ibid.
⁶ V. D. Mahajan, Ancient India 60 (S. Chand and Company Pvt, New Delhi, 2014).
contamination. Practically, every house in Mohen-Jo-Daro had its bathroom, always placed on the street side of the building for the convenient disposal of waste water into the street drains. Where latrines have been found in the houses, they were placed on the street wall for the same reason. Ablution places were set immediately adjacent to the latrines, thus conforming to one of the most modern sanitary maxims. Where baths and latrines were located on the upper floor, they were drained usually by vertical terra-cotta pipes with closely fitting spigot joints, set in the building wall.\textsuperscript{7}

The ruins of Mohen-Jo-Daro revealed that the water from the bathrooms and kitchens, the roof drainage as well as drainage from the latrines usually did not run into the street drains directly. But it passed in them through tightly brick-lined pits, with outlets to the street drains. Seemingly, these pits were cleaned out from time to time, as were the setting basins or soakage pits located along the street drains. These pits may have been the ancient precursors of our present day septic tanks and grit chambers. In some houses it could be seen that the drainage water discharged into large pottery jars placed in the street at the foot of the vertical drains in the street walls.

The most significant structure in the city was the Great Bath, which had water channels leading to and from it.\textsuperscript{8} The Great Bath is undoubtedly the earliest public water tank in the ancient world located at archaeological site of Mohenjo-Daro used for various domestic purposes by the people of the valley. Two wide staircases lead down into the tank from the north and south and small sockets at the edges of the stairs are thought to have held wooden planks or treads. At the foot of the stairs there is a small ledge with a brick edging that extends the entire width of the pool. People coming down the stairs could move along this ledge without actually stepping into the pool itself. The floor of the tank is water tight due to finely fitted bricks laid on edge with gypsum plaster and the side walls were constructed in a similar manner. To make the tank even more water tight, a thick layer of bitumen (natural tar) was laid along the sides of the tank and presumably also beneath the floor. Brick colonnades were discovered on the eastern, northern and southern edges. The preserved columns have stepped edges that may have held wooden screens or window frames. Two large doors lead into the complex from the south and other access was from the north and east. A series of rooms are located along the eastern edge of the building and in one

\textsuperscript{7} Supra note 4.
room is a well that may have supplied some of the water needed to fill the tank. Rainwater also may have been collected for these purposes, but no inlet drains have been found.9

The drainage system of Mohenjo-Daro is so elaborate that “the like of which has not yet been found anywhere in the world in any other city of the same antiquity.”10 It had an elaborate sanitary and drainage system and also had an early canal irrigation system. Large scale agriculture was practiced and an extensive network of canals was used for the purpose of irrigation.

The Harappan town had also very good drainage and sanitary system. The main drain was associated with each and every house ensuring the proper dumping of the waste materials. The drains were covered and connected to the bigger sewerage outlets, which ensured the channel of dirt out of city. The conduits to the main drains ran through the middle of the streets below the pavement level and were covered with flat stones and sturdy tile bricks. The covered drain was connected to the larger sewerage outlets which finally led the dirty water outside the populated areas. The urban plan found in these cities included the world’s first urban sanitation system. The elaborate brick-linked drainage system for the removal of rainwater is of unparalleled engineering skill.

Houses in the city had rubbish chutes built into the walls and descending from the upper floors, at the foot of which chutes there were sometimes provided bins at the street could be cleaned out by the scavengers. Public rubbish bins were also provided at convenient places.11 Nearly every house had a bathroom and the house drains which were covered by brick slabs, started from the bathrooms of the house and joined up to the main sewer in the streets. On the streets there were manholes for cleaning. Some drains flowed to closed seeps; others flow out of the city. The system of underground drainage at Lothal was the most unique aspect of water management during the Indus Valley civilization.

The kind of efficient system of Harappans of Dholavira, developed for conservation, harvesting and storage of water speaks eloquently about their advanced hydraulic engineering given the state of technology.12 The water-harvesting system developed at Dholavira formed an integral part of the planning of the city. Since the city lay between the seasonal channels of Mansar and Manhar, their waters were harnessed fully. The Archaeological Survey of India found evidence of check-dams on the Mansar and the Manhar. From these check-dams, water

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9 Supra note 4.
11 Supra note 4.
was let into a series of reservoirs raised on the eastern, western and southern sides of the city's built-up areas but within the fortification walls. All the reservoirs were interconnected. One reservoir was purely rock-cut. The Harappans cut the rock from the surface to the depth they wanted and then they raised linear walls on the sides. The largest of the reservoirs had three flights of steps leading to the bottom and the others had two flights. The staircases were to enable people to walk down and fetch water as the water level went down. Indeed, a beautiful stepped well was carved out of rock-bed in the eastern reservoir. Another notable example of water harvesting system is found about 130 km from Pune alongside the Western Ghats. A large number of tanks were cut in the rocks to provide drinking water to tradesman who used to travel along this ancient trade route.

It is a clear indication that the quality of municipal town planning in Indus Valley placed a high priority on accessibility to water. The well planned cities having high standard structures of drainage, water supply, sewage and storage implies a great concern for the exploitation and management of water resources. But legal norms in respect of water use began to emerge with the inception of Vedic social order, where Dharma became the test stone, though not always for all laws for their validity.

Ancient scriptures and secular literature, most of which, are dated long after the disappearance of the Indus Valley Civilization refer to the construction and improvement of water control works as activities beneficial to peoples’ welfare and deserving to be supported and promoted by kings. In ancient India water was used in all religious rituals and ceremonies because it was believed that pure or well provided water conveys offerings to gods.

4.1.2. Vedic era

According to Hindu jurisprudence, each creature is made of parts and is a part of the community and the cosmos. Harmony is achieved when human actions or Karma match the nature of human. Human actions are governed by Dharma that is enshrined in the sacred books of the Hindus- the Vedas, which include Shruts and Samritis. The laws of Manu

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13 Ibid.
addressed issues related to the regulation of water such as water pollution and its impact on health.  

The sacred books have several hymns and verses praising the rivers. These books also bring to light the knowledge of the people of that time in hydrology and water management practices. There are quotations in Vedas and in early scholarly manuscripts on canal irrigation, drought management, water allocation, water pricing, water management and even trans-boundary water management. The historical overview of the evolution of Indian water law shows that water law is linked not only with social, religious and economic developments, but also with the rise and fall of rulers. Yet there are certain common elements such as: right to water, restrictions on nuisance, penalties and monitoring systems.

During pre-colonial Hindu and Muslim rule in India, the ancient religious text commentaries and stone inscriptions reflect references of the principles such as ethical, moral, social, spiritual, social and ecological which were applied to water management. Since ancient times deficiencies of rainfall were overcome by means of one or the other form of artificial reservoirs, ponds, canals, lakes, tanks, wells, etc. In Ramayana the country of Kosala is praised as adevamattrka i.e. not solely depending on rainfall. In Mahabharata Narada asks Yudhistra if tanks, lakes etc. are built throughout the realm at proper distance for the purpose of agriculture.

Apart from the environmental value of water, it had religious value in ancient times. Water was considered as the essence of life and purity of water was a moral value. The water was treated as symbol of purity. Purity can be secured by sight or touch of water. In Vedic culture rivers are worshipped as deities. In Vedic texts water is referred to as Apah or literal the waters. The waters are considered to be purifying in the spiritual context.

The Vedic seers in several hymns invoked water, the purifying agent to be gracious with mankind, to purify man and to remove all physical defilements. They believed that water consumed by men gives strength and become auspicious drink within the stomach. Hence

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18 Phillipe Cullet and Sujith Koonan(ed), Water Law in India 1 (Oxford University Press, New Delhi, 2011).
21 Ibid.
23 Id. at 71.
they prayed “May the waters be pleasant to our taste, be free from diseases, sin and sickness, be the remover of fear of death, be full of divine qualities and be the strength of eternal laws.”25 The hymns invoking waters and the prayers directed to Lord Varuna, the deity of water, reveal that even as early as that of Vedic period, people took precautions to use only water free from all sought of impurities. Of all the Aryan gods, Varuna was ethically the highest. He was always aware of the deeds of men, and was omnipresent. The worshipper approached the Varuna in a spirit different from that in which he prayed to the other Gods most of whom were lively, cheerful fellows whom man needs not fear, if they offered regular sacrifices. Varuna was so pure and holy that the mere performance of sacrifice would not ensure his favour, for he abhors sin. Not only did Varuna punish the sins of the individual but he visited the sins of the ancestors upon him and his ubiquity ensured that there was no escape for the sinner.26

The Vedic period (or Vedic age i.e. from 1500 to 500 BCE) was the period in Indian history during which the Vedas, the oldest scriptures of Hinduism were composed. It is well accepted that Dharma, the universal, transcendent and immutable is essentially a rule of interdependence, founded on hierarchy corresponding to the nature of the things and essential for maintenance of social order.27 In Vedic system the powers were exercised by the King. Dharma was maintained by the royal commands which were backed by the sanctions. Water regulation management, control and exploitation were exercised by the royal Kings and by the community in some cases. During the regime of Chandragupta Maurya, Harshvardhana and Guptas there was a Hindu Vedic society and the country united with a centralised bureaucracy and brought under one rule.28

It is with the Vedas the Indian philosophy has its origin. The period of the earliest of the four Vedas namely Rig-Veda is attributed to be from 500-1000 B.C. The Upanishads belong to 800-600B.C. The importance given by Indians to water is evident from the references to water in these ancient literary works. The Rig Veda highlights the hydrologic cycle: the water which gets divided in minute particles due to the heat of sun is carried by wind and after conversion into cloud it rains again and again.29 It says that Sun is the cause of

27 Supra note 15.
28 Chhatrapati Singh(ed), *Water Law in India* 293 (Indian Law Institute, New Delhi, 1992).
rainfall and water (“Adityat Jayate Vrishti” or the ‘Sun gives rainfall’).

Rig Veda recognises the water as divine, unfathomable, and purifying.

The Rig Veda identifies the waters as the first residence or Ayana of Nara, the eternal being and therefore water is said to be pratishta, the underlying principle or the very foundation of this universe. The primary concern of Hindu ritualism is connected with manipulation and maintenance of purity and impurity. There are essentially two ways to bring about a condition of purity. One is to keep away from things signifying impurity and the other is to purify oneself by things recognised to have the ability to absorb and thus remove pollution directly. Water is the most common medium of purification. It is considered to have an inherent purity and the capacity to absorb pollution and carry it away.

Thus, water was considered to be an extraordinary and omnipresent element in Rig Veda. It was the upholder of all lives and the saviour of everything living or dead on earth. Not only Rig Veda but the societies existing even prior to it in the ancient world practiced spiritual veneration for water. Our Rig Vedic ancestors were similar to the predecessors in respecting all the natural elements. Water was, therefore, considered Divine. The waters in Rig Veda were both terrestrial and celestial. The release of waters and the breaking forth of the dawn or emergence of light are described as simultaneous event. In fact the movement of the waters and the spreading of the rays of light came from the same source and followed the same path of 'rita' simultaneously. These waters, when set free for movement, were described as moved upwards by Indra after the killing of Vritra. The luminaries also moved along with them. Their downward movement is portrayed as where the seven rivers flow into the jaws of Varuna as into a surging abyss or ocean. Rig Veda has several gods attributed to water. Apas, who is addressed in four Suktas, is the God of waters. In some direct or indirect way there are other gods too, who apart from having their own independent portfolios, are also related to some or the other form of water. They are Indra, Varun, Parjanya etc. Apah or Apas or the God of water, come from the Vedic Sanskrit term Ap (ap) for "Water." It turns into Ab - the Persian word for water. In Rig Veda, god Apas is somewhere described as mother, somewhere as a woman and somewhere as the Master Lord. He blesses those who follow the

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30 Ibid.
31 Supra note 24.
32 Ibid.
34 In the early Vedic religion, Vritra is a serpent or dragon, the personification of drought and adversary of Indra. In Hinduism, Vritra is identified as an Asura.
gods and conduct 'yagyas'. Indra, the bearer of 'Vajra', had created a path for Water and he never diverts from that path. The Rig Veda provides as under:

Samudrajyestha Salilasya Madhyapunana Yantyanivishmanah | 
Indrahya vajrivrishabhoradar Ta Apoadevirhnamvantu. II

“He, whose destination is the ocean, who purifies the world, is always flowing, such water lives in the middle of the Universe. Indra, who possesses 'Vajra' and rains the desires, broke opened a path for these divine waters. May these waters help me and be received by me.”

Likewise, the Yajur Veda and also Sam Veda clearly speak about the hydrologic cycle. In Atharva Veda, it is stated that rivers originating from the snow-clad mountains will keep on flowing in summer also, all the major rivers flowing from the Himalayas were perennial since they were fed by rains during the monsoon and snow melt during summer.  

The Atharva Veda quotes on water management as “Water of rivers, wells, ponds etc. if used and managed efficiently will reduce the intensity of drought and water scarcity. The need for water conservation to overcome water scarcity problems was well understood by them”. It states “in the heart of waters, O king Varuna, your golden home is built”.

Caraka and other sages of ancient India have said that entire water is ultimately one type, viz., the one which falls from the sky as directed by Indra as enshrined here under:

Jalam ekam vidham sarvampatatyai indramnabhastalatI
Tat patat patitam caivadesakalavepeksate II

-Carak Samhita Sutrasthanam, 196

It was believed that “Lord Indra directs the fall of water from heaven according to the activities performed by mortals. This water while falling and having fallen from the sky acquires properties depending upon time and space.”

Our ancient distinguish the type of water known as antariksam and this becomes clear from the statement of Susuruta:

Paniyam antariksam anirdesyas rasamamrtam
Jivanam tarpanam dharanam avasasjanam
Sramklama pipasama damurcchat andranidrad ahaprasamanam.

35 Supra note 33.
36 Id. at 133.
37 Supra note 29.
38 Ibid.
39 Varuna is considered to be a deity associated with water.
41 Ibid.
“Water produced in the cloud when they start dropping down has no taste, no odour. It is absolutely pure and beneficial like nectar. It gives and sustains life, quenches thirst, cures wounds caused by weapons etc., and revives the consciousness of those who faint due to fatigue, gives clear knowledge, removes drowsiness, burning sensation of the body etc.”

Even though, it is said in our ancient texts like Carak Samhita that entire water is ultimately of one kind, water was broadly classified into two sorts: divya and bhauma. Divyais that which falls from the sky. This is again of four type viz. dhara, kara, tusara and haima. Dhara is the rainwater which drops from the sky continuously, kara is hailstones, tusarais snow water and haimais the water from the due.

4.1.3. Code of Manu

The Code of Manu or Dharam Shastra is one of the most important document relating to water law of the past. The Laws of Manu provide indications of the water law of the ancient times. Water was considered indivisible. Manu Samriti provides that it is the King’s duty to build the irrigation works. King should protect public water and collect fees for crossing waters. Diversion or obstruction of waters was discouraged and the laws provide a system of punishment for those who polluted, stole or divert the water. Destruction of embankments was treated as a crime. The law promoted the use of water bodies as boundaries between villages to ensure that as many villages as possible had access to water. Water bodies of enemies, however, could be destroyed in times of war.

According to Rig Veda belief, the Goddess Saraswati gave birth to rivers. Chapter II Sect. 151 of the Code States, “Let him not entertain a sradda(dinner)… he who diverts water courses and he who delights in obstructing them”. In Chapter IV, Sect. 226 reads, “a rich man must always without avoiding it and with faith, do charitable works as constructing a reservoir or a well or building a public fountain”, and Sect 229 states “He who gives water obtains satisfaction.” This provision is similar to the Waqf or religious endowment developed in Islamic Law. Chapter IX Sect 219 provides the concept of public waters—“water along with other things is declared to be indivisible”. It further provides that “The king used to collect rights of way for crossing rivers” (Chapter VIII Sect 404). “Special obligation was placed on the king with respect to public water such as to organise vigilance and guards, both stationary and patrolling, and spies …” on waters and on houses where water is distributed” (Chapter IX, Sect. 264-266). There is a moral sanction to “consider water as a matter for exclusion from society of good people the sale of consecrated reservoir” (Chapter VII, Sect. 61 and

42 Ibid.
43 Supra note 20.
44 Ibid.
69), the obligation to punish with death “he who breaks the dam of a reservoir and causes loss of water by drowning him in the water or have his head cut off”. It states that “The offender may repair the damage but he shall have to pay the highest fine” (Chapter IX, Sect. 279). But he “who shall take away the water, must be made to pay the first (or lowest) fine” (Chapter IX, Sect. 281). The unlawful appropriation of the water of well or cistern shall be punished by lunar penance” (Chapter XI Sect 164). Waters were also considered as an element of purification, as well as means to ascertain culpability of a person for certain crimes. Special ceremonials had to be performed for purification. The control over water utilisation and distribution was under the responsibility of a powerful water administration headed by a water superintendent. This high official was vested with full and undisputed powers on all questions relating to water.

Out of the eighteen heads of disputes mentioned by Manu one relates to boundaries between villages. The law book of Manu provides that boundaries between two villages should be determined by tanks, ponds, channels, and other sources of water. This is naturally with a consideration of inter-village water supply so that constant flow of water between two such units could be maintained.

Manu laid down that anyone who destroys embankments of a tank should either be drowned or put to death by beheading. Embankments were probably the first techniques used for artificial management of water. It could serve two purposes: guarding a kingdom from harmful effects of water and storage of water. Because of their importance in the states security and prosperity, protection of embankments was taken very seriously and law provided severe punishment, for its destruction.

Similarly, Vishnu Sutra also provides that a King should give capital punishment to one who destroys embankments. Also, heavy fines were imposed for destruction of water channels by raising embankments or unauthorised use of tank built for the common good of the people.

With the conquest, the aim of the rulers was to consolidate control but not necessarily intervene in the lives of the villages. The closer one was to capital, was more likely that the rights to water and water ownership rules changed to suit the rulers. During the times of war

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46 Ibid.
47 Ibid.
48 Chattarpati Singh(ed), *Water Law in India* 291 (Indian Law Institute, New Delhi, 1992).
50 Supra note 49 at 290.
51 Supra note 8.
destroying the embankments or exploitation of water for destructive purposes were permitted. Manu, the earlier law giver, says that a King who wishes to conquer his enemy should first of all destroy dams in his (enemy’s) territory. Much later Kautilya renders some advice by saying that, when on war, the tracts of land of enemy should be flooded with water by breaking dams and embankments.

4.1.4 Arthashastra

‘Arthashastra’ is a book authored by Kautilya, who was the chief advisor to Chandragupta Maurya (321-297 B.C) on politics and statecraft. The Arthashastra explains the four sources of law:

i. The Dharma based on truth;
ii. Evidence provided by witnesses;
iii. Customs and traditions accepted by the people; and
iv. Royal edicts adopted by the king.

Kautilya provides that at the time of formation of new villages, the King is expected to construct reservoirs set up with continuous water supply or with water drawn from some other sources. In Kautilyan period ‘Arthashastra’ indicated that users had to pay a water tax for the use of water taken from the rivers, lakes or springs. It also provides a detailed account of governance in Kautilyan period. According to Kautilya it is the duty of the King to construct reservoirs, and fill them with water, either permanent or from some other source. He should provide all the necessary help like sites, roads, wood, and other necessary things to those persons who construct reservoirs of their own. Whoever stays away from such kind of cooperative works should send his servants and bullocks to carry on his work. The king should also share the expenditure and should not claim the profit. Kautilya says that the state should not only emphasising on construction of reservoirs of water but also should give necessary material and support for private contractors who undertake to build such reservoirs. The Nagaraka (Govt. Superintendent of City) shall make daily inspection and keep records of water reservoirs. Though private ownership of water works were encouraged, the ownership of a tank will be lost if it is not used for continuous five years, except in times

52 Supra note 49.
53 Supra note 20.
54 Supra note 18.
of distress. The owner was also empowered to sell or mortgage his tank. Waterless tanks or disused tanks were not to be destroyed as suggested by Kautilya.\(^56\)

The *Arthashastra* mentioned that all water belonged to the King and that the users were to pay water tax for the use of water for the development of water works, transport, and irrigation systems installed by the king. The taxes that owed to the king were specified in detail and these were collected by the Chief Superintendent of Crown lands.\(^57\)

Exemptions were granted from payment of water taxes for building or improving irrigation facilities. Exemption from payment of taxes was given for Five years in case of new tanks and embankments, exemption for four years was granted for renovating ruined or abandoned water works and exemption for three years was granted for clearing water works overgrown with weeds. Water works such as tanks, reservoirs, embankments could be owned by any individual and the owner had the right to sell or mortgage them. Ownership of tanks lapsed if they were not used for a period of five years except in case of distress. Anyone leasing, hiring, sharing or accepting water work as a pledge, with a right to use them, had to keep them in good condition. The owners could give water to others in exchange for a share of the produce in fields, parks or gardens. In absence of owner, the water works could either be maintained by charitable individuals or the people of the village acting together. The taxes were to be paid for use of water for cultivation. The use of water from water works built by the King and manually transported were charged 1/5\(^{th}\) of the produce. The water carried by bullocks was taxed at the rate of 1/4\(^{th}\) of the produce and the water lifted by mechanism into channels was taxed at the rate of 1/3\(^{rd}\) of the produce. The water from natural reservoirs used for irrigation was taxed at the rate of 1/4\(^{th}\) of the produce.\(^58\)

A prohibition was placed on causing damage to the ploughed or sown field of another by a person irrigating his field from tank or reservoir. Prohibition was also placed on:

i. Letting water out of dam out of turn;

ii. Obstructing through negligence the rightful use of water by others;

iii. Obstructing a customary water course in use;

iv. Making a customary water course unusable

v. Building a dam or well on land belonging to someone else; or

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\(^56\) Supra note 20.


\(^58\) Ibid.
Selling or mortgaging, directly or indirectly, a bund or embankment built and long used as a charitable public undertaking except when it is in ruins or has been abandoned.\textsuperscript{59}

The ‘\textit{Arthashastra}’ stated that while irrigating one’s own field there should not be any damage to the others. There were prohibitions on certain acts like the discharge of water from the water reservoirs without any reasonable justification, the hindrance of legitimate use of water by others, obstruction or diversion of the water course and construction of water works on someone else’s land. If the overflowing of water causes any damage to other person, the person responsible had to pay compensation to the other. Further, a list of kinds of damage and their corresponding compensation or penalty due are provided under this book.\textsuperscript{60}

This code provides that where a king rules over a territory, he should ensure Dharma, and Dharma only exists when there is order. If custom already exist in specific places, the King should allow the continuance of such custom. It elaborated in detail on foreign policy but does not say much about water. Specific legal norms in this respect began to emerge with the inception of Vedic social order, where Dharma became the test stone, though not always, for all laws for their validity.\textsuperscript{61}

From the ‘\textit{Arthashastra}’ it is evident that the farmers knew about the soil characteristics, rainfall pattern and irrigation techniques. The state rendered help for the construction of irrigation sectors. The village community had a major role to play apart from king’s role in water management at that time.

The Mauryan government had constituted a regular department which looked after irrigation works, measured lands to be irrigated, regulated the supply of water to the fields where irrigation depended on canals, and maintained a system of canals. The peasants were required to pay for the water got from the canals. The construction and maintenance of canals and reservoirs had been regarded as the duty of the State. Minor irrigation works were provided and maintained by village communities, whereas the bigger canals, reservoirs and lakes were constructed and looked after by the state. The well-known Sudersanlake at Girvar was constructed in Chandergupta’s time under the supervision of provincial governorPushya Gupta, and lake was provided with supplemental channels by the governor Tushashpha in the days of Emperor Ashoka.\textsuperscript{62}

\textsuperscript{59} Id at 203.
\textsuperscript{61} Ibid.
4.1.5. Other Religious Texts

The Dharma sutra (aphorismic form of teaching imparted by a master to his disciples) of Apstamba, an authority on civil and criminal law lays down that one who has taken the property of another unintentionally shall be reprimanded if the property be, among other things, water. But if the same is done intentionally his garments shall be taken away. 63 As per other Sutra the King, as a sovereign, has immunity from consequences of such acts, he could take or receive water from any place without it being considered as theft. 64

There were many other rules emphasizing the religious value of water. It provided self-restraint or sanctions to be observed by its users. The Dharamshastra of Vashistha in its Chapter V maintains that intellect of a man perishes who urinates in water. Such dictates observed as religious custom in effect, even today in some parts of the country, demonstrate the need for preserving water quality of purifying everything. 65 The essential element of water laws in ancient times consist of certain forms of practices and self-restraining rules for protection and conservation of water.

According to Vedic philosophy water has a divine character. It is recognised as a medium to attain spiritual enlightenment. Water was considered to be an essential element in the performance of all rituals and ceremonies. The Vedas recognise water as the very essence of spiritual sacrifice or the first door to attain the divine order.

After examining various Hindu texts relating to water regulations the following points may be noted. It regarded the wholeness of water and suggests that water cannot be divided. The persons who had the capacity of developing water works they should build or construct it for the benefits of others. King was considered to be the protector of public waters and he was having power to collect fees for using the water for particular purposes like crossing the water. Diversion of water or obstruction of waters was generally prohibited. There existed a legal system providing social admonishments and penalties in cases of contamination, theft or diversion of water. Destruction of embankments was regarded as illegal and thus generally not allowed. The law promoted the use of water bodies as boundaries between villages to ensure its maximum use by the residents of different villages, thereby making water accessible to the greatest number. Water bodies were to be protected and the prime

63 Jolly J Naradiya, Dharamshastra 50-51 (Takshilla, Delhi, 1981).
64 Id., at 114.
65 Supra note 49.
responsibility to protect was on the rulers, however during war times it could be demolished.\textsuperscript{66}

4.1.6. Post Vedic Era

The early Vedic text exhibited the philosophy of spiritualism in relation to water, whereas the post Vedic literature created the conception of its significance in ritualism. According to the post Vedic texts or \textit{Smritis} water was considered imperative for bodily purification as well for ritualistic purification. Ritualism was connected with the construction of Dharma or moral law. ‘Dharma’ persists steadfastly in Hindu society. Between 500BCE and 300 BCE, apparently no such substantial shortage of water could be seen as there used to be excesses of food grains. The trade was promoted along water channels in that period. \textsuperscript{67}

During this period, Jainism and Buddhism grew up to encourage preservation and protection of environment and nature. Mahavir Jain and Gautam Buddha encouraged rightful conduct and right belief, and promoted respect for other living creatures. After the war of Kalinga, the triumphant emperor Ashoka himself embraced Buddhism and preached non-violence to his people. Ashoka also called on his officers to build reservoirs and plant trees.\textsuperscript{68} Around 600 CE, there was a decline in Buddhism and Jainism and reduction in agricultural production possibly due to reasons like water scarcity, deterioration in soil fertility or/and increase in population.\textsuperscript{69}

In the rule of Guptas and afterwards up to about 1000 CE, the focus again shifted on the preservation and protection of the natural resources. This period witnessed the revering of specific animals and trees. Trade and urbanisation was at low in this period. Ninth Century onwards there was growth of new tank technologies and better quality dams and canals in South India. The improved reservoirs and canal system paved the way for the development of large scale agriculture.\textsuperscript{70} During the regime of Chandragupta Maurya, Harshvardhana and Guptas there was a Hindu Vedic society and the country united with a centralised bureaucracy. One example of highly organised bureaucracy was in charge of administration during Mauryan period was \textit{Agronomoi} having duties, inter alia, to control irrigational practices. The authorised officer used to oversee rivers and check channels through which water was let out from several divisions to ensure maximum supply. The construction of


\textsuperscript{67} \textit{Ibid.}

\textsuperscript{68} R. C. Majumdar and H. C. Raychaudhuri, et.al.(ed.),\textit{An Advanced History of India} 56 ( MacMillan, Delhi, 1978),

\textsuperscript{69} \textit{Supra note 67.}

\textsuperscript{70} \textit{Ibid.}
reservoirs, tanks, canals and wells were regarded as a part of state function. The water transport regulation and levy of tolls for goods carried through water routes were also found. In case of violation of those rules, the sanctions like stoppage of goods etc. were imposed on the violators.

In this way in ancient period one witnesses existence of legal regime of water management but it is impracticable to compile various rules, regulations and customary practices because during that time the socio-economic system was maintained through small republics with self-sufficient and autonomous villages. The task becomes even more difficult given the vastness of the country and its political and demographic divisions. The problem gets further complex for lack of efficient literature on agrological aspects, thus hindering the process of even a single sociological compilation of corpus juris of water for any social group in India for that period.  

4.2 Medieval Water Laws

During the Gupta era the water resources development took place in a great extent. The Pallavas in south expanded the irrigation system. Advanced irrigation systems were introduced during Chola period. In Northern India irrigation works were promoted by the Rajput dynasty. King Bhoja constructed a lake in Bhopal whose area was 647 km². In Eastern parts of the country Pal and Sen Kings built several big tanks and lakes. There were well developed irrigation systems in the 12th Century in Kashmir.

The Vijaynagar kingdom and the rulers of Deccan also extended surface irrigation through canals and tanks in the South. Several large and small storage tanks were constructed in the Vijaynagar Kingdom. One of such tank was Anantraj Sagar tank, which was built with a 1.37 km long earthen dam across the Maldevi river. The famous Korangal dam was constructed under King Krishnadevraya. The Bahamani rulers introduced canal irrigation for the first time in the eastern provinces of the Deccan. Sultan Zain Uddin built a network of canals in Utpalpur, Nadashaila, Bijbihara and Advin areas of Kashmir. These and subsequent periods witnessed greater interest among rulers in expanding and improving irrigation for increasing agricultural production which would not only benefit citizens but also provide larger revenues for the exchequer.

71 Supra note 49 at 294.
73 Ibid.
74 A Vaidyanathan, Water Resources of India 21-22 (Oxford University Press, New Delhi, 2013).
The Muslim rulers showed keen interest in constructing several irrigation works particularly canals across their boundaries. In the North, Feroz Shah Tughlaq constructed several canals to divert waters of the Sutlej river and Yamuna river in 14th century A.D. for irrigation purposes. Mohammad Bin Tughlaq encouraged and supported the farmers to construct their own wells and rainwater harvesting systems. He advanced loans to the peasants for digging wells in order to extend cultivation. Akbar also took keen interest in the construction of several canals. He rebuilt the abandoned Feroz Shah canal in 16th century. Feroze Shah Tughlaq constructed the Western Yamuna Canal in 1355 A.D. to ensure adequate supply for irrigation in the dry land regions of the present-day states of Haryana and Rajasthan. Emperor Shah Jahan constructed several canals. Two of them are Bari Doab or the Hasli Canal. During Muhammad Shah’s rule in 18th century, the Eastern Yamuna Canal was constructed to provide irrigation facilities in large areas of the present state of Uttar Pradesh.

During medieval times, there existed another set of legal principles governed by the Holy Quran and Sunna. In the Quran, water is considered to be an element of purity as it is used for ablutions (washing before prayers) five times a day and heaven is also described as “gardens beneath which rivers flow”.

Water is treated as a life giving, sustaining and purifying resource under the Islamic Law. The Holy Quran says that “It is the origin of all life on the earth, the substance from which God created man” (Quran 25:54). It says the God tells us that “We made every living thing from water. Water is the primary element that existed even before the heavens and the earth did. It is the god who created the heavens and the earth in six days and his throne was upon water” (Quran 11:7).

It is apparent from several verses of the Quran that water is of prime importance in Islamic cosmogony and beliefs. The word ‘Ma’ a synonymous for water appears more than sixty times in the Quran. Many other words connected to the semantics of water and hydrology, such as rivers, sea, fountains, springs, rain, hail, clouds and winds are also frequently used in the Quran.

Depending upon the quality there are mainly three type of water in Islamic systems. These are aabe-tahoor (water which purifies the things), aabe-tahir (pure water) and

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75 Ibid.
76 Ibid.
79 Ibid.
ghairtahoor (impure or dirty water). The Islamic principles basically moral in nature, recognise the resource as a common property to all. They declare free access and use of water as a birth right to everyone.

The Prophet Muhammed preached his followers to use water wisely. He advised not to waste water at any cost and even in situations where it is plentiful or is used for holy purposes. Prophet Muhammad’s prohibition to his followers to waste water are among the important ‘hadiths’ (statement by the Prophet Muhammed) related to water. He says that ‘Muslims have common share in three things namely grass, water and fire’. Prophet Muhammad also decreed that no more than an ankle depth of water could be taken for irrigation. One ankle depth of water was to be enough for one season. According to the hadith of Muslim, Muhammad prohibited urination into stagnant water. Several penalties were annexed by Muslim scholars in case of the misuse of water, contamination or defilement of fresh water.

Some other teaching relating to water is found in the Sunnah (declaration or actions undertaken or permitted by the Prophet treated as compulsory guides). A very famous ‘Hadith’ that “Men are co-owners in three things: water, fire and pastures”. Some Hadiths are associated to the priority over water or whether it can be sold or if it should be regarded as public good. Few statements even connected to the quantity of water to be used for drinking or irrigation. The excess use of water even when it is available in abundance is prohibited under certain teachings by the Prophet. Few prohibit to defecate or urinate into or near the water sources so as to control pollution and spreading of any diseases.

The basis of notion of Harim is that the human activities are forbidden around a water source to avoid defilement of any water body. There are certain fundamental rules in Shariah that have to be obeyed while consuming or managing water. It says that every human being has a right to drink (shafa) and quench his thirst to assure his survival. Thus, mankind has priority in the access to water while this right is sequentially rendered to animals. There also exists a right of irrigation (Shirb) that allows people to water their crops, but domestic use has been given priority over other uses such as agriculture or industrial use. It is provided under these norms that water belongs to the community and no one is permitted to own it unless

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80 Chattarpati Singh(ed.), Water Law in India 294 (Indian Law Institute, New Delhi, 1992).
81 Ibid.
83 Supra note 80.
84 Ibid.
85 Ibid.
86 Ibid.
they have provided labour or made effort to carry it through recipients or to allocate it.\textsuperscript{87} Islamic law principles include that “Water is a gift of God, that no individual or ruler can own water, and that everyone should have access to water”.\textsuperscript{88}

These principles include a right of thirst, which gives humans and animals the right to quench their thirst from any available water source.\textsuperscript{89} Offering water to thirsty has always been considered as a pious duty of everyone and is regarded as a moral act.

Islamic rulers ruled over northern India from 10th century onwards. Afterwards, the Mughals came to power in the 16th century and remained in power until European colonialists retained power. This implies that Islamic rulers were probably governed by these principles.\textsuperscript{90}

Two main principles related to water in Islam are ‘minimisation of waste’ and ‘conservation of water’. The Quran tells humanity that water is a precious resource and humans should care for it and limit waste: “O Children of Adam... Eat and drink: But waste not by excess, for God loves not the wasters.” Moreover, there is evidence which says that the Prophet spoke of not wasting water even when it was ample and used just 2/3 of a litre of water to perform ablution: “Do not waste water even if performing ablution on the bank of a fast-flowing, large river.”\textsuperscript{91}

Quran speaks about water or its use without, conferring it a clear legal character or sanctions for misdeeds. The importance of water as the source of life and life-giving resource has been enunciated under Quran. It is said that “water fashioned every living thing.” The Quran says that “He who withholds water in order to deny the use of pasture, God withholds from him His mercy on the Day of Resurrection, Excess in the use of water is forbidden, even if you have the resources of a whole river, The surplus of a well must not be withheld.”\textsuperscript{92}

During the Mughal period, in the Upper Gangetic plains wells provided the chief source of irrigation. Abul Fazl’s ‘Ain-i-Akbari’ makes mention of the fact that, “most of the

\textsuperscript{87} Ibid.
\textsuperscript{88} Supra note 67.
\textsuperscript{89} N. I. Faruqi, A. K. Biswas, et. al., \textit{Water Management in Islam} 31 (United Nations University Press, Tokyo, 2001)
\textsuperscript{90} Ibid.
province of Lahore is cultivated with the help of well-irrigation.” This is repeated later by Sujan Singh, a historian who himself belonged to that province.93

The impact of water regulation under Muslim rule in India has not been convincingly established. Perhaps, comparatively high availability of water in India may also be a factor for the relative lack of specific attention towards water regulation during this era. Thus making the historians to, rightly conclude that Mughals preferred gardens to canals and their officers tombs to wells.94 Literature reveals that there was relatively less attention of rulers towards water management during medieval period.

4.3. Law Relating to Water and its Management in Colonial Period

The historical evolution of law relating to water and its management in India from the colonial period is well documented. British rule in India transformed natural resource management in the country. Local knowledge and management institutions for water management existed prior to the beginning of British rule. While the East India Company made little efforts to intervene in the water systems of India, the beginning of the British rule in India saw extensive and organized interventions. The basic objective of British approach to water management had been to enhance the productivity of land by increased provisions of water for irrigation in regions with less rainfall or located away from rivers.95

The onset of British Colonial rule in the middle of eighteenth century brought major structural changes in land and in consequence, water management. When the East India Company took over the administration of provinces, in this period, their immediate focus was on increasing land revenue.96 It is in general context of the land revenue administration of the government, that the control, development and management of irrigation, initially by East India Company and after 1858 by the British Government need to be viewed. Colonial water legislation was characterised by its unmistakeable intent to generate more revenue.97 The core objective of law was clearly maximisation of revenue and efficiency. The British colonial rule had slightest concern for equity. The water resources which are not owned by anyone belonged to the state.98 The most important aspect of the governance of water resources and

94 M.P. Jain., Outlines of Indian Legal History 6(Tripathi, Bombay, 1981).
95 Jayanta Bandyopadhyay, Water, Ecosystems and Society 8 (Sage Publications India Pvt. Ltd., New Delhi, 2009).
96 M.S. Vani, Role of Panchayat Institutions in Irrigation Management: Law and Policy 31 (The Indian Law Institute, New Delhi, 1992).
98 Ibid.
the relative roles of the state and public in it is that of rights to water, from which flow powers of management.\textsuperscript{99}

East India Company and thereafter the British rule introduced new legislative thinking in India. The Colonial rules recognised administration, management and regulation of water resources in the country. Colonisation brought three chief impacts namely “a shift in perception of water from a resource gathering and food production economy into a commodity-oriented economy; a change in long-standing social relations and customs as local social relations became less important and social cohesion declined; and the development of the market and the importance given to wealth”.\textsuperscript{100}

In 1793, the system of permanent settlement was introduced under the British rule which brought a change in the nexus between government and land resources. The Britishers introduced the concept of private and individual ownership of resources. The land without an individual owner was appropriated by the State. A similar approach was adopted as regards to water reservoirs.

The first major development in water resource management came through the Bengal Regulation VI of 1819, which empowered the government to appropriate private rights of ferry through the establishment of public ferry. This marked the radical shift, as it introduced the idea of eminent domain and sought to change earlier practices, which treated water resources as common property for all.\textsuperscript{101}

\textbf{4.3.1. State Ownership over Water}

The British rule in the nineteenth century extended the principle of eminent domain over water resources. This was done by a legislative declaration of state control over water sources through the enactment of Northern India Canal and Drainage Act, 1873. The colonial government’s policy concerning water resources echoes deep concern to assume ownership and maximum control to exploit the resource for maximum profits.\textsuperscript{102} There are two main aspects of British colonial water law. First, introduction of common law principles to regulate control over water and related rights and second is emphasising the power of land owners to access water. For surface water, riparian rights permit a landowner a right to utilise a reasonable share of the flow of a water course and for groundwater the landowner has


\textsuperscript{100} M Gadgil and R Guha, \textit{The Use and Abuse of Nature} 116 (Oxford University Press, New Delhi, 1992).

\textsuperscript{101} Phillippe Cullet, Alix Gowlland Gualtieri et.al., \textit{Water Law for Twenty First Century: National and International Aspects of Water Law Reform in India} 126 (Routledge, London, 2010).

\textsuperscript{102} Supra note 100 at 177.
unlimited right to draw water beneath his land.\textsuperscript{103} Some statutes also hint at the recognition of the community rights. ‘The India Easement Act, 1882’ recognises certain customary rights over the use of water. Colonial rule redefined property relationship. In place of overlapping systems of access to natural resources, the State attempted to claim absolute ownership of all resources whether of land, minerals or forests for itself.\textsuperscript{104} Water was subject to taxation at all levels, with water rates being an integral part of land tax systems. There were well taxes, sub soil water taxes, canal charges and so on.

Statutory water law in pre independence or colonial period includes a number of legislations in various areas. These include laws on canal and drainage, irrigation, embankments, drinking water supply, water conservation, river water pollution, fisheries, ferries etc.

\subsection*{4.3.2. Canal and Drainage}

The precursor to ‘The Northern India Canal and Drainage Act, 1873’ was a draft bill prepared by the Punjab government in September 1867, which sought to declare that the entire property in the natural water supply and the water works was vested in the government, excepting in the cases where long usage had established a private property. It asserted the general right of the state to carry out works for utilising all waters. It also imposed the onus of obtaining the previous sanction of the government on all private persons who might wish to carry out such works themselves. In response to the Punjab Bill, the Government of India decided to draft a new law altogether as there was difficulty in many provinces to extend irrigation because there was no law to exert the powers of the government to buy up private water rights in certain areas. A need was felt to restrict private water rights in government canals. This Act was passed with the intent that the property rights in water resources like lakes, rivers and streams of British India were vested in the State, subject in certain cases to rights acquired by usage or grant or community rights.

The North India Canal and Drainage Act, 1873 was modified and re-enacted version of the Punjab Canal and Drainage Act, 1871 with wider application and detailed provisions for construction, maintenance of canals and regulation of navigation and water uses. Two main colonial enactments on the subject are The Bengal Canals Act, 1864 and The North India Canal and Drainage Act, 1873.

\begin{thebibliography}{99}
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The North India Canal and Drainage Act, 1873(Act VIII of 1873) sets down in wide and specific terms the State’s role in the regulation of water resources. Successive statutes on water resources were based on the rules laid down under this statute. One of the main criticism of this Act which remained for a long term was the vesting of all control in the state to utilise and control of all water resources such as rivers, streams and all lakes for public interest.105

The preamble sets out clearly the need for interfering with private rights (of abstraction of water from streams and rivers and construction of canals to carry water to fields) which had been the prevalent practice across the country before British rule. The types of powers that were vested in the State through this legislation included the following: “sovereign power of state over all water resources, power to levy rent, tolls and dues for irrigation and drainage, power to redistribute the water supply of districts, power to notify water sources and prohibit construction of works on them by any person without official permission. Further, the powers include power of planning and implementation of irrigation works, powers of entry upon land for planning, construction, maintenance, repair, inspection and supervision of canals and other systems, whether government or private, regulation of distribution of water in government as well as private canals and other systems., powers to enhance rent of land, determine compensation, power to recover cost and rates from beneficiaries, power to enforce payment of rent, power to define offences and sanctions, power to effect closure of canals and impose sanctions for offences committed or foe disobedience to orders. Certain other powers of canal officers were power to settle disputes, recording of rights, power to take over management of private canals, power to determine amount and character of water rates, power to regulate the construction and use of water mills, power to override recorded rights in scheduled canals- restrict, suspend or extinguish rights”.106 There was wide range of powers conferred on the state by this enactment. State’s control over water, and Common Law principles to regulate certain rights and groundwater, are the two main strands of the British rule related to water in India.107

4.3.3. Irrigation

“Irrigation law is one of the oldest and most developed areas of water law”.108 “The history of the development of water resources in British India was an irrigation history and

106 Available at punjabrevenue.nic.in/canal-drain-act1.htm (Visited on 24 November 2015).
107 Supra note 104.
108 Phillipe Culet and Sujith Koonan, Water Law in India 199 (Oxford University Press, New Delhi , 2011).
that history has established state monopoly over water resources”.

The rules prescribed by the Board of Revenue of East India Company for Collectors of Districts related to the repair of tanks, water courses and other sources of irrigation constituted the first regulation on the subject.

Under East India Company, various rules and regulations emphasized the management of works (repair, construction etc.) more than the explicit declaration of government’s authority. Government’s right of control was assumed by the act of territorial acquisitions. The rules were generally to prescribe the forms of estimates and of accounts and of auditing of actual repairs of tanks, water courses and other sources of irrigation. The rules prescribed forms of estimates required for new works or for repair of old works; the daily wages to be paid to carpenters, brick layers smiths, coolies and tank diggers, the rates of materials to be used etc. The Collectors were permitted to apply to Superintendent, tank repairs, for estimate forming and superintendence. The Inspector of estimates of tank repairs was also required to assist the Collectors. Legislative declaration of government control over water resources evolved in a process in the second half of the nineteenth century in response to problems associated with administration and management of water resources.

Bengal Irrigation Act 1876 and Bombay Irrigation Act, 1879 are two major Codes of that time. The Bengal Act VIII of 1867 and Act VI of 1869 earlier operated for irrigation works in irrigation and to facilitate the recovery of water rates.

In Secretary of State v. Nageswara Iyer, the Madras High Court laid down the doctrine that “right of government to control the supply and distribution of irrigation waters is not merely a proprietary right but a sovereign one.” The powers to regulate uses of water were vested in the company.

The Bengal Irrigation Act, 1876 broadly dealt with construction, maintenance and protection of public water works, like canals, water courses and drainage, government use of water from natural sources to such works. For public purposes, supply and regulation of waters by users and their rights, determination and collection of water rates, acquisition of compulsory labours for such works in energy and penal provisions for violation of certain statutory rules.

Almost similar provisions have been incorporated in Bombay Irrigation Act, 1879 but with provision of summary decisions in certain cases. There are express provisions, but only in Bengal Act, for compensation in cases of damage due to loss of drinking water supply. The

109 Supra note 97.
111 Secretary of State v. Nageswara Iyer, AIR 1936 Mad 923.
government was under obligation in such cases to provide, within a convenient distance, an adequate supply of goods drinking water.

In this way all rights and privileges to the native people for access and use of natural waters were available in the customary system and once the state proclaimed undertaking such rights in discretion of state and its officers.\textsuperscript{112}

The notion of state’s right of eminent domain and the absolute ownership of all rivers took root. It provided the legal basis for the government to assume the exclusive power and responsibility for developing surface water resources, as well as to improve restrictions on individuals, communities and the private sector for accessing using water flowing in rivers and streams without the explicit approval of the government. Pre-existing small local works were largely left to be managed by individuals and local institutions in the traditional manner. The power to construct and manage new projects of this kind was also taken over by the state.\textsuperscript{113}

Till 1921, the Government of India had the authority over all public works including the irrigation works, hydroelectric power generation and all development activities related to water resource in the provinces. The power of superintendence, issuing direction and control on all activities whether technical or administrative of the Provincial Public Works Department vests with the Government of India. But the real implementation and administration of water works was done by the Provincial Governments.\textsuperscript{114}

The firm control exercised by the Government of India came to an end after the introduction of first instalment of constitutional reforms in 1921. Irrigation became a provincial but reserved subject and the supervision of irrigation works was reserved to the Governor in Council. According to then existing provisions, it was made necessary for provincial Government to get a prior approval of the Secretary of State in Council through the Government of India. Such approval was required before sanctioning any irrigation project costing more than 5 million rupees or if it substantially affects the interests of more than one province.\textsuperscript{115}

The Governor Generals Council enacted the Northern India Canal and Drainage Act with the aim to regulate the construction and working of irrigation and drainage works in 1873.\textsuperscript{116}This Act was made valid to Punjab, North-West Provinces, Oudh, and the Central

\textsuperscript{112} Supra note 81 at 300.

\textsuperscript{113} Supra note 77 at 23-24.


\textsuperscript{115} \textit{Ibid}.

\textsuperscript{116} Act No. VIII of 1873.
Province. ‘The Northern India Canal and Drainage Act, 1873’ deals with the matters of irrigation, drainage and navigation in northern India.\(^{117}\) A similar Act was passed in 1879 and was made applicable to the Bombay Presidency (Bombay VII of 1879). There did not exist any comprehensive irrigation Act in Madras Presidency and irrigation works were regulated by fragmentary legislations enacted and amended from time to time. Consequentially, In the course of time, other provinces passed statutes applicable to them and few princely states had passed their separate legislations usually based on the Act VIII of 1873.

It is pertinent here to mention that this Act (the Northern India Canal and Drainage Act, 1873) did not directly assert the state’s ownership over surface waters, but it recognized the power of the government to use and control the water of sources like rivers, lakes and streams flowing in natural channels for public purposes. This Act was criticised on the ground that it asserted the control of the state to use the water of all sources for public purposes. However, this Act is milestone legislation as it asserted the right of the government to control water use for the interest of larger public.\(^{118}\)

Historically, the irrigation laws were the most developed part of the water law in terms of statutory development. This was due to the fact that the British government focused on large irrigation works to foster the productivity and consequently the revenue. Therefore, many of the fundamental principles of water law applicable today in the nation are derived from irrigation statutes.

### 4.3.4. Easement

In India various species of servitudes and easements were known both in the Hindu and Muhammadan law even before the passing of the limitation Act and the Easement Act. The earlier English Law as applied to India distinguished between servitudes of two types: easements and ‘profits of a pendre’. Easement includes, inter alia, right to have access and use of water resources. However, these and other rights in water are subject to saving clause under section 2(a) of the Act, which vests exclusive powers in the government(state) to regulate uses of water.\(^{119}\)

The Easement Act, 1882 legalises customary rights of the people and provides two rules for recognition:

1. By long use or prescription\(^{120}\)
2. By local custom\(^{121}\)

\(^{117}\) Preamble, The Northern India Canal and Drainage Act, 1873.
\(^{118}\) Phillipe Cullet, A. Gowlland et.al.(eds), Water Governance in Motion 32(Cambridge University Press India Pvt. Ltd., New Delhi, 2010).
\(^{119}\) Section 2, Indian Easement Act, 1882.
\(^{120}\) Id., Section 15.
\(^{121}\) Id., Section 18.
Section 2(b) of the Act “recognizes customary rights in or over immovable property which any person, the public or the government may possess, irrespective of other immovable property”. Thus, a right may exist by custom in which some people are entitled to take water from another’s land. This includes rights for water issuing from a well, spring spout or flowing water in government or public places.

As regards the domestic and industrial use of water, Section 28 of the Easement Act, 1882 gives a restricted right to pollute both surface and groundwater. This is a proprietary or usufructuary right. It is to facilitate drainage, washing and denial of unwanted organic and inorganic matters for industrial purpose. The idea was to balance the necessary freedom which this right gives against appropriate restrictions on the freedom so that people could not do mischief, create nuisance or be negligent.

The laws that were enacted after the passing of Easement Act slowly shifted the focus on individual water rights from natural to proprietary or usufruct rights. The necessary connection between property right in land and proprietary right in water finds expression in the Transfer of Property Act, 1882 which provides that easement cannot be transferred apart from dominant heritage.\textsuperscript{122} The dominant heritage which creates water rights is limited to rights in groundwater and certain riparian rights in natural flowing water\textsuperscript{123}. Where water has been provided by the government through canals for irrigation purposes, no such rights accrue to the land owner.

\textbf{4.3.5. Groundwater}

Generally, groundwater is conceived as a part of land in legal parlance. Therefore, its extraction by landowners where it existed is considered to be an unrestricted right. This rule was originated in Britain in the 19\textsuperscript{th} century. It has been duly recognised by the Indian legal system through statutes\textsuperscript{124} and judicial decisions.\textsuperscript{125}

The Indian Easement Act, 1882 also followed the common law principle of absolute proprietorship regarding groundwater. This Act recognised the right of every owner of the land to collect and use all water within his own territory beneath the land which does not pass in a definite channel.\textsuperscript{126} It is believed to be inadequate and obsolete for addressing current

\textsuperscript{122} Section 6(c), Transfer of Property Act, 1882.


\textsuperscript{124} The Indian Easement Act, 1882.


\textsuperscript{126} Section 7(b), Illustration (g) Indian Easement Act, 1882 provides as under:
issues and it is likely to be rejected in view of present legal scenario. The valid reason may be that, the system of land-based groundwater rights were created at a time when groundwater was not a chief source of freshwater and moreover the technology was not that much developed to enable withdrawal of groundwater unsustainably. As such historically, groundwater was not a serious concern in the spectre of water management.127

4.3.6. Penal Provisions

Besides easement rights, customary rights, there are penal provisions which make certain acts relating to water punishable offences under Indian Penal Code, 1860. Relevant sections are 268, 277, 290,425, 430, 431,432 and 441 of IPC providing for public nuisance, fouling of water as public nuisance not otherwise provided in the Act, mischief by injury to irrigation works or by wrongfully diverting water, and mischief by injury to river or other water channels respectively. These provisions may be said to be in general for protection, conservation and preservation of water resources and are discussed in detail later in the chapter.

4.3.7. Embankments

Till about 1940s, the colonial government nearly neglected the traditional role of the previous governments in maintaining the embankments, on which the stability of region’s agriculture considerably depended.128 The pre-colonial system of maintaining the embankments had three major features. Local zamindars arranged for their maintenance. Peasants offered free labour for mending the major breaches in the embankments.129

Bengal Embankment Act, 1855 was the earliest Act passed by the colonial government. Thereafter it was amended in 1866, 1873 and 1882. It was passed for the purpose of amending the law concerning embankments and water courses. The term embankment has been defined in the Act under section 3 of the Bengal Embankment Act 1855.130 The embankments that are under the management of government servants are known as public embankments.

(g) The right of every owner of land to collect and dispose within his own limits of all water under the land which does not pass in a defined channel and all water on its surface which does not pass in a defined channel.

127 Supra note 126.
129 Ibid.
130 Section 2, The Bengal Embankment Act, 1855 provides as under: "Embarkment" defined-The word "embarkment" in this Act means an embarkment for the purpose of excluding or retaining water; and every embarkment which is now kept up, or may hereafter be kept up, by the officers of the Crown at the expense either of the Crown or of any private person, is a public embarkment within the meaning hereof.
This Act was applicable to the states of West Bengal and Bihar and also to some parts of State of Orissa\textsuperscript{131} which was under the governance of the Lieutenant Governor who administered the Bengal state on June 21, 1882. The interpretation clause of the Act affirms that “collector” includes the revenue officer who is under the general charge of the district or some part thereof, or who is particularly appointed by the concerned government under the West Bengal state to discharge the duties of the Collector.

Under the terms of enactment, public embankments as well as entire water course used by public and the land, ground and terrain, pathway etc. that are under or near the embankment and managed by concerned governments of the state shall be administered and held by such State government\textsuperscript{132}.

Besides the lands which are taken for the maintenance or to carry out any activities on public embankments shall be acquired by the government of the concerned State without giving any damage and shall be disposed according to the decision of such government. The Collector is entrusted with the duty to determine and demarcate the land as provided under the enactment. The Collector is also given some power under the Act which includes taking the general administration of the embankment, carry out the maintenance works of the embankment, exclusion of any embankment... or any barrier caused to the embankment, altering the lines, any improvement to drainage, construction of roadways as well as water courses.\textsuperscript{133} The collector was not under obligation to pay any person, nor did anyone have a right to civil suit for recovery of money, whose lands were acquired, rather persons whose lands benefited from such schemes were bound to pay.

The Act of 1882 gave wider powers to the concerned statutory authorities, in addition to the task of management of embankments and water courses as stated above. A person desiring to use waters from such facilities is to apply to the Collector, who may allow activities in that respect only when there is an advantage of doing so.\textsuperscript{134} Certain acts interfering with the system of embankment are punishable offence.\textsuperscript{135}

\begin{thebibliography}{9}
\bibitem{131} The word “state” was substituted by the word “provinces” by para 4(1) of Adaptation of Laws Order 1950.
\bibitem{133} \textit{Ibid.}
\bibitem{134} \textit{Id.}, Section 18.
\bibitem{135} \textit{Id.}, Section 76.
\end{thebibliography}
4.3.8. River Conservancy

One of the earliest laws on the conservation of the rivers in India is the Madras River Conservancy Act, 1884.\(^{136}\) This Act provides for the conservancy of rivers in the respective regions. The Act was renamed as The Tamilnadu Rivers Conservancy Act, 1884. Under the Act, the state from time to time, bring notifications, stating that conservancy of a river is required. After that, on survey, the state is empowered to prohibit cultivation on a land in the river bed. All these functions under the Act are to be discharged by the Conservator.\(^{137}\)

Madras River Conservancy Act, 1884 provides powers to a conservator of rivers to survey\(^{138}\) and prohibit certain activities like cultivation. The Conservator of Rivers may, with the previous sanction of the Collector of the district, prohibit the cultivation. He may do so by an order in writing require any owner or occupier of land usually cultivated, or cultivated with permission made section 11\(^{139}\), within such river-bed, to abstain from cultivating such land, where it appears that such cultivation will tend to obstruct or divert the course of the river and it shall be the duty of such owner or occupier to act in obedience to such order.\(^{140}\) The purpose of the Act was to protect and conserve rivers. The purpose of the Act seemed to regulate the use of land within the river banks rather than river itself. There are provisions containing penalties for violation of the rules.

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\(^{136}\) These words were substituted for the word “Madras” by the Tamil Nadu Adaptation of Laws Order, 1969, as amended by the Tamilnadu Adaptation of Laws (Second Amendment) Order, 1069, which came into force on the 14th January 1969.

\(^{137}\) Section 6, Madras River Conservancy Act, 1884 provides as under:
For the purpose of carrying out this Act in Power to i respect of any river, the [State Government] may atom appoint as many officers as may be deemed necessary, of Rivers, to be styled Conservators of Rivers, end may from time to time define, by order to be notified in the Gazettes of the districts in which any part of such river is situated, the limits of their several jurisdictions.

\(^{138}\) Id., Section 3, provides as under:
The State Government(earlier province) at any time direct that a survey be made of such river for the purpose of determining the limits within which this Act is to be applied, and that proper charts and registers be prepared setting forth the channel and all boundaries and land-marks and all other matters necessary for the purpose of ascertaining such limits.

\(^{139}\) Id., Section 11, provides:
After such surveys have been completed Prohibition and approved and the notification as provided by of new cultivation on this Act made by the state, land in bed within the limits of a river-bed as defined in section 7, which has not been cultivated for two years previous to the date on which this Act is applied to the river, shall not, without the previous permission of the Conservator of Rivers in writing, be cultivated, and it shall not be lawful without such permission to cultivate within the limits of a river-bed any new formation of land. Whoever commences or carries on, or attempts to carry on, any cultivation in contravention of this section and of a notice from the Conservator to desist shall be punishable with fine which may extend to five hundred rupees and, in default of payment of fine, to simple imprisonment not exceeding three months.
Explanation.-'Cultivation' shall, for the purposes of this Act, include the growing of plants which require the ground to be ploughed once a year or at shorter intervals and which are ordinarily removed at the end of the season but shall exclude 'plantation' as explained in section 13.

\(^{140}\) Id., Section 12.
4.3.9. Ferries

Ferries which form part of water based resource laws also dealt with under codified laws though less extensively. Ferry has been defined as “bridge of boats, pontoons or rafts, a swing-bridge, a flying bridge and a temporary bridge, and the approaches to, landing places of a ferry”.  

A large number of ferry legislations were enacted which vest control over ferries in the government. These laws also enable the government to collect tolls, define the limits of ferries and prevent the unauthorised ferrying. Bengal Ferries Act, 1866 and the Bombay Inland Vessel Act, 1868 were the earliest codes to ferries. Both followed the lines of Bengal Regulation VI of 1819 . The Bombay Inland Vessels Act, 1868 provides that “no person shall ply any vessel (which includes anything made for conveyance of human beings, animals or property) on any river, stream, tank, lake or other natural collection of water affording passage to vessel, whether on hire or not, except under a license from the government”.  

However, the most important Ferry code was the Northern India Ferries Act, 1878. This Ferry legislation of the time a complete model for subsequent legislations of the time in different provinces. The Act provides that the state government has the power to establish new public ferries, to declare a ferry as public ferry, define the limits, change the course and discontinue any public ferry which deems unnecessary. The Act prohibits the establishment of new ferry by any private person within a distance of two miles from the limits of public ferry. It also provides regarding liability to pay tolls on all persons crossing any river by a public ferry. With regard to private ferries the Act enables the state government to make rules for the maintenance of order and for the safety of passengers and property. The Act also provides regarding penalties and criminal procedure in cases of breach of rules made under the different sections of the statute. The subsequent ferry codes in other provinces became by and large, extension of the said Act.

4.3.10. Fisheries

Earlier, fisheries were governed by local customs. But after codification of laws the concern for fisheries came into prominence. The need for the law on fisheries was emphasised as long aback as in 1873 when the attention of then government of India was

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141 Section 3, The Northern India Ferries Act, 1878.
142 Section 14, The Bombay Inland Vessel Act.
143 Chhatarpal Singh, Water Law in India 302 (Indian Law Institute, New Delhi, 1992).
144 Section 4, The Northern India Ferries Act, 1878.
145 Id., Section 13.
146 Id., Section 14.
147 Section 19, The Northern India Ferries Act, 1878.
148 Supra note 144.
drawn towards prevalent extensive slaughter of fish, fry and fingerlings and the urgency to adopt and implement effective measures to preserve the fishery resources. Consequently, the Indian Fisheries Act, 1897 was passed to include all private fisheries all over the nation. The Act defines right to fishery in private waters as “being exclusive property of an individual or in which the person has for the time being an exclusive right of fishery as an owner, lessee or in any other capacity”. It also declares that just because a person may have by custom a right of fishery therein, water shall not stop to be private water. Further, This Act prohibited certain acts which causes pollution in water resources. Use of destructive methods of fishing such as explosions or use of dynamites in inland, coastal waters and marine league was forbidden. Poisoning of water with toxic materials was also banned.

4.4 Constitutional Framework

The Constitution of India provides a number of provisions relating to water and its management in India. It specifies the legislative jurisdiction of the Union and State Governments including local governing bodies concerning water. Under the federal set up of the country, the legislative competence for water and water based resources are divided between the Union and the states, of which major part lies with the latter. In fact the constitution makes water a state subject in express terms while only certain aspects are dealt with by the Union. Under the scheme of Indian constitution, water is primarily a state subject and the Union comes only in case of inter-state river waters. All these arrangements can be seen in three lists of the Seventh Schedule of the constitution. The general policies and principles for the management of natural resources including water resources are incorporated in its Part III and IV. These guarantee fundamental rights to free access and use of water to citizens, the right to life and impose duties on the state for equitable distribution of the resources ensuring ecological and environmental improvements and preservation. To this effect the constitution imposes fundamental duties on citizens too for the preservation and improvement of natural environment.

The Constitution of India recognises the crucial principle of equal access to water. Article 15(2) of the constitution explicitly states that “no citizen shall on grounds only of religion, race, caste, sex, place of birth or any of them be subject to any disability, liability, restriction or condition with regard to the use of wells, tanks, bathing ghats, etc”. Sub
clause b of clause 2 of Article 15 is with regard to “the use of wells, bathing ghats, roads and places of public resort maintained wholly or partly under the funds provided by the state or dedicated to the use of general public”. The expression “maintained wholly or partly out of state funds or dedicated to the use of general public” qualifies each of the places mentioned in sub clause (b). Accordingly, a privately owned well or tank does not come within the meaning of this clause.

Article 21 of the Constitution of India provides the right to life which has been widely interpreted by the Supreme Court of India to include all facets of life. In India, the Constitution fails to explicitly recognise human right to water. Yet, the courts have time and again asserted its existence in many cases. The right is, thus, deep rooted in the Constitution of India. While the Indian judiciary has clearly confirmed the existence of the right but at present real problems regarding the human right to water in India its definite content and active realisation. The courts in India have not elaborated the actual components of this right. This may be due to the absence of legal framework in this regard.

The right of access to water and the right to pollution free water have also been considered as part of right to life under Article 21 of the Constitution of India. This is due to profuse and advanced explanation or interpretation of the fundamental right to life under Article 21 by the Supreme court and several high courts in a series of cases before them.

The Directive Principles of State Policy recognises the principle of “equal access to material resources of the community”. Article 39(b) orders that “the state shall, in particular, direct its policy towards securing that the ownership and control of the material resources of the community are so distributed as best to sub serve the common good.” The statement “material resources of the community” in clause (b) includes all things which are capable of producing wealth for the community.

Article 47 of the Constitution of India assigns a responsibility on the State “to raise the standard of nutrition and living and to improve public health”. Article 51-A (g) imposes a fundamental duty on every citizen of India “to protect and improve the natural environment including forests, lakes, rivers, wildlife and to have compassion for living creatures”.

The legislative powers are distributed between the Parliament of India and the Legislative Assemblies of different states. The separation of the powers between the

155 Id., Article 21.
159 Assam Sillimanite Ltd. v Union of India, AIR 1992 SC 938.
Parliament and the state legislative assemblies has been significantly influenced by a decision taken before independence to devolve water related competencies to the States. The Government of India Act, 1935 specifically gave provinces the powers concerning canals, irrigation, water supply, drainage and embankments, water storage and hydro power.\textsuperscript{159} The disputes between princely states or provinces were subject to the jurisdiction of the Governor General, who was empowered to appoint a commission to examine and investigate a conflict if he deems it necessary and appropriate.\textsuperscript{160}

The Constitution of India took the scheme of 1935 Act and conferred the states an important role in water management. Water was, thus, incorporated in the state list recognising the fact that concerns of different states differ as per the diverse conditions exist there. However, this does not mean that the Central Government has no control over water and related matters.

According to Article 245 of the Constitution, “Parliament makes laws for the whole or any part of the country and a legislature of the state for the whole or any part of the territory of the State”. The subject matter of laws on which Parliament has exclusive powers to make laws are given under List I (Union List) of the Seventh Schedule. Entry 56 in the Union List is related to “regulation and development of interstate rivers and river valleys to the extent to which such regulation and development under the control of Union is stated by the Parliament by law to be of public interest”. In exercise of this power, the Parliament passed the River Boards Act, 1956. However, this Act has remained mostly out of use.\textsuperscript{161} It provides “a framework to set river boards by the Union Government to advise the state governments relating to the regulation or development of an inter-state river or river valley.”\textsuperscript{162} The state governments can be advised by the River Boards on various issues including, control and best use of water resources, preservation, the promotion and working of irrigational schemes, drainage or water supply or the promotion and operation of schemes for flood control.\textsuperscript{163} It is pertinent to note here that this Act was never used practically.

Article 262 of the Constitution provides for the constitution of tribunal for resolving the disputes between states in relation to distribution of river waters. Accordingly, the Parliament has passed Inter State Water Disputes Act, 1956. This Act provides for the adjudication of inter-state river disputes among states where the disputes have not been

\textsuperscript{159} Phillipe Cullet and Sujith Koonan, \textit{Water Law in India} 2 (Oxford University Press, New Delhi, 2011).
\textsuperscript{160} Sections 130 to 134, Government of India Act, 1935.
\textsuperscript{161} Ramaswamy R Iyer “Towards a Re-ordering of Water Law in India”, 1 Indian Juridical Review 18 (2004).
\textsuperscript{162} River Boards Act, 1956 available at http://www.ielrc.org/content/e5602.pdf (Visited on 28 December 2015).
\textsuperscript{163} \textit{Id.}, Section 13.
solved through negotiations. It provides for the setting up of the tribunals to adjudicate such conflicts and such tribunals have already been established in several cases.\(^{164}\)

Article 252 of the Constitution allows the Parliament to adopt a legislation in any field in which states are competent to legislate, provided that the states have given their assent. This was the basis for the adoption of “Water (Prevention and Control of Pollution) Act, 1974”. This Act aims to prevent water pollution, maintain and restore the water resources. It also empowers the water boards to lay down standards and regulations for the control and prevention of pollution.

The relevant provisions of water under the Constitution relating to legislative competency are Entry 17 in the State List, Entry 56 in the Union List and Article 262. The above mentioned are specifically concerned with water. Entry 17 in the State List includes the provisions of “irrigation and canals, water supplies, drainage and embankments, water storage and hydro-power”. It can be seen, at once that it is not an unqualified entry. Water is indeed in the State List but this is subject to the provisions of Entry 56 in the Union List, which provides “Regulation and development of interstate rivers and river valleys to the extent to which such regulation and development under the control of Union are declared by Parliament by law to be expedient in the interest of the public”.

Article 262 provides regarding “adjudication of disputes relating to waters of inter-state rivers or river valleys (1) Parliament may by law provide for the adjudication of any dispute or complaint with respect to the use, distribution or control of the waters of, or in, any inter-state river or river valley (2) Notwithstanding anything in this Constitution, Parliament may by law provide that neither the Supreme Court nor any other court shall exercise jurisdiction in respect of any such dispute or complaint as is referred to in clause (1) Coordination between States.”

The subject matter of water is included in the Union list as well as State List and is not listed in the Concurrent list. The Centre has legislative power to regulate the control and development of interstate rivers and river valleys Water and is strengthened by the use of the provisions of Entry 20\(^{165}\) in the Concurrent List, namely “economic and social planning.” By virtue of this entry, the Centre Government approval is required for inclusion of major and medium irrigation, hydropower, flood control and multipurpose projects in national plan.\(^{166}\)

Local governing bodies at the village and city level constitutes third tier in the constitutional structure created by the 73rd and 74th Amendments, namely; the village

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\(^{164}\) Inter State Water Dispute , 1956 available at http://www.ielrc.org/content/e5601.pdf (Visited on 28 December 2016).


\(^{166}\) Ramaswamy R Iyer , Water Perspectives, Issues, Concerns 22 (Sage Publications, New Delhi, 2003).
panchayats and the city nagarpalikas (municipalities/corporations). The Eleventh and the Twelfth Schedule to the Constitution lay down lists of subjects entrusted to the Panchayats and Nagarpalikas. Similarly municipalities have been given powers over water supply for domestic, industrial and commercial. The lists include, inter alia, drinking water, water management, water shed development and sanitation. In rural areas, Panchayats are now given explicit powers in relation to water and related issues. This includes powers and responsibilities over drinking water supply, minor irrigation, water management and water shed development as well as fisheries. Similarly, in the context of urban areas Municipalities have been given powers, inter alia, over water supply for domestic, industrial and commercial purposes. The crucial changes proposed in the constitutional amendments are, so far, not executed at the local level across the country. Yet, they constitute some of the most significant changes brought to the Constitution because they have the capacity to effectively recast the distribution of power in favour of democratically elected local bodies.

4.5. Post Constitutional Legal Framework

The Constitution at the Apex of all laws is the basis for the legitimacy of all post constitutional legislations. Various statutes concerning water and its management have been passed by Union and States under constitutional powers. Since water is primarily a state subject, the state legislatures have passed a plethora of laws in areas like water supply, drinking purposes, irrigation, groundwater, mining, electricity, fisheries, ferries, rehabilitation and resettlement of displaced persons due to operation of projects for water resource management. The concern of Union with regard to the water resources is mainly in specific areas like interstate water concerns, economic development of environment, territorial waters and inland transport. Moreover in other aspects as drinking water, sanitation, flood management etc. the central Government’s role is advisory, policy making, framing draft laws and schemes for helping and assisting state governments.

4.5.1. The River Boards Act, 1956

“The River Boards Act, 1956”\textsuperscript{168} got assent of the President of India on 12 September 1956. This Act was passed by the Parliament of India with the aim of establishing River Boards for the purpose of providing regulation and development for interstate rivers and river valleys. The Union Government is required to take under its authority and control, the regulation and development of interstate rivers and river valleys to the certain extent as provided under the Act.

\textsuperscript{167} Article 243 G and Eleventh Schedule, Constitution of India, 1950.
\textsuperscript{168} Act No. 49 of 1956.
The Constitution of India confers powers on the Parliament under Article 262 to enact laws for adjudication of disputes or complaints related to the use, distribution etc. of waters of inter-state river or river valley. The Act\textsuperscript{169} provide for the establishment of river board by the central government on the request of state government or otherwise for advising the governments upon the matters concerning the regulation and development of an interstate river or river valley. Separate boards may be established for different interstate rivers or river valleys as per the provisions of this Act.\textsuperscript{170} Every board so constituted shall be a body corporate having perpetual succession.\textsuperscript{171} So far as the constitution of the board is concerned the board shall consist of a chairman and such other members as the central government thinks fit to appoint.\textsuperscript{172} Its jurisdiction should be extended to the boundaries of river or river valley and such areas should be called as the ‘area of operation’ of the board. The River Boards Act provides for powers and functions of the board. Section 13 provides that “subject to the provisions of Section 14, the board is required to perform functions inter alia as advising governments, preparing schemes, prevention of pollution of the water of interstate etc.” The functions of the board are advisory and not adjudicatory. The matters in respect of which the board may be authorised to render advice are as following:

1. “Conservation, control and optimum utilisation of water resources of interstate rivers”.
2. “Promotion and operation of schemes for irrigation, water supply or drainage”.
3. “Promotion and operation of schemes for the development of hydroelectric power”.
4. “Promotion and operation of schemes for flood control”.
5. “Promotion and control of navigation”.
6. “Promotion of afforestation and control of soil erosion”.
7. “Prevention of pollution of the waters of interstate river”.
8. “Such other matter as may be prescribed”.

Other matters include preparing schemes for the purpose of regulating or developing the interstate river or river valley and advising the governments interested to undertake the measures for executing the schemes prepared by the board.\textsuperscript{173}

The Act provides that “in case of any dispute or difference which may arise amongst two or more governments regarding any advice, measures or otherwise it will be referred to

\textsuperscript{169} The River Boards Act, 1956.
\textsuperscript{170} Id., Section 4.
\textsuperscript{171} Ibid.
\textsuperscript{172} Id., Section 5.
\textsuperscript{173} Id., Section 13.
an arbitrator appointed by the Central Government.”174 The Act also makes provisions for the dissolution of the board. Such dissolution can be affected by the Central Government when the board has performed its function under the Act.

As a matter of fact no board has been constituted so far. Two of such enactments on this subject are Betwa River Board Act, 1956 and the Brahmaputra River Boards Act, 1980, but they too have suffered the same fate.175 Different boards have, so far, been constituted under different legislations like Betwa River Board, Tungabhadra Board, Upper Yamuna River Board etc.

i. Betwa River Board

The Betwa River is a tributary of the river Yamuna on which the Rajghat dam project is constructed. It is an interstate project of Uttar Pradesh and Madhya Pradesh. According to an interstate agreement made between the states of Uttar Pradesh and Madhya Pradesh in 1973, ‘Betwa River Board’ was constituted under the ‘Betwa River Board Act, 1976’ to regulate the operation and maintenance of the project.176

ii. Tungabhadra Board

In exercise of the powers vested under sub section 4 section 66 of Andhra Pradesh State Act the President of India constituted the Tungabhadra Board in 1953. It was constituted for accomplishment of Tungabhadra project including its operation and maintenance. The Board regulates water of the dam for irrigation, hydropower generation and other uses.

iii. Upper Yamuna River Board

Upper Yamuna River Board is a subordinate office under the Ministry Of Water Resources, Government of India. A Memorandum of Understanding was signed by the Chief Ministers of Himachal Pradesh, Haryana, Uttar Pradesh, Rajasthan and National Capital Territory of Delhi on 12th may 1984 with regard to distribution of utilisable surface flow of Yamuna up to Okhla among the co-basin states. The Memorandum of Understanding provides for the creation of a board called the Upper Yamuna River Board.

The main function of Upper Yamuna River Board is to regulate the distribution of existing flows amongst the beneficiary states and also monitor the return flows. The board was also assigned functions to monitor, conserve and upgrade the quality of surface and ground water, and monitor hydro-meteorological data for the basin. The other functions

174  *Id.*, Section 22.
175  *Supra* note 144 at 308.
176  Available at wrmin.nic.in/forms/list.aspx?lid=254 (Visited on 21 March 2016).
include overview plans for watershed management, monitor and review the progress of all projects up to and including Okhla barrage.\textsuperscript{177}

iv. Brahmaputra Board

The Government of India set up the ‘Brahmaputra Board’, under the ‘Ministry of Irrigation’ (now renamed as ‘Ministry of Water Resources, River Development and Ganga Rejuvenation’) under the Act of the Parliament called as the ‘Brahmaputra Boards Act, 1980’ (46 of 1980). It was constituted for the planning and for the control of floods and bank erosion in the Brahmaputra valley by adopting effective measures. The Board has jurisdiction over whole of the Brahmaputra and Barak valley spreading in all the states of north eastern region including Sikkim and part of West Bengal falling under Brahmaputra basin.\textsuperscript{178}

4.5.2. Inter State Water Disputes Act, 1956

Inter State Water Disputes Act, 1956\textsuperscript{179} was passed on 28\textsuperscript{th} August 1956 by Indian Parliament to address and resolve the water dispute that would arise in the use, control and distribution of an inter-state river or river valley.\textsuperscript{180}

The Act provides for adjudication of disputes concerning inter-state river waters and river valleys. Such disputes include conflicts arising from the interpretation of inter-state river water sharing agreements and treaties, and disputes over the levy of water rates.\textsuperscript{181} The government of any state can request the central Government under section 3 of the Act to the Tribunal for adjudication. Such request can be made by the State Government if it seems to the it that a water dispute with the government of another state has arisen or is likely to arise by reason of the fact that interests of the state, or of any of the residents of the state, have been, or are likely to be, affected prejudicially in the an interstate river waters or river valley.

The Act lays down the details regarding the following:

1. ‘Constitution of the tribunal’.\textsuperscript{182}
2. ‘Timeframe with in which it has to be constituted’.\textsuperscript{183}
3. ‘Adjudication of water disputes’.\textsuperscript{184}

\textsuperscript{177} Ibid.
\textsuperscript{178} Ibid.
\textsuperscript{179} Act No. 33 of 1956.
\textsuperscript{180} N. Sasidhar, “Inter State Water Disputes Act and its legal provisions” available at www.indiawaterportal.org (Visited on 23 March 2016).
\textsuperscript{181} Id., Section 2 (c).
\textsuperscript{182} Id., Section 4 (1), provides as under: Constitution of Tribunal.

(1) When any request under section 3 is received from any State Government in respect of any water dispute and the Central Government is of opinion that the water dispute cannot be settled by negotiations, the Central Government shall, within a period not exceeding one year from the date of receipt of such request, by notification in the Official Gazette, constitute a Water Disputes Tribunal for the adjudication of the water dispute.

\textsuperscript{183} Ibid
4. ‘Filling of vacancies’.185
5. ‘Publication of decision of the tribunal’186
6. ‘Power to make schemes for implementing the decision of the tribunal’187
7. ‘Prohibition of levy seigniorage, etc.’188
8. ‘Bar of reference of certain disputes to tribunal’189
9. ‘Powers of Tribunal’190
10. ‘Maintenance of data Bank and Information’191
11. ‘Bar of jurisdiction of Supreme Court and other courts’192
12. ‘Dissolution of Tribunal’193 and ‘power to make rules’194

Under the ‘Inter-State Water Disputes Act, 1956’ an aggrieved State may ask the Central Government to refer a dispute to a water dispute tribunal. Such tribunal is appointed by the Chief Justice of India. It comprises of a sitting judge of the Supreme Court and two other judges selected from the Supreme Court or High Courts. The tribunal can take the assistance of assessors and experts in the concerned field to advise it. The Award of the

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184 Id., Section 5, provides as under:
Adjudication of water disputes—(1) When a Tribunal has been constituted under section 4, the Central Government shall, subject to the prohibition contained in section 8, refer the water disputes and any matter appearing to be connected with, or relevant to, the water dispute to the Tribunal for adjudication.
(2) The Tribunal shall investigate the matters referred to it and forward to the Central Government a report setting out the facts as found by it and giving its decision on the matters referred to it within a period of three years:
Provided that if the decision cannot be given for unavoidable reasons, within a period of three years, the Central Government may extend the period for a further period not exceeding two years.
(3) If, upon consideration of the decision of the Tribunal, the Central Government or any State Government is of opinion that anything therein contained requires explanation or that guidance is needed upon any point not originally referred to the Tribunal, the Central Government or the State Government, as the case may be, within three months from the date of the decision, again refer the matter to the Tribunal for further consideration, and on such reference, the Tribunal may forward to the Central Government a further report within one year from the date of such reference giving such explanation or guidance as it deems fit and in such a case, the decision of the Tribunal shall be deemed to be modified accordingly:
Provided that the period of one year within which the Tribunal may forward its report to the Central Government may be extended by the Central Government, for such further period as it considers necessary.
(4) If the members of the Tribunal differ in opinion on any point, the point shall be decided according to the opinion of the majority.

185 Id., Section 5 A.
186 Id., Section 6.
187 Id., Section 6 A.
188 Id., Section 7.
189 Id., Section 8.
190 Id., Section 9.
191 Id., Section 9A.
192 Id., Section 11.
193 Id., Section 12.
194 Id., Section 13.
Tribunal is regarded as conclusive and binding on the parties as well as beyond the jurisdiction of courts.

In relation to reforms in Inter-State River Water disputes resolution, one prime document is the Sarkaria Commission report. The Commission was set up in June 1983 to examine the Centre-State relationship and suggested some changes within the framework of the Constitution of India. The ‘Sarkaria Commission’ submitted its final report in 1988. The report in its Chapter XVII on Inter-State River Water Disputes recommended that:

(i) “Once the Central Government receives an application under Section 3 of the Inter-State River Water Disputes Act from a State, it becomes mandatory for the Union government to set up a Tribunal within a period not exceeding one year from the date of receipt of such application. There may be appropriate amendment in Inter-State River Water Disputes Act for this objective.”

(ii) “The amendment is required in the Inter-State Water Disputes Act that empowers the Union Government to appoint a Tribunal suo-moto whenever necessary and it is satisfied that such a dispute actually exists.”

(iii) “Data Bank Information system has to be strengthened at the national level and adequate machinery should be set up for this purpose at the earliest. There should also be a provision in the Inter-State Water Disputes Act that requires the to provide all necessary data to the Tribunal.”

(iv) “The Inter-State Water Disputes Act should be amended to ensure effective implementation of the award of the Tribunal within five years from the date of constitution of a Tribunal. However if it deems to the Tribunal that for some appropriate reasons, the five years period needs to be extended, the Union Government may extend its term on a reference made by the Tribunal.”

(v) “The amendment is required in the Inter-State Water Disputes Act, 1956 to make a Tribunal’s award actually binding and has the same force and sanction behind it as an order or decree of the apex court i.e. Supreme Court.”

Keeping in view the increasing water disputes between the states and existing drawbacks and implications in the functioning of the Tribunals, ‘The Inter-State Water Disputes Act’ was amended in 2002. One of the key change that the amendment sought to

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196 Id., Para 17.4.11.
197 Id., Para 17.4.14.
198 Id., Para 17.4.15 & 17.4.16.
199 Id., Para 17.4.17.
200 Id., Para 17.4.19.
bring is time bound constitution and adjudication of the disputes. The amending provision states that the Central Government of India is required to constitute a Tribunal within one year from the date of request by a State Government. Further, the Tribunal needs to give its final Report within a period of three years. However, the Central Government may extend this period by another two years. The verdict of the Tribunal, shall have the same force as an order or decree of the Supreme Court after its publication in the Official Gazette by the Central Government.

Since the enactment of the Inter-State Water Disputes Act in 1956, five Inter-State Water Disputes Tribunals have been constituted for adjudicating water disputes in respect of the Cauvery, Krishna, Vasandhara, Mahadayi and Ravi-Beas rivers. The life of the tribunal comes to an end after the submission of the final report to the satisfaction of the Central Government through a formal resolution of Parliament. Thus, basically it is fact finding and advisory in character.

**Inter-State Water Disputes (Amendment) Bill, 2017**

The inter-state river disputes in the current times has spurred the legislators to come up with the more efficient law to deal with these emerging issues more effectively and to overcome the existing drawbacks in the present provisions. Therefore, the Central government has introduced ‘Inter-State Water Disputes (Amendment) Bill, 2017’ in the Lok Sabha with the aim to bring efficacy by speeding up in the interstate water dispute resolution.\(^{201}\) Union Minister of ‘Water Resources, River Development and Ganga Rejuvenation’ Uma Bharti while Introducing the Bill called it a “Revolutionary step” towards the resolution of Inter-State River Water Disputes.\(^{202}\) The Bill contains provisions for the appointment of Assessors with the purpose of providing technical support to the tribunal. These officers providing technical support shall be selected from amongst experts serving in the Central Water engineering Service not below the rank of Chief Engineer. The total time period for decision of dispute has been fixed at maximum of four and half years. The decision of the Tribunal shall be final and binding without any requirement of publication in the official Gazette.\(^{203}\)

This Bill also provides for adoption of the mechanism of amicable resolution of the dispute by negotiations before such dispute is referred to the tribunal. It speaks about setting up of Dispute Resolution Committee (DRC) that is to be established by the Central


\(^{202}\) Ibid.

\(^{203}\) Ibid.
Government consisting of relevant experts. The Bill also provides for transparent data collection system at the central level for each river basin. Further it asserts that Central Government shall appoint or authorise an agency to maintain data-bank and information system.\textsuperscript{204} The Inter-State River Water Disputes (Amendment) Bill, 2017\textsuperscript{205} also proposes to update and reorganise the adjudication of inter-state river water disputes by necessary amendments in the present legal and institutional set up as the Inter-State river water disputes as there is rise in the demand by the states. This Bill was introduced keeping in view the increasing disputes and many drawbacks that existed in the Inter State Water Dispute Act, 1956.\textsuperscript{205}

4.5.3. Territorial Waters

The limits of Indian Territorial Waters are defined by the ‘Territorial Waters, Continental Shelf, Exclusive Economic Zone and Maritime Zones Act, 1976’. Previously such things were governed by the ‘Territorial Waters Jurisdiction Act, 1878’. Jurisdiction over territorial waters, that is up to three nautical miles from the low water mark, was claimed and exercised by the courts in India even prior to the passing of the Territorial Waters Jurisdiction Act, 1878. The ‘Territorial Waters, Continental Shelf, Exclusive Economic Zone and Maritime Zones Act, 1976’ was passed in 1976 after the third ‘United Nations Convention on the Law of Sea’, held at Geneva. A legal framework stipulating the nature, scope and extent of rights, jurisdiction and control of India with respect to different maritime zones is provided by this Act. The Act specifies the maritime borders of India with its neighbouring countries. It also provides the misuse, exploration, preservation and management of natural resources within maritime zones. So, the Act by its very nature is an umbrella legislation dealing with manifold issues concerning maritime.\textsuperscript{206} The Act provides that “whoever disregards any provisions of this Act or any announcement thereunder shall (without prejudice to other action which may be taken against such person under any other provision of this or of any other enactment) be punishable with imprisonment which might extend to three years or with fine, or with both.”\textsuperscript{207} However, the Act necessitates the requirement of previous assent of the Central Government before commencing prosecution proceedings against such persons.\textsuperscript{208}

\textsuperscript{205} Ibid.
\textsuperscript{207} Section11, The Territorial Waters, Continental Shelf, Exclusive Economic Zone and Maritime Zones Act, 1976.
\textsuperscript{208} Id., Section 14.
It is provided under this Act that “the maritime boundaries between India and state having coasts opposite or adjacent to it shall be determined by agreement (whether entered into before or after the commencement of this section) between India and such state and pending such agreement between India and such state.”

It further provides that “unless any other provisional agreements are agreed to between them, the maritime boundaries between India and such State shall not extend beyond the line every point of which is equidistant from the nearest point from which the breadth of territorial waters of India and of such state are measured.”

The Act defines ‘contiguous zone of India’, as “an area beyond and adjacent to the territorial waters and the limit of contiguous zone is the line every point of which is at distance of twenty four nautical miles from the nearest point of the baseline referred to in sub section (2) of Section 3 where the outer edge of the continental margin does not extend up to that distance”.

The ‘Exclusive Economic Zone’ of India is “an area beyond and adjacent to territorial waters, and the limit of such zone is two hundred nautical miles from the baseline”. The Act provides that “In the exclusive economic zone, the Union has Sovereign rights for the purpose of exploration, exploitation, conservation and management of the natural resources, both living and non-living as well as for producing energy from tides, winds and currents, exclusive rights and jurisdiction for construction, maintenance or operation of artificial islands, off-shore terminals, installations and other structures and devices necessary for the exploration and exploitation of the resources of the zone or for the convenience of shipping or for any other purpose, exclusive jurisdiction to authorize, regulate and control scientific research. Exclusive jurisdiction to preserve and protect the marine environment and to prevent and control marine pollution and Such other rights as are recognized by international law.”

The Act also limits ‘the continental shelf of India’ as “the seabed and sub soil of the submarine areas that extend beyond the limit of its territorial waters throughout the natural prolongation of its land territory to the outer edge of the continental margin or to a distance of two hundred nautical miles from the baseline referred to in sub section (2) of section 3 and

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209 Id., Section 9.
210 Ibid.
211 Section 3(2), The Territorial Waters, Continental Shelf, Exclusive Economic Zone and Maritime Zones Act, 1976 provides as under:
The limit of the territorial waters is the line every point of which is at a distance of twelve nautical miles from the nearest point of the appropriate baseline.
212 Id., Section 6.
213 Id., Section 7.
where the outer periphery of the continental margin does not extend up to that distance”. It also states that India has and always had full and exclusive sovereign rights in respect of its continental shelf.

4.5.4. Inland Water Transport

The navigable waterways in India are about 14,500 km. These waterways comprise of rivers, canals, backwaters, creeks etc. Annually, about 55 million tons of cargo is being moved by inland water transport, which is a fuel efficient and environment friendly mode. The maintenance, development and operation of inland waterways are central subject.

‘The National Waterways Act, 2016 (Act No. 17 of 2016)’ The following laws are relevant under this head:

1. The National Waterways Act, 2016
2. The Inland Waterways Authority of India Act, 1985
3. Major Ports Act, 1963
4. The Inland Vessels Act, 1917

4.5.4.1. The National Waterways Act, 2016

Recently passed ‘The National Waterways Act, 2016’ makes provisions for the development of inland water transport in public interest and their regulation in national waterways of the country. It was enacted “to make provisions for existing national waterways and to provide for the declaration of certain inland waterways to be national waterways and also to provide for the regulation and development of the said waterways for the purposes of shipping and navigation and for matters connected therewith and incidental thereto.” Section 4 of The National Waterways Act, 2016, declared “National Waterways” means the inland waterway to be a National Waterway. This Act repealed “the National Waterway (Allahabad-Haldia Stretch of the Ganga Bhagirathi-Hoogly River) Act, 1982’, The National Waterway( Sadiya-

This Act provides that “the above said existing national waterways specified at serial numbers 1 to 5 in the schedule along with their limits shall continue to be national waterways for the purpose of shipping and navigation subject to the modifications made under the Act. The Act further declares inland waterways are national waterways for the purposes of shipping and navigation as specified at serial numbers 6 to 11 in the Schedule along with their limits given in column 3 thereof.”

4.5.4.2. The Inland Waterways Authority of India Act, 1985

‘The Inland Waterways Authority of India Act, 1985’ confers power on the Central Government to declare waterways having capacity for development of shipping and navigation as ‘national waterways’ and develop such waterways for effective shipping and navigation. The prime objective of the Act is to regulate and develop inland waterways by constituting an Authority. Such Authority aims to regulate shipping and navigation and for allied and connected matters.

“National waterways” was earlier defined by Section 2(h) of the Act. This definition has now been replaced by Section 4 of ‘The National Waterways Act, 2016’.

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218 Id., Section 5.
219 Id., The Schedule.
220 Act No. 82 of 1985.
221 Preamble, The Inland Waterways Authority of India Act, 1985.
222 Id., Section 2(h) reads as : “ national waterway” means the inland waterway declared by section 2 of the National Waterway (Allahabad- Haldia Stretch of the Ganga- Bhagirathi- Hooghly River) Act, 1982 (49 of 1982 ), to be a national waterway. Explanation.— If Parliament declares by law any other waterway to be a national waterway, then from the date on which such declaration takes effect, such other waterway—

223 Section 4, the National Waterways Act, 2016 reads as under: “national waterway” means the inland waterway declared by section 2 of the National Waterways Act, 2016, to be a national waterway. Explanation.— If Parliament declares by law any other waterway to
The Inland Waterways Authority of India Act came into effect on 21st October 1986 for the development and regulation of inland waterways for shipping and navigation. The Authority under the grants received from Ministry of Shipping primarily undertakes projects for development and maintenance of Inland Waterways. The Authority is a corporate body having perpetual succession and common seal with powers to acquire, hold and dispose of property subject to the provisions of this Act. The Act provides for the constitution of an authority. The Authority has been assigned various functions and powers such as:

1. "carry out surveys and investigations for the development, maintenance and better utilisation of the national waterways and the appurtenant land for shipping and navigation and prepare schemes in this behalf";
2. "provide or permit setting up of infrastructural facilities for national waterways";
3. "control activities that may affect safe and efficient, shipping and navigation and prepare schemes in this behalf";
4. "remove or alter any obstruction or impediment in the national waterways and the appurtenant land";
5. "provide for the regulation of navigation and traffic (including the rule of the road) on national waterways";
6. "Regulate the construction or alteration of structures on, across or under the national waterways";
7. "disseminate navigational meteorological information about national waterways";
8. "ensure co-ordination of inland water transport on national waterways with other modes of transport";

be a national waterway, then, from the date on which such declaration takes effect, such other waterway— (i) shall also be deemed to be a national waterway within the meaning of this clause; and (ii) the provisions of this Act shall, with necessary modifications (including modification for construing any reference to the commencement of this Act as a reference to the date aforesaid), apply to such national waterway;'.

Section 3, The Inland Waterways Authority of India Act, 1985.

Id., Section 3(3).
The Authority shall consist of the following members, namely:--
(a) a Chairman;
(b) a Vice- Chairman; and
(c) such number of persons, not exceeding five, to be appointed by the Central Government.

Id., Section 14.

Id., Section 2(a) defines appurtenant land as:
“appurtenant land” means all lands appurtenant to a national waterway, whether demarcated or not;

Id., Section 14 (a).

Id., 14 (b).

Id., 14 (c).

Id., 14 (d).

Id., 14 (e).

Id., 14 (f).

Id., 14 (g).

Id., 14 (h).
9. “establish and maintain pilotage on national waterways”;\(^{236}\)

10. “Enter into joint ventures concerning inland shipping by way of equity participation”\(^{237}\)

The Authority may also advise the Central Government on matters relating to inland water transport. It may also carry out hydrographical surveys and publish rivers charts. Further it may assist any state government in formulation and implementation of scheme for inland water transport development. The Authority may also conduct research and arrange programmes of technical training for inland water transport personnel within and outside the country.

Section 35 of the ‘Inland Waterways Authority of India Act, 1985’ confers power on the Inland Waterways Authority of India to make rules with the prior approval of the Central Government. In the exercise of such rule making power the Authority made ‘The National Waterway, Safety of Navigation and Shipping Regulations, 2002’ to ensure the safety of navigation and shipping on the national waterways.

These regulations provide for waterways and safety measures\(^{238}\) on waterways such as marking of navigable channel, traffic signals and signs, passage through bridges and locks,\(^{239}\) safety of vessels\(^{240}\) and legal proceedings \(^{241}\) for failure to observe navigable channel, traffic signals and signs, regulate speed, keep safe distance to observe navigational and meteorological information etc.

4.5.4.3. The Inland Vessels Act, 1917

‘The Inland Vessels (Amendment) Act, 2007’\(^{242}\) was enacted by Parliament of India in order to facilitate the extension and usage of inland waterways by vessels. It is an amendment to the original Act passed in 1917. This Act came into force on 21 February 2008. It addresses the extension of inland water limits, facilitating safety of vessels by dividing the inland water area into three zones based on maximum significant wave height criteria. The new Act envisages increasing of existing inland vessel units, thereby giving a boost to inland vessel operations.

\(^{235}\) Id., 14 (i).
\(^{236}\) Id., 14 (j).
\(^{237}\) Id., 14 (k)
\(^{239}\) Id., Rule 2(j) runs as under:

"Lock" means confined section of river or canal where level can be changed for raising and lowering boats between adjacent sections by use of gates and sluices;

\(^{240}\) Id., Rule 2(s) provides as under:

“Vessel” means every description of watercraft, including small craft, vessel under oars or sail, floating equipment and non-displacement craft.

\(^{241}\) Id., Rule 22 to 41.
\(^{242}\) Act No.35 of 2007.
4.5.4.4. The Major Ports Act, 1963

The Major Ports Act, 1963 was passed in order to make provisions for the constitution of port authorities for certain major ports in India and to vest the administration, control and management of such ports in such authorities and for connected matters. This Act provides, inter alia, for constitution of Board of Trustees and Committees thereof, staff of the Board, property and contracts, works and services to be provided at ports, tariff Authority for major ports, imposition and recovery of rates at ports.

The Central Government has recently approved the proposal of Ministry of Shipping to replace the ‘Major Port Trusts Act, 1963’ by the ‘Major Port Authorities Bill, 2016’. This Bill aims to increase the efficiency of the major ports to perform with more efficacy. It also provides for modernising the institutional structure of major ports and conferring full autonomy in decision making.\(^{243}\)

The proposed Bill aims to decentralise decision making and to bring professionalism in governance of ports. It also intends to encourage the expansion of infrastructure and consequently facilitate trade and commerce. ‘The new Major Ports Authority Bill, 2016’ proposes to impart decision speedier and transparent to benefit the concerned and to foster improved project execution capability. The purpose of the Bill is reorientation of the government model in central Ports to landlord port model in conformity with the recognised international practices. It will also be helpful in bringing transparency in practices and operations of Major Ports.\(^{244}\)

The relevant characteristics of ‘the Major Ports Authority Bill’ are as follows:

a. “There is reduction of the sections in the new Bill thereby making it concise in comparison to ‘the Major Port Trusts Act, 1963’. The sections have been reduced to 65 from 134 by removing overlapping and outdated sections.”\(^{245}\)

b. An easy and simplified composition of the Board of Port Authority has been proposed under the new Bill. According to it, the board will have 11 members from the present 17 to 19 Members representing different interests. This Bill intends that a compact Board with professionally adept and independent members will strengthen decision making and helpful in strategic planning. There has been “provision for inclusion of representative of the State Government in which the Major Port is located, Ministry of Railways, Ministry of Defence and Customs, Department of Revenue as Members in


\(^{244}\) Ibid.

\(^{245}\) Ibid.
the Board apart from a Government Nominee Member and a Member representing the employees of the Major Ports Authority.”

c. The role of ‘Tariff Authority for Major Ports’ (TAMP) has been redefined. Port Authority has now been conferred powers to fix tariff which will act as a reference tariff for purposes of bidding for PPP projects. PPP operators will be free to fix tariff based on market conditions. The Board of the Port Authority has been delegated “the power to fix the scale of rates for other port services and assets including land.”

d. There has been a provision to create an independent Review Board to carry out the remaining functions of the former TAMP for Major Ports, to hear and take cognizance of the disputes between ports and PPP concessionaires, to review stressed PPP projects and suggest measures to review stressed PPP projects. Other functions of such review board are to recommend effective ways to recuperate such projects and to look into the complaints with respect to services provided by the ports or private hands operational within the ports.

e. The Boards of the Port Authority have been fully empowered to enter into contracts, planning and development, fixing of tariff except in national interest, security and emergency arising out of inaction and default. In the present MPT Act, 1963 prior approval of the Central Government was required in 22 cases.

f. This Bill intends to strengthen the Board to come up with its own Master Plan with regard to an area within the port limits and to build and construct Pipelines, Telephones, Communication towers, electricity supply or transmission equipment within port limits. The Board is empowered to lease land for Port related use for up to 40 years and for any purpose other than the purposes specified in section 22 for up to 20 years beyond which the approval of the Central Government is required.

g. Provisions of CSR & development of infrastructure by Port Authority have also been introduced.

4.5.5. Water Pollution Control

The water pollution control in India is governed by the following laws.

4.5.5.1. Water (Prevention and Control of Pollution) Act, 1974
Despite the rich water resources, the country is facing the worst water pollution problems. The major water courses of India which, inter alia, consist of several rivers, have all become severally polluted. The situation calls for a serious concern for the protection and preservation of all these sources on national level. This is apparent from the statement for objects and reasons of ‘the Water (Prevention and Control of Pollution) Bill, 1974’ which reads:

“Growth of industries and the increasing tendency to urbanization has increased the problem of pollution of rivers and streams which assumed considerable importance and urgency in recent years. Hence it is essential to ensure that the domestic and industrial effluents are not allowed to be discharged into the water courses without adequate treatment as such, discharges of drinking water as well as for supporting fish life and for use in irrigation. Pollution of rivers and streams also causes increasing damage to the country’s economy”.

In order to achieve the above stated objects, the Water Act was enacted. ‘The Water (Prevention and Control of Pollution) Act, 1974 (Act No. 6 of 1974)’ (hereinafter called as ‘Water Act’) is denoted as one of India’s first attempt to deal comprehensively with an environment issue related to water. Minor Changes were made to the Act in 1978 and it was revised in 1988 to bring it to in close conformity to the provisions of ‘the Environment (Protection) Act, 1986’.

The Water Act is a central law passed by the Parliament of India under Article 252(1) of the Constitution. This Article (Art. 252 of the Constitution) empowers the Central Government to legislate on a subject included in the State list, where two or more state legislatures consent to a central law. All the state legislatures have given their consent to the implementation of Water Act in 1974.

The Water Act is a wide-ranging Act applicable to various sources of water such as streams, inland waters, subterranean waters, and sea or tidal waters. The main objectives of the Water Act are the prevention, control and abatement of water pollution and the maintenance or restoring of wholesomeness of water. ‘Pollution’ under the Water Act is defined as “such contamination of water by discharge of any sewage or trade effluents or of any other liquid, gaseous or solid substance into water (whether directly or indirectly) as may, or such alteration of physical, chemical or biological properties of water, or is likely to, create a nuisance or render such water harmful or injurious to public health or safety, or to

252 Shyam Divan, Armin Rosencranz, Environmental Law and Policy in India 176 (Oxford University Press, New Delhi, 2104).
253 Id., at 35.
domestic, commercial, industrial, agricultural or other legitimate uses, or to the life and health of animals or plants or of aquatic organisms.”

The Act, inter alia, provides for constitution of Central, State and joint Boards for preventing water pollution. These Boards are empowered by the Act to take water samples and their analysis, cognizance of offences, water laboratories, discharge of sewage or trade effluents, penalties, offences by companies and government departments, analysis etc.

The functions of the Central Board include, “to advise the Central Government on various matters related to water pollution, coordinate the activities of ‘State Pollution Control Boards’, sponsor investigation and research concerning water pollution and develop inclusive plan for control and prevention of water pollution.”

The Central Board also performs the functions of a State Board for the Union Territories. The Central Board will prevail in case of any conflict between central board and the state board. Since 1982, the Central Board has been attached to the Union Government’s department of Environment, Forests and Wildlife. The Central and State Pollution Control Board, with almost similar functions have been created to carry out the purposes of the Act.

The Central Board is primarily responsible for ensuring the cleanliness of streams and wells in the States. In addition to this the Central Board performs the following functions as well:

1. Advises the Central Government on issues related to water pollution;
2. Manages and coordinates the activities of the State Boards and resolves conflicts among them;
3. Provides technical assistance and guidance to the State Boards regarding water pollution;
4. Provides training to the persons involved in water pollution related programs;
5. collects, compiles and publishes technical and statistical data concerning water pollution;
6. lays down, modify or annul the standards for a stream or well in consultation with the State Government concerned; and
7. Plans and execute the nation-wide programmes related to water pollution.

The Act enables the State Boards “to prescribe standards for the discharge of effluent or the quality of the receiving waters.” The Act provides for a permit system or “consent”

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255 Id., Section 2(e).
257 Supra note 253 at 179.
258 Id., Section 16.
259 Id., Section 17(1).
procedure to prevent and control water pollution. The Act “prohibits disposal of polluting matter in the streams, wells and sewers or on land in excess of the standards established by the state boards”.\textsuperscript{260} It provides that “a person must obtain consent from the state board before taking steps to establish any industry, operation or process, any treatment and disposal system or any extension or addition to such a system which might result in the discharge of sewage or trade effluents into stream, well or sewer or onto land”.\textsuperscript{261} Other functions of the state boards specified by the Act include “planning an all-inclusive programme for the prevention, control or abatement of pollution in the State, encouraging, conducting and participating in investigations and research of water pollution problems, inspecting facilities for sewage and trade effluent treatment and developing economical and reliable methods of treatment of sewage and trade effluents”.\textsuperscript{262}

The Act gives the state boards “the power of entry and inspection to carry out their functions”.\textsuperscript{263} The 1988 amendment introduced a new section 33A which empowers the state boards to issue directions to any person, officer or authority including orders to close, prohibit or regulate any industry, operation or process and to stop or regulate the supply of water, electricity, or any other service. The 1988 amendment modified section 49 to allow citizens to bring action under Water Act. Now the State Board must make relevant reports available to complaining citizens, unless the board determines that the disclosures would harm “public interest.” Previously, the Act allowed courts to recognize only those actions brought by a board or with a previous written sanction of a board.

In order to cope with the financial constraints of pollution boards in discharging their statutory functions, “The Water (Prevention and Control of Pollution) Cess Act, 1977” was passed.

\textbf{4.5.5.2. The Water (Prevention and Control of Pollution) Cess Act, 1977}

Parliament adopted “The Water (Prevention and Control of Pollution) Cess Act, 1977 (Act No. 36 of 1977)” to collect capital resources for Central and State Pollution Control Boards. The main objective of the Act is “to provide 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 State Boards under the Water (Prevention and Control of Pollution) Act, 1974 for the preservation and control of water pollution.”\textsuperscript{264}

\begin{flushright}
\textsuperscript{260} Id., Section 24. \\
\textsuperscript{261} Id., Section 25. \\
\textsuperscript{262} Id., Section 17. \\
\textsuperscript{263} Id., Section 23. \\
\textsuperscript{264} Id., Preamble.
\end{flushright}
The Act empowers the Central Government to impose a cess on water consumed by industries listed in Schedule I of the Act. Specified industries and local authorities are subject to the cess if they use water for purposes listed in Schedule II of the Act. It includes:

1. Industrial cooling, spraying in mine pits, or boiler feed.
2. Domestic purposes.
3. Processing which results in water pollution by biodegradable water pollutants.
4. Processing which results in water pollutants which are not easily biodegradable or are toxic.

Most courts concluded that water cess is a tax which Parliament is authorized to impose under Entry 97, List I of Schedule VII of the constitution. For instance in *Tata Iron and Steel Company Ltd. (TISCO) v. State of Bihar*, a division bench of the Patna High Court concluded that the cess imposed under the Act was within the legislative competence of Parliament.

In 1991, this Act was amended. The provision of rebate of Cess is also provided in the Act. It says where any person or local authority liable to pay the cess under this Act installs any sewage or trade effluent treatment plants he shall be entitled to rebate of 25% on the cess payable. The Act further provides that, any person or authority shall not be entitled to a rebate if he consumes water in excess of the maximum quantity prescribed in this behalf for any specified industry or local authority or fails to comply with any of the provisions of Section 25 of the ‘Water (Prevention and Control of Pollution) Act, 1974’ or any of the standards laid down by the Central Government under ‘the Environment (Protection) Act, 1986’.

**4.5.5.3. The Environment (Protection) Act, 1986**

‘The Environment (Protection) Act, 1986 (No. 29 of 1986)’ was enacted “to provide for the protection and improvement of environment and for matters connected therewith”. This Act was enacted under Article 253 of the Constitution of India. Implementation of the decisions of “United Nations Conference on the Human Environments” held at Stockholm in June, 1972 is its prime objective. This UN Conference was related to the protection and prevention of hazards to human beings, other living

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265 Entry 97, List I of Schedule VII of The Constitution of India states as under:
Any other matter not enumerated in List II or List III including any tax not mentioned in either of those Lists.
266 AIR 1991 Pat 75.
268 Article 253 of the Constitution reads as under:
Legislation for giving effect to international agreements Not withstanding anything in the foregoing provisions of this Chapter, Parliament has power to make any law for the whole or any part of the territory of India for implementing any treaty, agreement or convention with any other country or countries or any decision made at any international conference, association or other body.
creatures, plants and property. The Environment (Protection) Act is an umbrella legislation providing a framework to coordinate the activities of various authorities established under the previous laws such as ‘the Water Act’ and ‘the Air Act’.

The Environment (Protection) Act, clearly extends to water quality and the control of water pollution. Section 2 (A) of the Act states that “the environment should include water and the interrelationship which exists among and between water and human beings and other living creatures such as plants, micro-organisms and property”.\(^{269}\) The “environment pollutant” is defined as “any solid, liquid or gaseous substance present in such concentration as may be, or tend to be, injurious to environment.”\(^{270}\)

This Act authorizes the Central Government to ‘establish standards for the quality of the environment’\(^{271}\) and for ‘emission or discharge of environment pollutants’ from any source.\(^{272}\)

The Environment (Protection) Act includes a citizens’ initiative provision and a provision\(^{273}\) authorizing the Central Government to issue direct orders to protect the environment.\(^{274}\) The Central Government may delegate specified duties and powers under The Environment (Protection) Act, 1986 to any officer, state government or other authority.\(^{275}\)

These duties of the Central Government are with regard to:

1. “Take all necessary measures for protecting quality of environment”\(^{276}\)
2. “Co-ordinate activities of various states, officers and other authorities under this Act”\(^{277}\)
3. “Lay down standards for discharge of environment pollutants”\(^{278}\)
4. “Plan and execute a nationwide programme for prevention, control and abatement of environment pollution”\(^{279}\)
5. “Establish and recognize environment laboratories”\(^{280}\)
6. “Empower any person to enter, inspect, and take samples and test”\(^{281}\)
7. “Lay down procedures and safeguards for handling hazardous substances”\(^{282}\)

\(^{269}\) Section 2(a), The Environment (Protection) Act, 1986 provides as under:
"environment” includes water, air and land and the inter-relationship which exists among and between water, air and land, and human beings, other living creatures, plants, micro-organism and property.

\(^{270}\) Id., Section 2 (b).

\(^{271}\) Id., Section 3 (2) (iii).

\(^{272}\) Id., Section 3 (2) (iv).

\(^{273}\) Id., Section 19(b).

\(^{274}\) Id., Section 5.

\(^{275}\) Id., Section 23.

\(^{276}\) Id., Section 3 (1).

\(^{277}\) Id., Section 3 (2) (i).

\(^{278}\) Id., Section 3 (2) (ii).

\(^{279}\) Id., Section 3 (2) (iii).

\(^{280}\) Id., Section 3 (2) (ii).

\(^{281}\) Id., Section 12 (1).

\(^{282}\) Id., Section 10-11.
8. “Constitute an Authority for exercising powers”.283

The Act lays down that “no court shall take cognizance of offence under this Act except on a complaint made by the Central Government or an officer or authority authorized in this behalf by the Central Government”.284 It also confers “power on a person to complain to court regarding any violation of the provisions of the Act, after a notice of sixty days to the prescribed authorities”.285 The Act makes it “obligatory for the persons responsible for discharge and the person in charge of the place where such discharge takes place, to inform the authorities about the accidental discharge of any pollutant in excess of the prescribed standards”.286 Stringent penalties are prescribed for the violation of the provisions of the Act”.287 Further, “Jurisdiction of civil court is barred under the Act”.288

‘The Air (Prevention and Control of Pollution) Act, 1981’ and ‘the Water (Prevention and Control of Pollution) Act, 1974’ were amended to bring their provisions in conformity with those of ‘The Environment (Protection) Act, 1986’. The Act increased the penalties for any contraventions of its compared to those envisaged under ‘the Water Act, 1974’. The Environment (Protection) Act has been criticized as being ineffective and only designed to fulfil international obligations of the Stockholm Conference.289

It would appear that no wise analysis of the possible short and long term harmful effects of pollution on the environment has been taken into consideration while enacting this Act.290 It could also be said that the Act, like all previous laws on environmental matters, does not clearly state the social objective to be achieved. Administrative machineries are set up to implement the legislation. But how can the administrators interpret their duties and functions, from time to time, when the intent and objective for which the statute was passed in the first place remains unclear?291

4.5.5.4. Other Major Acts Regulating Water Pollution

Other important statutes within the domain of environmental law, controlling water pollution are as under:

a) “The Shore Nuisance (Bombay and Kolaba) Act, 1853”.

b) “The Oriental Gas Company Act, 1857”.

283 Id., Section 3 (3).
284 Id., Section 19 (1).
285 Id., Section 19 (2).
286 Id., Section 9 (1).
287 Id., Section 15.
288 Id., Section 22.
290 Ibid.
291 Ibid.
c) “The Sarais Act, 1867”.
d) “The North Indian Canal and Drainage Act, 1873”.
e) “The Obstruction in Fairways Act, 1881”.
f) “The Indian Fisheries Act, 1897”.
g) “The Indian Ports Act, 1908”.
h) “The Indian Vessels Act, 1917”.
i) “The Poison Act, 1919”.
j) “The Indian Forest Act, 1927”.
k) “The Merchant Shipping Act, 1958”.

a. The Shore Nuisances (Bombay and Kolaba) Act, 1853

This Act was passed to enable the removal of nuisance and encroachments below high-water mark in the islands of Bombay and Kolaba. The Act empowers the Collector of Land Revenue at Bombay to serve notice requiring the removal of any nuisance, encroachment or obstruction. If after serving such notice they are not removed, the Collector is empowered under the Act to take necessary action to eliminate or stop the nuisance.

b. The Oriental Gas Company Act, 1857

‘The Oriental Gas Company Act’ is the first legislation in the arena of water pollution. According to the Act the company will be liable to pay the penalty if it causes contamination of any source of water like stream, a pond, reservoir. The Act under section 15 provides that “the gas company is liable if it shall at any time cause or suffer to be brought, or to flow into any stream, reservoir, aqueduct, pond, or place for water, or into any drain communicating therewith, any washing or other substance produced in making or supplying Gas, or shall wilfully do any act connected with the making or supplying of Gas, whereby the water in any such stream, reservoir, aqueduct, pond, on place for water, shall be fouled.” This section further provides that “the penalty will be of Rs.1000 and further Rs.500 per day if such act continued after the service of notice upon the company. Such notice was to be served by the person whose water is so fouled or contaminated”.

According to Section 17 of this Act, “the Oriental Gas Company shall be liable, whenever water be fouled by the gas of the said company, forfeit to the person whose water shall be so fouled”. This section further provides that “the fine was maximum Rs.200 for fouling water and not exceeding Rs.100 per day for the further continuation of the offence after the expiration of twenty-four hours from the service of notice of such offence”.

293
c. The Sarias Act, 1867

This Act does not deal with water pollution specifically. However it contains a provision relating to water pollution. Section 7 of this Act “imposes duty on the keeper of the sarai or an inn to have certain quality of water fit for the consumption by the persons and animals consuming it to the satisfaction of the District Magistrate or his nominee”. It further provides that “in case of the failure of such duty to maintain the required standards of water the Act imposes a penalty of rupees twenty”. However, this Act is rarely used in practice.

d. The North Indian Canal and Drainage Act, 1873

The Act was intended to regulate irrigation, drainage and navigation in the northern India. Few offences have been given under the Act in Section 70. It includes “the regulation of way canals for the purpose of irrigation and to prohibit discharge the harmful effluents from various industries as well as drainage system”.

e. The Obstruction in Fairways Act, 1881

The aim of ‘The Obstruction in Fairways Act, 1881’ is to confer powers on the government to remove or extinguish obstructions to navigation, which may occur in the fairways leading to the ports. The other purpose of the Act is the prohibition of the creation of such obstruction for the future. The Act provide that “Whenever in any fairways leading to any port, any vessel is sunk, abandoned, stranded or any fishing stake, timber or anything is placed, and the Central Government may, if in its opinion such thing is or likely to cause obstruction or danger to navigation cause removal of such things or parts thereof, or if such thing is not removable in the opinion of the Central Government, cause the destruction of the same or any part thereof.”

The government was empowered to sell the thing in certain cases. Similarly, under Section 8, “the government is empowered to prohibit, by notification, the placing of fishing-stake, casting or throwing of ballast, rubbish or any other things likely to cause obstruction or danger to navigation”.

f. The Indian Fisheries Act, 1897

This Act basically prohibits the destruction of fish in the water. It prohibits the poisoning of water resulting in destruction of fish. This Act provides “a punishment with imprisonment which may extend up to two months or with fine which may extend to hundred rupees, if any person puts any poisonous thing, lime or any obnoxious material into any water with intention thereby to catch or destroy fish”.

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292 Section 2, The Obstruction in Fairways Act, 1881.
293 Section 5, The Indian Fisheries Act, 1897.
g. The Indian Ports Act, 1908

The Act indirectly deals with the quality of water while dealing with the protection and safety of the ports. This Act “empowers the Conservator of the Forest to remove or cause to be removed any timber, raft or other things floating or being in any part of such port, if it causes obstruction to the navigation.”§294 It also provides “removal of lawful obstruction to the navigation after making reasonable compensation to the person suffering damage by such removal or alteration.”§295 Similarly, this Act “authorises the Conservator of the Ports to raise, remove or destroy any vessel which is wrecked, stranded or sunk in the port.”§296 The Act also “prohibits unauthorised discharge of ballast or rubbish or any other things, harmful to navigation.”§297 The Act further prohibits the mixing of the oil or water mixed with oil into any port except in accordance with the rules made under Section 6 of the Act.

h. The Indian Vessels Act, 1917

‘The Indian Vessels Act, 1917’ also does not deal with water pollution directly. It casts “a duty on the government to cause the vessel to be raised, removed or blown up or otherwise destroyed if such vessel is wrecked or stranded or sunk in an inland or water or landing place or embankment.”§298 The government is empowered to recover the cost of such action by selling the property of vessel in some cases. The Act provides the extension of inland water limits. It divides the inland water area into three zones based on maximum significant wave height criteria for the safety of vessels. This Act also contains provisions regarding employment of manpower from Army, Navy and Coast Guard in this sector, controlling pollution and regulating the insurance regime on par with motor vehicles.

i. The Indian Forest Act and Indian Forest (Conservation) Act, 1927

The Act provides imprisonment for a term of one year or with fine which may extend to one thousand rupees or both if any person, who, in contravention of the rules made by the state government, inter alia, poisons water.

j. The Factories Act, 1948

‘The Factories Act, 1948’ through an amendment to the Act in 1976 also provides for the effective disposal of water and effluents of a factory. Section 12 states that:

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§294 Section 10, The Indian Ports Act, 1908.
§295 Id., Section 12.
§296 Id., Section 14.
§297 Id., Section 21.
§298 Section 44A, Indian Vessels Act, 1917.
(1) “Effective measures and arrangements shall be made in every factory to make them harmless, and for their disposal for the treatment of wastes and effluents produced during the manufacturing process carried on therein”,

(2) “The State Government has power to frame rules mentioning the measures to be made under sub-section (1) or requiring that the measures made in accordance with sub-section (1) shall be approved by such authority as may be prescribed.”

The Act provides that “the occupier and manager of the factory shall be liable for the offences and punishable with imprisonment for a term which may extend up to two years or with fine which extends up to Rs.1 lakh or with both. Non-observance or non-compliance has been an offence under Section 92 of the Act.”

k. The Merchant Shipping Act, 1958

The first Indian Merchant Shipping Act was passed in the year 1923. The provisions of which were in tune with ‘U.K. Merchant Shipping Act, 1894’. After independence, a comprehensive legislation was passed by the Indian Parliament in 1958 known as ‘The Merchant Shipping Act, 1958’, considering the conditions and changes that took place in shipping industry. The Indian Parliament passed a comprehensive legislation in 1958 known as ‘The Merchant Shipping Act, 1958’. The main purpose of this law is “to provide for the registration of Indian ships and generally to consolidate and amend law relating to merchant shipping and to foster the development and ensure the efficient maintenance of an Indian mercantile marine.”

India ratified the “International Convention for the Prevention of Pollution of Sea by Ore, 1954”. The Convention envisioned the prohibition on the discharge of ore and oil mixture anywhere into the sea except where not exceeding the prescribed limit. To give effect to the provisions contained in the said Convention Part XI A was added to the Act. The Act defines ‘pollution damage’ as “loss or damage caused outside the ship by fouling of water occurred from escape or discharge of oil from that ship, wherever such escape or discharge occurs.”

The Act imposes the liability upon the owner of any ship for any pollution damage caused by escape or discharge of oil. The exceptions to the liability are:

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302 Part XI A – Prevention and Contamination of Pollution of the Sea by Oil.
303 Section 352 H (1) (d), The Merchant Shipping Act, 1958.
304 Id., Section 352 I.
1. If it is due to any act of war, civil war, hostilities, insurrection or a natural happening of an extraordinary, irresistible and inevitable kind.

2. If it is consequent to any act or omission done with intent to cause such damage by any other person.

3. If it is the result of negligence or other wrongful act of any Government or other authority in exercise of its functions in that behalf that are responsible for the maintenance of lights or other navigational aids.

4. If the owner can establish that pollution is the result of act/omission of the person who offers the damage, wholly or partly with an intention to cause such damage, then owner will be exonerated, wholly or partly as the case may be, from liability.

The Act provides that no oil or oily mixture shall be discharged from an Indian ship other than a tanker into the sea or from a foreign ship other than a tanker within the coastal water of India. However, this is subjected to exception where each of the following condition is satisfied:

- The ship is proceeding en route.
- The oil content of the discharge is less than one hundred parts per million parts of the oily mixture.
- The instantaneous rate of discharge of oil content does not exceed sixty litres per mile.
- The discharge is made as far from nearest land as practicable and the ship is not within the designated area notified as such under sub section 6 of Section 7 of the territorial waters, continental shelf, Exclusive Economic Zone and Other Maritime Zones Act, 1976. The abovementioned prohibition does not apply in certain cases as following:
  - Safety of such ship.
  - Preventing damage to such ship.
  - Saving life at sea the escape of oil resulted from damage to or unavoidable leakage from the ship and after occurrence of leakage all reasonable precautions have been taken for the purpose of preventing such escape.

The Act provides that “for the purpose of preventing or reducing the discharge of oil or oily mixture into sea, the Central Government may make rules requiring Indian ships to be
filed with such equipment or to comply with such other requirements as may be prescribed.”

4.5.5. The Indian Easement Act, 1882

‘The Indian Easement Act, 1882’ is one of the initial legislation which deals with the rights of the persons inter se concerning water pollution. Illustration 9(f) and (b) of the Section 7 specifically refers to the water pollution. The doctrine of riparian rights to the unpolluted water which is part of Common Law has been codified in this Act. However, the other remedies as nuisance, negligence, trespass and strict liability have not been revoked. Under Common Law principle riparian owners’ rights extend only upto the natural streams. But the scope under this Act is broader as it extends not only upto the natural streams, but also to the water percolating and flowing in unidentified channel and the still water such as lakes, sea, or ponds.

‘The Indian Easement Act, 1882’ does not define the term “pollution”. The term ‘pollution’ under the Act must denote to any change in the natural quality of the water whereby it gets less appropriate for any purpose for which in its natural state it is capable of being used.

Illustration (h) of Section 7 provides as under:

“The right of every owner of land that the water of every natural stream which passes by through or over his land in a defined natural channel shall be allowed by other persons to flow within such owner’s limits without interruption and without material attention in quantity, direction. Force or temperature; the right of every owner of land abutting on a natural lake or pond into or out of which a natural stream flows, that the water of such lake or pond shall be allowed by other persons to remain within such owner’s limits without material alteration in quantity or temperature.” Explanation to Section 7 defines “natural stream as “a stream, whether permanent or intermittent, on the surface of land or underground, tide or tide less, which flows by the operation of nature only and in a natural and known course.”

Under illustration (j) of Section 7, various uses have been mentioned such as drinking water, watering the cattle and sheep, household purposes, irrigation and other manufacturing

307 Id., Section 356E.
308 The illustration reads: “The right of every owner of land that, within his own limits the water which naturally passes or percolates by, over or through his land shall not before so passing or percolating, be unreasonably polluted by other persons.”
309 The illustration reads: “The right of every owner of land that the air passing thereto shall not be unreasonably polluted by other persons.”
purposes. The substantial injury to others has been forbidden. As the words unreasonable pollution is used in the Act meaning thereby pollution which is temporary or trifling will not be included under this Act.

It may be noted that the Act recognizes the prescription right to pollute water where the right has been peacefully enjoyed without interruption for twenty years.\textsuperscript{311} The prescriptive right to pollute water whether natural, artificial, sea or underground, however, cannot be acquired against the government which has sovereign rights in waters. The recognition of prescriptive right to pollute is drawback of ‘the Indian Easement Act, 1882’. It is submitted that in view of the high incidence of pollution and scarce drinking water resources, there should not be a statutory recognition of the prescriptive right to pollute.\textsuperscript{312}

A riparian owner has two remedies against pollution viz. to claim damages and to file a suit for injunction restraining him from polluting the stream. It is not necessary for a riparian to prove actual damages. Thus pollution per se is actionable, though it was necessary to prove that there was pollution i.e. the act of pollution has resulted in making the water less fit for uses to which the riparian was entitled.

Despite the existence of several environmental related Acts, the problem of water pollution has not been mitigated, on the contrary the problem has aggravated mainly due to the legislative mandates by the concerned administrative agencies constituted thereunder.\textsuperscript{313} In this context expressing serious concern, the Supreme Court of India in Indian Council for Enviro-Legal Action v. Union of India\textsuperscript{314} observed as under:

“There are stated to be over 200 Central and State Statutes which have at least some concern with environment protection, either directly or indirectly. The plethora of such enactments has, unfortunately, not resulted in preventing environmental degradation, which on contrary has increased over the years. Abuse of anti-pollution laws not only adversely affects the present quality of life but the non-enforcement of the legal provisions generally results in ecological imbalance and degradation of the environment, consequently its ill affects will have to be tolerated by the next generations.”\textsuperscript{315}

\textsuperscript{311} Section 28 (d), The Indian Easement Act, 1882.
\textsuperscript{312} Supra note 311 at 212.
\textsuperscript{313} Aruna Venkat, \textit{Environmental Law and Policy} 196 (PHI Learning Private Ltd., New Delhi, 2011).
\textsuperscript{314} (1996) 5 SCC 281.
\textsuperscript{315} Ibid.
Besides the above stated statutes, there are certain provisions relating to water pollution under Central laws such as Indian Penal Code, the Code of Criminal Procedure as well as under common law.

4.5.5.6. Indian Penal Code, 1860

‘The Indian Penal Code, 1860’ makes various acts causing degradation of environment as offence. Chapter XIV of IPC comprising of Sections 268 to 294 A deals with the offences affecting the public health, convenience, safety, decency and morality. While a private nuisance is civil wrong under tort, a public nuisance is a crime. A public nuisance is one which substantially affects the reasonable comfort and convenience of life of a class of the public who come within the ambit of its application. Public nuisance which injuriously affects the public at large are dealt with by or in the name of state or corporate bodies authorised by statute. In public nuisance, it is not necessary that annoyance should injuriously affect every member of the public within sphere of its operation.

Section 268 of ‘Indian Penal Code’ provides:

“Any individual is guilty of a public nuisance when he does any act or is guilty of an illegal omission which causes any common injury, annoyance or danger to the public or to the people in general who reside or possess property in the locality, or which must necessarily cause injury, obstruction, danger or annoyance to persons who may have occasion to use any public right. Some convenience or advantage caused by the act resulting in public nuisance is no ground for exemption from liability”.

This section requires the following essentials:

1. Doing of any act or illegal omission
2. The act or omission
   (i) Must cause any common injury, danger or annoyance
      (a) To the public or
      (b) To the people in general who dwell or occupy property in the vicinity or
   (ii) Must necessarily cause injury, obstruction, danger or annoyance to persons who may have occasion to use any public right.

Similarly, Section 269 of IPC prescribes punishment for a negligent act likely to spread infection of disease dangerous to life. It says:

“A person shall be punished for doing an act which is, and which he knows or has reason to believe to be, likely to spread the infection of any disease dangerous to life with imprisonment for a term which may extend to six months, or with fine, or with both for illegally or negligently”.

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The fouling of water in any public spring or water reservoir is also an offence under Section 277 of IPC which provides as under:

“When a person intentionally fouls the water of any public spring or reservoir to render it less fit for the purpose for which it is ordinarily used, with a fine of five hundred rupees or an imprisonment of either description for a term which may extend to three months, or with, both”.

This section includes only the flowing canals of rivers, canals and streams and well in terms of public reservoir or spring. The scope of this provision seems to be restricted as it does not cover an act committed involuntarily and covers only the voluntary fouling of water. Whatever the consequent of involuntary act may be it does not lead to liability of the doer. The terms ‘corrupt’ and ‘foul’ used in this section simply considers the purity of water. But in modern terms, the term pollution indicates something more than the purity of water. ‘Pollution’ is legal, as well as technical term that deals with the quality and standards of water with respect to its valid uses with reference to particular purposes. Thus, It may be submitted that the section 277 of the IPC is incapable of taking into account wide range of water pollution.

Pollution of water other than springs and reservoirs will be covered by Section 290 of the Code. It provides that “A person shall be punished with fine which may extend to two hundred rupees when he commits a public nuisance in any case not otherwise punishable by this Code.” Another section of IPC relevant to the pollution of water is section 426 which deals with mischief. It says:

“Anybody who misbehaves shall be punished with fine or imprisonment of either description for a term which may extend to three months, or with both. Mischief is defined in IPC as causing the destruction of any property, or any such change in any property or in the situation thereof as destroys or diminishes its value or utility, or affects it injuriously.”

4.5.5.7. The Code of Criminal Procedure

Chapter X, Part B and C from Sections 133-144 of the Code of Criminal Procedure, 1973 deals with the public nuisance. Section 133 of The Code of Criminal Procedure deals with the conditional order for the removal of public nuisance. The District Magistrate, the Sub-Divisional Magistrate or any Executive Magistrate specially authorised for this purpose

316 Susai v Director of Fisheries, 1965 MLJ 35; Emperor v Nama ram, 1905 Bom.LR 52.
317 Legal Aspects Of Water Pollution available at http://shodhganga.inflibnet.ac.in/bitstream/10603/8107/10/10_chapter%205.pdf (Visited on 21 December 6).
318 Section 425, Indian Penal Code, 1860.
by the state government has the power to take cognizance of the following amongst other either on a complaint or on the basis of police report:

a. Any illegal obstruction or nuisance in any public place or way, river or channel which is or may be legally used by the public should be removed.

b. Requirement of fencing in such a manner as to prevent danger to any tank, well or excavation to any such public place.

c. Construction of any building, or disposal of any substance, as is likely to occasion any conflagration or cause explosion,

d. Existence of any building, tent, or structure, or any tree in such a condition which is likely to fall thereby causing injury to persons living or carrying on business in the locality or passing by and repair, removal, or support of such building, tent or structure, or the removal or support of such tree is necessary.

e. Requirement of fencing in such a manner as to prevent danger to any tank, well or excavation to any such public place,

f. Necessity of destruction, confinement or otherwise disposal of any dangerous animal.

The person responsible for causing such nuisance or obstruction or any of the acts may be conditionally ordered within the fixed time limit to remove or prevent or stop from carrying on such activity or to fence such tank, well or excavation. The order passed under this section is conditional order for the removal of public nuisance within a fixed period of time. The order is conditional because it is only a preliminary order. The order may be absolute or final only after giving the opposite party reasonable opportunity to be heard. The Kerala High Court held that an order closing a factory is illegal where no such conditional order was first issued.\textsuperscript{319}

Section 133 Cr. P. C. provides a speedy and summary remedy in case of exigency where any act leads to or likely to damage to public interest or public health. In all proceedings started under this Section, the Magistrate is supposed to be acting virtuously in the interest of public. This section must not be used as a substitute for litigating in the civil court to reach at the settlement of a private dispute.\textsuperscript{320}

Order made under Section 136 Cr. P. C. without prior notice under Section 133(1) is bad, substantial order under Section 144 of the same Code is also bad.\textsuperscript{321} This section bars the

\textsuperscript{319} Vallikadar Assainar \textit{v} P.K. Moideen Kutty, 1999 Cri.L.J 4228.

\textsuperscript{320} Farzand Ali \textit{v} Hakim Ali, ILR (1915) 37 All 26, 28

\textsuperscript{321} Narayan Sahuv, Sub – Divisional Magistrate 1986 Cri.L.J 102 (Ori).
jurisdiction of the civil court and provides that no order duly made by Magistrate shall be called in question in any civil court.\textsuperscript{322} For invoking jurisdiction under this section it is not necessary that there should always be danger or in convenience to public at large but even if danger or in convenience is about to be caused, it is actionable under Section 133(1) and Section 138 Cr. P. C.

In order to provide a sanction under Section 133 the Magistrate must be satisfied that:

1. It is a public nuisance i.e. the number of persons injuriously affected is so considerable that they must rationally or judiciously be regarded as the public or portion of it.

2. It is not a private dispute between the parties.

3. It is a case of great emergency of imminent danger to the public interest. \textsuperscript{323}

In the landmark Ratlam Municipality case\textsuperscript{324}, the Supreme Court did not consider the effect of ‘Water (Prevention and Control of Pollution) Act, 1984’ on the availability of injunctive relief under the above said section. However there is difference of judicial opinion on this issue. The Kerala High Court in \textit{Tata Tea Ltd. V State of Kerala}\textsuperscript{325} ruled that “court could not entertain a section 133 action to await water pollution even where a state board was remiss”.\textsuperscript{326}

According to this view the Water Act was a complete code to prevent water pollution and impliedly repealed the provisions of Section 133 of Cr.P.C in so far as they relate to prevention and control of water pollution.

In \textit{Nagarjun Paper Mills Ltd. V Sub Divisional Magistrate and Divisional Officer, Sangareddy}\textsuperscript{327} the Andhra Pradesh High Court considered a petition from Magistrate’s conditional order shutting down a paper mill that has failed to take adequate pollution control measures. The mill challenged the order, claiming that State Pollution Control Board had exclusive power to regulate air and water pollution. Rejecting the argument, the High Court upheld the Magistrate’s power to regulate the pollution by restraining the public nuisance. It was observed by the court that “the Magistrate’s power to act under Section 133 is not

\begin{itemize}
\item \textsuperscript{322} Section 133(2), The Code of Criminal Procedure, 1973.
\item \textsuperscript{324} Municipal Council, Ratlam v Vardhichand, AIR 1980 SC 1622.
\item \textsuperscript{325} 1984 Ker. L. T. 645.
\item \textsuperscript{326} Ibid.
\item \textsuperscript{327} 1987 Cri. L. J. 2071.
\end{itemize}
affected by the other special or local laws which deal with nuisance. The powers of the Sub-
Divisional Magistrate under the above said section has not been taken away even by the
‘Water (Prevention and Control of Pollution) Act 1984’.

4.5.5.8. Common Law

Common Law is a body of customary law of England based on judicial decisions. The
term “common law” is derived from Latin phrase “lex Communis”. The present legal system
in India is formed on the basis of the English Common Law brought into India by the British.
From the eighteenth century, the British colonial rulers, who were eager to have a legal
system that would maintain law and order and secure property rights, gradually imposed on
India a general system of law.

Anglo Indian judicial system was laid by judicial plan of 1772 adopted by Warren
Hastings on which later administrations built superstructures. The structures and the
powers of the court, role of judges and lawyers, the adversarial system of trial, the reliance of
judicial precedent and the shared funds of concepts and techniques brought the Indian Legal
system into the mainstream of the common law system.

It is said that “common law in India, in the widest meaning of the expression, would
include not only what in England is known strictly as common law but also its traditions and
some of the principle underlying the English statute law.” The common law originally
introduced into India by the British, continues to apply here by virtue of Article 372(1) of the
Indian Constitution unless it has been modified or changed by legislation in India.

The Common Law remedies against environmental pollution in general and water
pollution in particular are available under the Law of Torts. Tort is a civil wrong other than
breach of trust or contract. The tortious action results in the violation of legal right. The
affected person can claim damages, compensation or injunction or both.

While commenting on nature of wrong of pollution the Supreme Court in the case of M. C.
Mehta v Kamal Nath and Others observed the following:

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329 Dr. Madhvi Parikh, “Tortious liability for Environmental Harm: A Tale of Judicial Craftsmanship”
2Nirma University Law Journal. 76 (2013) available at www.manupatra.co.in/newsline/articles/upload/1B0960FF-9DFE-4A43-917D-065ED5E6EE03.PDF (Visited on 26 February 2016).
331 Supra note 330.
332 Ibid.
333 Notwithstanding the repeal by this Constitution of the enactments referred to in Article 395 but subject
to the other provisions of this Constitution, all the laws in force in the territory of India immediately
before the commencement of this Constitution shall continue in force therein until altered or repealed
or amended by a competent Legislature or other competent authority.
334 AIR 2002 SC 1515.
“Pollution is a civil wrong. It is a tort committed against the public as a whole, by its very nature. A person, therefore, who is guilty of causing pollution has to compensate for restoration of the ecology and environment. He also has liability to pay damages to the persons who have suffered loss due to the act of the wrongdoer. The powers of this Court under Article 32 are not restricted and it can award damages in a PIL or a Writ Petition as has been held in a series of decisions. In addition to general damages above said, The wrongdoer can also be made liable to pay exemplary damages to the sufferer so that it may leave a deterrent effect on others to avoid causing pollution in any manner…The considerations for which "fine" can be imposed upon a person guilty of committing an offence are different from those on the basis of which exemplary damages can be awarded.”

The India Judiciary has played a remarkable role in implementing the principles of tort law in environmental issues. The credit goes to the Supreme Court in interpreting the same old principles of tort with wider meaning to encompass wherever and whenever necessary, the Supreme Court has evolved new principles of tort and gave a new shape to tortious liability in environment protection.

The liability of polluter under the Law of Tort is one of the main and oldest legal remedies to control or diminish the pollution. The significant tortious liabilities for environmental pollution or water pollution in particular are under the following heads:

1. Nuisance
2. Trespass
3. Negligence
4. Strict Liability

To these traditional categories, the Supreme Court has added a new class based on the principle of absolute liability.

4.5.5.8.1. Nuisance

In relation to water, under the tort law the act of polluting the water is termed as a nuisance. We do not have a precise definition of the civil wrong called as nuisance. Nuisance can be described as unlawful interference with another’s use and enjoyment of lands or of some right over or in connection with land. A nuisance may also be caused by negligence. It is of two kinds: (a) Private nuisance and (b) Public nuisance.
Private nuisance is physically injuring a property or by interfering materially with his leisure, comfort or convenience by using or authorising the use of one’s property or anything under one’s control so as to injuriously affect an owner or occupier of property.\textsuperscript{336} Private nuisance affecting water rights includes acts leading to wrongful disturbance of easements for example, disturbance of right to water from a particular water channel or tank, wrongful escape of water into another’s property etc. The conduct of the defendant must be unreasonable then only it can be actionable. According to Pollock, “the nuisance is the wrong to a person illegally disturbing him of (a) the enjoyment of his property, or, in some cases (b) in the exercise of a common right.”\textsuperscript{337}

A nuisance would comprise offensive smell, noise, water pollution or air pollution. Thus the basis of action under this section may be discharge of murky water, poisonous or any hazardous or polluting substance, solid, liquid or gaseous or any other polluting substances into any water body. Thus action for nuisance is a common remedy available apart from any action under any statute. The contemporary environmental law finds its roots in the Common Law concept of nuisance.\textsuperscript{338} To be nuisance an act must satisfy certain conditions. These are as follows:

1. The act causing nuisance must not rise on the plaintiff’s properties.
2. It must occur beyond the plaintiff’s property and then continue to affect that property or its use.
3. It must not be a single instance, in other words, it must be a continuing one i.e. long standing, not a trivial one.

A single instance of nuisance of harmful effects may be the evidence of continuous, unreasonable use of land and amounts to an act of nuisance. In other words, it is also a nuisance when the single act is so serious that it leads to some continuous wrongful effects. The loss suffered by the plaintiff must be substantial or material. It can be assessable or determinable in some or the other way.\textsuperscript{339} Under an action of nuisance, Damages as well as injunction can be sought by the plaintiff. The applicability of nuisance concerning pollution is quiet extensive. It includes an array of inferences with the use and enjoyment of one’s land or property coming from pollution of water, air, smell noise, etc. Due to pollution of surface, underground and tidal waters caused by the defendant, injunctive and damages reliefs have

\textsuperscript{339} Kailash Thakur, Environmental Protection Law and Policy in India 186 (Deep and Deep Publications, New Delhi, 2007).
been granted to prevent the pollution or compensate the plaintiff for injury suffered by him.\textsuperscript{340}

Remedies for public nuisance are:

1. ‘A criminal prosecution for the offence of causing public nuisance’.\textsuperscript{341}
2. ‘A criminal proceeding before a magistrate for removing public nuisance’.\textsuperscript{342}
3. ‘A civil action by the advocate general or by two or more members of the public with permission of the court for a declaration, injunction or both’.\textsuperscript{343}

The operation of nuisance in relation to water pollution may be illustrated by reference to a few English cases. In \textit{Pride of Derby and Derbyshire Angling Association Ltd. v British Celanese LD},\textsuperscript{344} the plaintiffs were the owners of a fishery in a river and the defendants were a local authority charged by the legislation with the duty of providing a sewerage system in the local area. The local authority was diverting the effluents of sewers, after treatment in the beds and tanks of their disposal works, into the river. The treatment was not successful in rendering the effluent harmless. It was still noxious. This was held to be a nuisance which could be prevented by an injunction restraining the local authority from polluting the river.

In \textit{Haign v. Deudraeth Rural District Council}\textsuperscript{345} the plaintiff owned certain fields which were in part intersected, and in part bounded, by a stream. The crude sewage matter had been discharged into it in considerable quantities by the sewers owned by the local authority. It was held to be a nuisance and injunction was issued to restrain the local authority from discharging the sewage matter into the river.

About the pollution of underground water it has been stated that although there can be no property in percolating water, an action will lie against one who fouls the water supply existing in the underground strata, so that the water reaches the plaintiff in an impure condition.\textsuperscript{346}

Similarly with regard to tidal waters the provision in Common Law is as follows: The general rule that a riparian owner on the banks of natural stream is entitled to receive the flow of water in its natural state and unpolluted and that an infringement of this right gives him a right of action is also applicable to tidal waters.

\textsuperscript{340} Id., at 187.
\textsuperscript{341} Section 268, Indian Penal Code, 1860.
\textsuperscript{343} Section 91, the Code of Civil Procedure, 1908.
\textsuperscript{344} (1953)1 Ch. 149.
\textsuperscript{345} (1945) 2 K.B. 661.
\textsuperscript{346} S. N. Jain, “Legal Control of Water Pollution in India” in S. L. Agarwal(ed.) \textit{Legal Control of Environmental Pollution} 21 (Ashish Publishing House, New Delhi, 1980).
4.5.5.8.2. Trespass

Trespass means direct interference, deliberate or neglectful with personal or proprietary rights without any legal justification. There is no need to show damages resulted from trespass. In other words, the tort of trespass is actionable per se. The wrong of trespass is closely related to nuisance. However, it is a distinct wrong and rarely invoked in the environmental cases. It requires an intended interference in the plaintiff’s right of the exclusive possession over the property. This interference may be direct or indirect i.e. through some tangible substances. According to Lord Pearson, “trespassing is the form of misbehaviour, showing lack of considerations for the rights of others. It would be unfair if trespassers could by their misbehaviour impose onerous obligations to others.”

Thus, intentional placing of waste in such a way that carries it to the plaintiff’s property by natural forces, release of gas or unseen smokes constitutes tort of trespass. Every invasion of property is a trespass, however trivial it is. If the injury is direct, it is trespass and if it is consequential it is nuisance. It is somewhat difficult to prove direct interference in environmental disputes.

In ESSO Petroleum v. Southport Corporation when an oil tanker stranded and to try refloat, some oil drifted ashore and polluted the sea and claimant’s foreshore, the claimant bared the cost of cleaning. The action of trespass to discharge oil at sea which was then washed from foreshore was not brought. The two judges of House of Lords thought that it would have failed since pollution was not unavoidable.

In Jones v Leanrwst Urban District Council when sewage was accidently released and polluted the river downstream, the interference was held to be direct, keeping in view the natural flow of river.

Due to the requirement of element of directness in the action of trespass, it has not been developed appropriately in the cases of pollution. There has been inclination of the judiciary to grant relief under this head of tort. In Martin v. Reynold Metal Company, “the court revised the outdated definition of trespass to bring industrial pollution within the ambit of liability. It defines trespass as the intrusion of right of landowner to exclusive possession, whether by tangible or intangible object and held that mere setting of fluoride deposits upon the plaintiff’s was adequate to bring an action for trespass.”

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348 Supra note 255 at 190.
349 (1956) AC 218.
350 (1911)1 Ch. 393.
351 (1959) 221 Ori 86.
352 Supra note 255 at 190-191.
Trespass is an exceptional and exclusive action for remedy with regard to water pollution. Because the direct entry of pollutants into the defendants’ land or from other’s land may be easy to establish except in case of air pollution. As there is less applicability of the tort of trespass concerning environmental claim its scope is perhaps undefined.\textsuperscript{353} However in \textit{M. C. Mehta v Union of India}\textsuperscript{354} (Span Motel Case) though the ground of trespass was not raised but it fulfilled all the requirements for the action of trespass.

\textbf{4.5.5.8.3. Negligence}

A Common Law action for negligence may be brought to prevent environmental pollution or water pollution in particular. In an action for negligence, the plaintiff must show the following:

\begin{itemize}
  \item [a)] The defendant must owe a duty to take reasonable care towards the plaintiff;
  \item [b)] There was a breach of this duty by the defendant; and
  \item [c)] The breach of duty caused the foreseeable damage.
\end{itemize}

In every case, the standard of care required depends on the surrounding circumstances. It differs according to the risk involved and the extent of the probable injury.\textsuperscript{355} The presence of direct link between negligence and harm caused must be established in order to succeed in action of it. Further, absence of due care taken on the part of the person claimed to be guilty of negligence has to be proved.\textsuperscript{356} The Common Law action for negligence has been raised at times to seek damages in water pollution cases, but with limited success.

The law of negligence requires that every act of an individual is subject to the “duty to take care” and “negligence” principles. Each principle is explained below.

An action for negligence may be the only remedy available to a person who otherwise cannot sue for nuisance or under the rule laid down in \textit{Rylands v. Fletcher}\textsuperscript{357} because of technicalities. The biggest difficulty to succeed in negligence cases is proving the breach of duty by the defendant. Breach of duty is regarded as an unreasonable failure to achieve the standard of care required by law or to conform to general and approved practices. Conformation with general policy, approved practices and generally accepted trade practices are good defences against an action of negligence and are commonly evoked by the defendant to escape from his liability.

\begin{footnotesize}
\begin{itemize}
  \item 1997(1) SCC 388.
  \item Shyam Divan, Armin Rosencranz, \textit{Environmental Law and Policy in India} 100 (Oxford University Press, New Delhi, 2014).
  \item (1868) LR 3 HL 330.
\end{itemize}
\end{footnotesize}
Another difficulty in negligence cases of pollution is that of establishing the causal connection between the negligent act and the plaintiff’s injury or in other words ‘the negligence principle’. In interpreting the “neighbour” principle observations made by Lord Atkin in the English case of *Donoghue v Stevenson* \(^{358}\) are of great importance. He states that “the neighbours seem to be persons who are so closely and directly affected when I am directing my mind to the acts or omissions which are called in question”. Thus, where there is a breach in a canal as a result of which water escapes and damages the property and enjoyment of virtually all the local people then all these people become the injured neighbours who are entitled to compensation in tort.

In *Mukesh Textiles Mills (P) Ltd. v H.R. Subramania Shastry* \(^{359}\) the plaintiff suffered damage to their standing paddy and sugarcane crop in their fields from excess flooding of water, polluted with some 8000 tonnes molasses belonging to the defendants factory. Molasses were stored in earthen tank, which had become dilapidated having been dug into by rodents and consequently the embankment had collapsed and a large quantity of molasses overpowered land. The defendant was held liable on the ground of foreseeability and strict liability by the Karnataka High court.

**4.5.5.8.4. Strict Liability**

The rule of Strict Liability as enunciated in *Rylands v. Fletcher* \(^{360}\) is another form of private law action in respect of environmental hazards. The rule made by Blackburn J. in this case is that the person who for his own purpose brings, collects and keeps anything in his possession, which likely to do any harm if it escapes, must keep it in at his own risk. If he does not do so, he is prima facie liable for all the damage resulting from its escape.

The rule of Strict Liability is subject to the following exceptions:

1. An act of God.
2. Act of third party.
3. The plaintiff’s own fault.
4. The plaintiff’s own consent.
5. The natural use of land by the defendant.

\(^{358}\) 1932 S.C. (H.L.) 31
\(^{359}\) AIR 1987 Kant 87
\(^{360}\) House of Lords (1868) LR 3HL330
The rule of Strict Liability has been applied to a variety of circumstances wherein damage has resulted inter alia covering the water pollution. This rule has been applied in rare situations relating to escape of water causing damage.\textsuperscript{361}

There has been a remarkable judicial achievement in 1985. A more stringent rule called absolute liability was laid down by the Supreme Court in Case of \textit{M.C.Mehta v. Union of India}.\textsuperscript{362} This case was related to harm caused by escape of oleum gas from one of the units of Shriram Foods and Fertiliser Industries in Delhi. The court evolved a new principle of liability for enterprises engaged in hazardous or inherently dangerous activities. Under this principle if any harm results from the hazardous activity the enterprise is absolutely liable to compensate for such harm. Such liability affords no exceptions as available under the rule in \textit{Rylands v. Fletcher}. Such a rule ensures that hazardous industries should bear the burden of damage resulted from the escape of such substances. But its fairness particularly in such cases where the escape which may result from any natural calamity such as an earthquake or from an attack from enemy aircraft is subject to doubts.\textsuperscript{363}

\textbf{4.5.9. Some Other Major Legal Themes Relating To Water}

\textbf{4.5.9.1. Drinking Water Supply}

Drinking Water Supply is one of the primary water related concern for any government. This is not surprising given the direct link between drinking water and human survival. Drinking water supply is one of the core component of water law and policy that is most associated with the realisation of the fundamental right to water.\textsuperscript{364}

The A.P. High Court in \textit{P.R. Subhash Chandran v. Government Of A.P.}\textsuperscript{365} held that “under the constitution, the role of the state to provide every citizen with adequate clean drinking water and to protect water from getting polluted is not only a fundamental directive principle in the governance of the state but is also a penumbral right under Article 21 of the constitution of India”.

The constitutional jurisprudence of the nation developed by the judiciary has placed drinking water as a derivative right within the purview of right to life under Article 21.\textsuperscript{366} Whenever the shortage of drinking water was brought to the attention of the judicial

\begin{footnotes}
\footnotetext[361]{Supra note 340 at 194.}
\footnotetext[362]{AIR 1987 SC 1086.}
\footnotetext[363]{Supra note 340 at 195.}
\footnotetext[364]{P. Cullet, and Sujith Konnan, \textit{Water Law in India} 69 (Oxford University Press, New Delhi, 2011).}
\footnotetext[365]{AIR 2000 AP 272.}
\end{footnotes}
bodies, their response reflected a deep concern about the issue in terms of basic human rights. This is evident from the observation by the court as given below:

“Water is a gift of nature. Human hand cannot be permitted to convert this bounty into a curse, oppression. The primary use to which the water is put being drinking, it would be mocking the nature to force the people who live on the bank of a river to remain thirsty, whereas others incidentally placed in an advantageous position are allowed to use the water for non-drinking purposes.”

India being a vast and diverse country there exist many challenges in ensuring reliable, sustainable safe drinking supply to every households of the country. A two way approach is adopted in India in this regard viz:

1. Statutes focussing on water supply and at times water supply and sanitation to be driven by state agencies.
2. Policy initiatives by the Central government to help and complement the State’s activities with the overall purpose of providing clean drinking water and thereby providing public health.

At the level of the states, there have been several initiatives leading to the adoption of legislation concerning drinking water. The relevant Acts are, however not conceived as framework drinking water legislations. As some of the existing Acts focus on limited set of issues, such as the introduction of specific regulatory measures in time of water scarcity. One such legislation, “the Calcutta Metropolitan Water Supply and Sanitation Authority Act, 1966” passed with a view to promote public health deals with subject elaborately. It establishes an authority to be a body corporate with wide range of powers for fulfilling the objectives of the Act. It also regulates the exploitation of soil waters.

The water supply legislations are meant for drinking and non-drinking purposes. A broad classification of water laws could be laid down as follows:

1. Laws for the water supply in the State as a whole;
2. Laws passed for water supply in the metropolitan cities;
3. Laws enacted for providing water to specific industrial areas;
4. Laws setting up water boards for urban water supply;
5. Laws on regulation of ground water extraction, use and transportation.

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369 Chhatarpati Singh, Water Law in India 310 (Indian Law Institute, New Delhi,1992).
370 Supra note368.
The states of Karnataka and Maharashtra have enacted ground water focussed drinking water legislation.\textsuperscript{371} Other states such as Uttar Pradesh have preferred water supply law focussing on establishing institutional mechanism for supplying water. The laws primarily meant for cities provide for maintenance, development and construction of facilities and are in co-existence with the municipal laws in the concerned areas.\textsuperscript{372}

‘The Andhra Pradesh Municipalities Act, 1965’ which replaced ‘the Andhra Pradesh Area District Municipalities Act, 1925’ provided that the ‘Municipal Council’ shall so far as the funds at its disposal may admit, provide sufficient supply of water fit for the use of inhabitants.\textsuperscript{373} It also empowers the municipality to supply water to commercial establishments, industrial undertakings etc. It could be seen that the responsibility of providing drinking water rests with the municipalities.

Different states then proceeded to set up special purpose organisations whose mandate covered both water and sewage. ‘The Tamil Nadu Water Supply and Drainage Board Act, 1970’, ‘The U.P. Water Supply and Sewerage Act, 1975’ and ‘the Punjab Water Supply Sewerage Board Act, 1976’ are few of such legislations passed by the states. The state legislations are enacted in the states with the objectives of providing and regulating water supply, maintaining public health and setting up of corporations or boards for the same.\textsuperscript{374}

The Assam Act provides for the setting up of an urban board for development, regulation and maintenance of water supply and sewage services.\textsuperscript{375} The Karnataka Act provides for the creation of a board, having powers of monitoring various schemes and distributing monetary funds to the local bodies.

The Kumaun and Garhwal Water Act\textsuperscript{376} applicable to Kumaun and Garhwal divisions of U.P. except Terai & Bhabar of Nainital Distt. and Garhwal Division brought about a fundamental and drastic change in the law that prevailed until that time. The Act vested the state government with the sole power to regulate and control the collection, retention and distribution of water and water sources for the purposes of human and animal consumption, irrigation and industrial development.

\textsuperscript{371} Karnataka Ground water (Regulation for Protection of Sources of Drinking Water) Act, 1999 available at www.ielrc.org/content/e9905.pdf and Maharashtra Groundwater (Regulation for Drinking Water Purposes) Act 1993 available at www.ielrc.org/content/e9301.pdf (Visited on 24 March 2016).
\textsuperscript{372} Supra note 370.
\textsuperscript{373} Section 138, The Andhra Pradesh Municipalities Act, 1965.
\textsuperscript{374} Preamble, U. P. Water Supply & Sewerage Act,1975.
\textsuperscript{375} The Assam Urban Water Supply and sewerage Board Act,1985.
\textsuperscript{376} The Kumaun and Garhwal Water (Collection, Retention &Distribution)Act, 1975.
An analysis of the water supply laws show that most of this legislation were enacted at a time when state was perceived as predominant actor in the public sphere.\textsuperscript{377} These specific water supply laws are characterised by some limitations such as limited water supply, limited to towns and cities, levying of charges, no accountability of state agencies in case of failure of their duties etc.\textsuperscript{378}

4.5.9.2. Sanitation

There has been a major change in the way in which sanitation is perceived nowadays both at national and international levels. Sanitation, in the second decade of twenty-first century, must imperatively be conceived as encompassing various dimensions rather than as a question of access to toilets alone. There is no doubt that there is an intrinsic link between water and sanitation but sanitation has also link to other sectors as health and environment. Further, sanitation in India can only be addressed in a meaningful manner if its social, religious, and labour dimensions are also considered as an integral part of the sector.\textsuperscript{379}

The sanitation law in India includes constitutional provisions, legislations, judgements and a variety of administrative orders and policy documents. There is no fundamental right to sanitation specified in the Constitution of India but sanitation is included in two different ways. First, since the higher judiciary has recognised the existence of the fundamental right to sanitation as derived from the fundamental right to life.\textsuperscript{380} Second the Constitution includes a fundamental right that does not mention the term sanitation but constitutes an integral part of a broadly conceived right to sanitation. This is the abolition of untouchability which is linked to practice of manual scavenging.\textsuperscript{381}

Sanitation law is first characterised by the absence of any legislation that deals with all dimensions of sanitation. What exists as sanitation law is found in different laws that may or may not be linked to sanitation. The first category of law that is linked to sanitation is local laws for both rural and urban areas. None of the laws define sanitation or provide a set of general principles applicable with regard to sanitation, they do provide framework within which the responsibilities of local bodies, which are enshrined in the Constitution are to be performed. A second type of legislation is environmental law that include ‘the Environment (Protection) Act, 1986’, ‘the Water (Prevention and Control of Pollution) Act, 1974’, and

\textsuperscript{377} Supra note 368.
\textsuperscript{378} Ibid.
\textsuperscript{379} Philip Cullet and Lovleen Bhullar, Sanitation Law and Policy in India 8(Oxford University Press,NewDelhi,2015).
\textsuperscript{381} Article 17, Constitution of India, 1950.
subsidiary instruments of these laws. Other relevant legislation includes public health laws, such as ‘the Goa, Daman and Diu Public Health Act, 1985’ which makes the link between health, sanitation and water supply. Legislation setting up institutions governing water also includes sanitation, as in the case of ‘the Uttar Pradesh Water Supply and Sewerage Act, 1975’. 382

‘Water supply and sanitation’ is a state responsibility under Indian Constitution. States may give the responsibility to Panchayati Raj Institutions in rural areas or municipalities in urban areas. At present, States generally plan, design and execute water supply schemes and often operate them through the state departments. At the central level, ‘the Ministry of Drinking Water and Sanitation’ (until 2011 the Department of Drinking Water Supply in the Ministry of Rural Development) is responsible for rural Water supply and sanitation. ‘The Ministry of Housing and Urban Poverty Alleviation’ and ‘The Ministry of Rural Development’ take the responsibility of urban water supply and sanitation.

4.5.9.2.1. The Sanitation in Urban Areas

The sanitation in urban areas was guided by the National Urban Sanitation Policy. 383 The vision for urban sanitation in India is:
“All cities and towns of become totally sanitisised, healthy and liveable and ensure and sustain good public health and environmental outcomes for all their citizens focussing on hygienic and affordable sanitation facilities for the urban poor and particularly women”.

In order to achieve the above vision the following key policy issues must be addressed:

1. Poor awareness among the citizens.
2. Social and occupational aspects of sanitation.
3. Scattered institutional roles and responsibilities. 3
4. Absence of an integrated city wide approach.
5. Inadequate technology options.
6. Reaching the marginalised and poor.
7. Want of demand receptiveness.

The transformation of urban India into community driven, totally sanitisised, healthy and liveable cities and towns is the overall goal of this policy. A new framework seeking to achieve the vision of ‘the National Urban Policy, 2008’ was adopted in 2014. The Prime Minister of India on 2 October, 2014 launched the “Swachh Bharat” Mission to accelerate the efforts to achieve universal sanitation coverage and to put focus on sanitation. The mission

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included two sub missions: “The Swachh Bharat Mission (Gramin)” and “Swachh Bharat Mission (Urban)”. The guidelines for “Swachh Bharat Mission (Urban), 2014” seek to give a common overall framework to sanitation policy in urban areas. The general objective of the mission is to provide comprehensive sanitation solutions for all of India’s 4041 statutory towns. Abolition of open defecation, eliminating use of insanitary toilets and eradicating manual scavenging are constituents of this elaborate mission. “Sensitisation of people on the importance of sanitation along with breaking the age old behaviour of defecating in the open and toilet usage are few themes of the Mission.”

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The Mission has the following components:

i. Provisions for household toilets
ii. Community toilet
iii. Public toilets
iv. Solid Waste Management
v. IEC and Public awareness
vi. Capacity building and A&OE

4.5.9.2.2. The Sanitation in Rural Areas

‘The rural sanitation programme’ was introduced in the country in the Year 1954 as a part of First ‘Five Year Plan’ by the Government of India. In 1986, the Government of India introduced ‘the Central Rural Sanitation Programme’ with the objective of improving the quality of life of rural people and also to provide privacy and dignity to women. From 1999, a demand driven approach under the ‘Total Sanitation Campaign’ focused more on “information, education and communication, human resource development, capacity development activities to foster awareness among the rural people and generation of demand for sanitary facilities.”

386 Administrative and Office Expenses.
387 Total Sanitation Campaign Guidelines, 2007 (as amended in 2010) available at [www.ielrc.org/content/e0716.pdf](http://www.ielrc.org/content/e0716.pdf) (Visited on 19 April 2016).
The ‘Nirmal Bharat Abhiyan’, the successor programme of ‘Total Sanitation Campaign’ was launched from 1st April, 2012. The aim was to accelerate the sanitation coverage in the rural areas so as to cover the rural community comprehensively through renewed strategies and saturation approach. The major objectives of the SBM (Gramin) are as under:

a) Improvement in the overall quality of life in the rural areas, by encouraging cleanliness, hygiene and disregarding defecation in open.
b) Accelerate sanitation coverage in rural areas to achieve the vision of ‘Swachh Bharat’ by 2nd October 2019.
c) Encourage Communities and Panchayati Raj Institutions to adopt sustainable sanitation practices and facilities through spreading awareness and education regarding health and sanitation.
d) Encourage appropriate, updated and cost effective technologies for environmentally safe and sustainable sanitation.
e) Develop wherever required, Community managed sanitation systems emphasising on scientific Solid & Liquid Waste Management systems for total cleanliness in the rural areas.

The guidelines issued by the MDWS provides a process comprising three-phase describing the various activities to be commenced under each of these phases—planning, implementation and sustainability. Information about the role of and administrative structure at the Panchayat and block level, role of community based organizations and swachhata doots apart from other options such as microfinance for toilet construction, rural sanitary marts and community sanitary complexes are components of it.\(^{389}\)

While major changes in the sanitation sector are being implemented through policies and programmes at the initiatives of the Union Government, the legal framework remains underdeveloped, in particular, in comparison with developments on the policy front.\(^{390}\) In practice most of the municipal Acts contain a chapter dealing with water supply and sanitation. Uttar Pradesh Water Supply and Sewerage Act, is an example of such legislation containing provisions relating to sanitation.

**4.5.9.3. Groundwater**

The law relating to groundwater in India is inappropriate. We do not have a comprehensive legislation to regulate the development of groundwater. The legislative


\(^{390}\) P. Cullet, Sujith Koonan (ed.) *Water Law in India* 121 (Oxford University Press, New Delhi, 2011).
competence to enact laws on water is primarily with the states under the State List. In the absence of state enacted laws the groundwater is controlled by Indian Easement Act, 1882, common law principles and property law.

4.5.9.3.1. Central Law on Groundwater

Although the Central Government would find it difficult to enact groundwater legislation due to incompetence under constitutional scheme but the first attempt dated back to 1970 when such first model bill was passed. The Model Bill to regulate control, conserve, protect and manage the groundwater was first framed in 1970 and since then has been revised in 1992, 1996, 2005 and 2011 and more recently in 2016. The Model Bill drafted in 1970 on groundwater sought to introduce a licensing system by the ground water Authority, which would notify areas for regulation of groundwater. To improve upon and correct certain defects in the Act, the Model Bill was drafted in 1992. This was further amended in 1996. In 2005, the Ministry of Water Resources released a further draft Bill to control and regulate the use of groundwater. The Union Government, through the Ministry of Water Resources, has been encouraging state governments to adopt groundwater laws by formulating and circulating the Model Bill to regulate control, and manage the groundwater.

The Central Government has come up with the draft Model Bill for “the Conservation, Protection, Regulation, and Management of Groundwater” in August 2016. The Model Bill provides that the Act is to restore and ensure groundwater security through availability of adequate quantity and proper quality of groundwater to all users in rural and urban areas. It provides asserts that serious groundwater crisis prevails due to excessive overdraft and groundwater contamination. It recognises the application of ‘public trust doctrine’ and provides groundwater in its natural state is ‘common pool resource’ and private property rights in groundwater are inappropriate.

Salient features of Draft Model Groundwater Bill, 2016

‘Draft Model Groundwater Bill, 2016’ is based on the principles of subsidiary, equitable distribution in an integrated approach. According to it the State should act as public trustee of groundwater which should be considered as a common pool resource to ensure that groundwater is protected, conserved, regulated and managed.

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392 Supra note 390 at 268.
393 Model Bill For The Protection, Conservation, Regulation And Management Of Groundwater, 2016 available at wrmin.nic.in/forms/Listaspx?lid=1304&Id=6 (Visited on 5 May 2016).
Objectives of the Act as provided under the Model Bill are to ensure that groundwater is protected, conserved, regulated and managed in a manner so as to achieve the following purposes:\(^{394}\)

a. effective realisation of the fundamental right to life through the provisions for life;
b. fulfilment of basic needs such as food security, basic human needs, livestock and aquatic life needs;
c. sustainable use of groundwater in the public interest;
d. adoption of integrated approach in the management of groundwater;
e. implementation of the principle of subsidiarity;
f. protection of the ecosystems and their biological diversity; and
g. protection against gender discrimination and past inequalities in access to groundwater.

The Model Bill also sets binding national water quality standard and pushes for a national water security plan. It gives first priority to meeting the right to water for life, followed by allocation for achieving food security, supporting sustenance agricultural sustainable livelihoods and ecosystem needs. The Bill also provides for the dispute resolution by mediation or conciliation at appropriate level.

The Central Bill proposes, inter alia, the compulsory registration of bore well-owners, compulsory permission for sinking a new borewell, creation of a groundwater regulatory body, restrictions on the depth of borewells and establishment of protection zones around sources of drinking water.\(^{395}\)

It provides for the constitution and membership of the State Groundwater Advisory Council and District Groundwater Council. The State Groundwater Advisory Council shall provide advice and support to all groundwater bodies constituted under this Act.\(^{396}\)

The institutional framework in rural areas is as under:

- Gram Panchayat Groundwater Sub-Committee
- Block Panchayat Groundwater Sub-Committee

In urban areas the institutional framework is as under:

- Ward Groundwater Committee
- Municipal Water Management Committee

\(^{394}\) Ibid.


\(^{396}\) Ibid.
At district level it is as under:
District Groundwater Council
Groundwater Grievance Redressal Officer to be nodal officer for implementation of Act.
Information and monitoring cells and supporting institutes at all levels.

4.5.9.3.2. State Groundwater Legislation

‘The Model Bill to regulate and control the development and management of groundwater’ was largely ignored by the states for about three decades. It is only over the past fifteen years that states and Union territories have started adopting groundwater legislations. In response to the Model Bill, so far, eleven states and four Union territories have adopted and implemented ground water legislation. These are Andhra Pradesh, Assam, Bihar, Goa, Himachal Pradesh, Jammu and Kashmir, Karnataka, Kerala, West Bengal, Telangana, Maharashtra, Lakshadweep, Puducherry, Chandigarh and Dadra and Nagar Haveli.

The basic framework is directly derived from the current Model Bill in all the states/UTs that have adopted groundwater statute. Several states have enacted laws based on the Model Bills of 1992 and 1996. While the comprehensive structure is similar, few differences can be noted in the different state Acts.

These statutes vary in their extent as some are applicable only to notified areas while others apply to all groundwater in the state.\textsuperscript{397} In addition, few earlier legislations emphasised particularly on the groundwater use for drinking water supply. Andhra Pradesh is one of the state that has enacted groundwater law in a wider framework linking surface and groundwater in the context of environmental protection.\textsuperscript{398}

The groundwater Acts aims to set up new institutional structure in the respective state. There are some variances in the composition of these institutions for example in Goa, the Act simply empowers the state government to nominate members without specifying their origin.\textsuperscript{399} In West Bengal, the majority of these members are civil servants. In Kerala only four of the thirteen members of the Authority are civil servants while the rest is composed of a combination of experts in different fields.\textsuperscript{400} The authority constituted under the Act has been assigned with different functions such as notifying areas of special areas of concern and

\textsuperscript{397} S. Koonan, “Groundwater-Legal Aspects of the Plachimada Dispute” in P. Cullet, A. Gualtieri, (et. al.) (ed.), \textit{Water Governance in Motion} 159 (Cambridge University Press, New Delhi, 2010).

\textsuperscript{398} Andhra Pradesh Act to promote water conservation, and tree cover and Regulate the exploitation and use of ground and surface water for protection and conservation of water sources, land and Environment and Matters, connected therein or incidental thereto,2002.

\textsuperscript{399} Section 3 (2), Goa Ground Water Regulation Act, 2002.

\textsuperscript{400} Section 3 (3), Kerala Ground Water Regulation Act, 2002.
granting permits to use groundwater in notified areas.\textsuperscript{401} The west Bengal legislation is the only one that gives the authority a wider command that comprises the development of a policy to conserve the groundwater and promote people’s participation and involvement in the planning and use of groundwater.\textsuperscript{402}

In most of the Acts the prioritisation of use of water for drinking purpose is absent even though most Acts devote specific attention to the issue of drinking water.\textsuperscript{403} The Himachal Pradesh legislation casts duty on the authority to give first priority to drinking water.\textsuperscript{404} Further, some statutes particularly imply that the use of groundwater as public drinking water source should not be affected by any measures of control.\textsuperscript{405}

There is lack of implementation of the different provisions of these Acts and there are different reasons for the lack of implementation and in absence of data these can only be guessed. Other factors can be the increasingly politically sensitive nature of groundwater leading to lack of state initiatives. The dependence on groundwater for all uses of water in a state has resulted in a situation where no government dares to upset the existing equilibrium, however crooked it may be.\textsuperscript{406} Moreover, these regulations do not address the issue adequately and are designed in a manner that makes implementation difficult.\textsuperscript{407}

\textbf{4.5.9.4. Irrigation}

The irrigation laws include construction, maintenance and regulation of tanks, canals, drainage and other irrigation works. Various acts on irrigation empower the state government to use waters from a natural resource in public interest. The right to use waters out of irrigation works may be acquired by permission in writing or rational distribution of water in some statutes.\textsuperscript{408} Further, although none of the legislation speak of the customary rights in water, ‘The Kumaun and Garhwal Water Act, 1975’ expressly abolishes all existing rights in water, if any to use water in areas to which this Act extends.\textsuperscript{409}

The essential contents of most of the statutes passed by the state legislatures are as follows:

i. Construction and maintenance of irrigation works.

ii. Construction and maintenance of water courses.

\textsuperscript{401} Section 5 and Section 7, The Himachal Pradesh Ground Water Resources (Control of Development and Management) Act, 2005.

\textsuperscript{402} Section 6 (2), West Bengal Ground Water Resources(Management, Control and Regulation)Act, 2005.

\textsuperscript{403} Philippe Cullet, “Groundwater Towards a new Legal and Institutional Framework” available at http://www.ielrc.org/content/W1201.pdf(visited on 11.05.2016)

\textsuperscript{404} Section7(3),Himachal Pradesh Ground Water(Regulation and Control of Development and Management)Act,2005.

\textsuperscript{405} Supra note 322 at 10.

\textsuperscript{406} Ibid.

\textsuperscript{407} Phillip Cullet(ed.),\textit{Water Law for the Twenty-first Century} 117(Routledge, London and NewYork,1\textsuperscript{st} ed.2010)

\textsuperscript{408} Section 21, The Orissa Irrigation Act, 1959

\textsuperscript{409} Section 3, The Kumaun and Garhwal Water (Collection, Retention and Distribution)Act, 1975
iii. Provisions relating to water supply.

iv. Levy of water rate and cess.

v. Penalties for damaging irrigation works.

In the recent times, there have been significant attempts to involve farmers in operation and management of the irrigation systems in India. In a number of statutes including the states of Andhra Pradesh, Orissa, Madhya Pradesh, Rajasthan, Kerala etc., the law enabling farmer’s participation in irrigation management has come via the state enactments relating to irrigation\textsuperscript{410}.

4.5.9.5. Flood Management

The primary responsibility for flood control lies with the States. Several States have already passed Acts with provisions regarding ‘Flood Management’. ‘The Assam Acquisition of Land for Flood Control and Erosion Act, 1955’, ‘The U. P. Flood (Emergency Powers) Evaluation and Requisition Act, 1951’ and ‘the Bihar Irrigation and Flood Protection Act, 1959’ provide for certain related aspects. These statutes contain the provisions relating to flood, protection of life and property from damage caused or threatened to be caused by floods, diversion of flow, removal of any obstruction, provision for accommodation, boats and compensation.

Surprisingly, flood control does not find mention in any of the three lists given in Schedule VII of the Indian Constitution. However, State list includes drainage and embankments in Entry 17.\textsuperscript{411} It would not be wrong to state that flood control is a state subject. The states not only make schemes according to their needs but implement the same with their own resources. The Central Government plays only an advisory role in the matter. A two tier flood control mechanism exists in India, one at the State level and another at the Central level.

The State Level Mechanism for flood control and flood management comprises of the Water Resources Departments, State Technical Advisory Committee and Flood Control Board. The Irrigation Departments and Public Works Departments have been assigned the duty to take care of flood matters in some states.\textsuperscript{412}

\textsuperscript{410} Lin Crase, Vasant P. Gandhi (ed.) Reforming Institutions in Water Resource Management 139 (Earthscan, London, 1\textsuperscript{st} ed., 2009)

\textsuperscript{411} Entry 17 List II, Schedule VII, Constitution of India reads as under:
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(Union List).

\textsuperscript{412} Flood management available at
The Central Government’s Mechanism of flood management is more elaborate. Various organizations and expert committees have been set up to help the State Governments address flood problems in an exhaustive manner.

4.5.9.5.1. Central Water Commission

The Central Water Commission was established in 1945 with the objectives of controlling the floods, conserving and utilizing water resources in the areas of beneficial uses throughout the country, river conservation, irrigation and generation of hydropower generation, and flood management.\textsuperscript{413}

The Central Water Commission works with a mission to promote integrated and sustainable development and management of India's Water Resources by using state-of-art technology and competency and coordinating all stake holders.\textsuperscript{414}

Being a premier Technical Organization in the field of water resources, the Central Water Commission is an attached office of the Ministry of Water Resources, River Development and Ganga Rejuvenation, Government of India. The main functions of the Central Water Commission include:

1. Commencing, organizing and advancing schemes for conservation, control and utilization of water resources in consultation of the State Governments for flood control, irrigation, navigation, drinking water supply and water power development.
2. Investigating, constructing and executing the schemes as required.

The Commission is headed by a Chairman, who is the Ex-Officio Secretary to the Government of India. The work of the Commission is separated as three wings viz., Designs and Research Wing, River Management Wing and Water Planning and Projects Wing. Each wing is looked after by a Member who is also the Ex-Officio Additional Secretary to the Government of India and comprising of number of Organizations accountable for the delegation of tasks and duties which falls within their assigned scope of functions.

The Central Water Commission has, since its inception, made valuable contribution in planning, investigation, management and design of water resources development schemes throughout the country.

\textsuperscript{414} \textit{Ibid.}
\textsuperscript{414} Available at \url{http://www.cwc.nic.in/} (Visited on 21 April 2016).
1. **Brahmaputra Board**

The Brahmaputra Board was established by the Indian Government in 1980 under Brahmaputra Board Act, 1980 for all North Eastern states in Brahmaputra and Barak Basin. The Brahmaputra Board functions under the Ministry of Water Resources. The main functions of Brahmaputra Board inter alia include:

- Conducting surveys and investigations in Barak and Brahmaputra valley.
- Preparing the master plan for controlling floods, bank erosion, and improving drainage system.
- Specifying standards for construction operation and maintenance of dams.\(^{415}\)

2. **Ganga Flood Control Commission**

The Central Government set up ‘The Ganga Flood Control Commission’ in 1972 to prepare comprehensive plan of flood control for Ganga Basin. Ganga Flood Control Commission was assigned the responsibility to make a programme to implement the works related to flood management schemes of Ganga basin States. The comprehensive plans prepared by Ganga Flood Control Commission have been implemented in 23 sub-basins in the Ganga Basin. Besides, the Ganga Flood Control Commission has drawn out a phased programme of implementation of these works.

3. **Farakka Barrage Project Authority**

The Farakka Barrage Project Authority carry out anti-erosion and river bank protection works in its jurisdiction in near river vicinity of the Barrage.\(^{416}\)

4. **National Disaster Management Authority**

National Disaster Management Authority was set up by the Government of India in 2005 under the Chairmanship of the Prime Minister of India to:

(i) lay down policies on disaster management;

(ii) Approve National Plan and the plans prepared by the Ministries or departments of in accordance with the National Plan;

(iii) lay down guidelines to be followed by the State Authorities in drawing up the State Plan and by different Ministries or departments integrating the measures for prevention of disaster or the mitigation of its effects in their development plans and projects;

\(^{415}\) *Ibid.*

\(^{416}\) Available at [http://fbp.gov.in](http://fbp.gov.in) (Visited on 22 April 2016).
(iv) Coordinating the enforcement and implementation of the policy and plan for disaster management;

(v) Recommending provision of funds for the purpose of mitigation.\textsuperscript{417}

The guidelines issued by the National Disaster Management Authority in January, 2008 relate to flood management and specifies the roles of various agencies- Central and State, for preparing flood mitigation plans and taking relief measures during floods.

\textbf{4.5.9.6. Water Conservation}

Conservation of water resources is one of the most important aspects in water management. But so far there has not been an adequate legislative activity in this regard. U.P. Bhoomi Evam Jal Sanrakshan Adhiniyam, 1963 is one of such laws for the conservation of water which is grossly neglected. ‘The Andhra Pradesh Water, Land and Trees Act, 2002’ is one of the most comprehensive pieces of legislation on water conservation and green cover implemented by any state. The preamble of the Act points out that “it aims to promote water conservation, and the tree cover and surface water for the protection and regulate the exploitation and use of ground and surface water for the protection and conservation of water sources, land and environment. Under the Act the state government has constituted an authority called the Andhra Pradesh State Water, Land and Trees Authority.”\textsuperscript{418}

The Water Conservation Authority of India Bill, 2016 was framed to provide for the establishment of a Water Conservation Authority for the conservation of water of the rivers, ground and rainwater through traditional means of ponds, wells, canals, trenches, etc. and by building reservoirs, bunds and check dams, reviving dried rivers, making trenches in riverbeds, building recharge shafts, depending and widening canals and ponds, building permanent water conservation structures by means of rainwater harvesting to recharge the groundwater, encouraging people to participate in water conservation movement and plantation of trees in a big way and for matters connected therewith and incidental thereto.\textsuperscript{419}

The Central Government, shall as soon as may be, but within one year of the commencement of this Act, by notification in the Official Gazette, establish a Water Conservation Authority of India for the purposes of this Act.\textsuperscript{420} The Authority shall formulate and execute a comprehensive action plan for the conservation of water of rivers, ground and

\begin{itemize}
  \item \textsuperscript{417} \url{http://www.ndma.gov.in/en/projects-and-scheme.html} (Visited on 22 April 2016).
  \item \textsuperscript{418} Section 3, The Andhra Pradesh Water, Land and Trees Act, 2002.
  \item \textsuperscript{419} Preamble, The Water Conservation Authority of India Bill, 2016.
  \item \textsuperscript{420} \textit{Id.}, Section 3(1).
\end{itemize}
rainwater throughout the country and perform such other functions relating to water conservation as may be assigned to it by the Central Government.\textsuperscript{421}

Other functions of the Authority include the following.\textsuperscript{422}

(a) Building adequate number of reservoirs at conspicuous places in different parts of the country, particularly in desert and drought prone areas.

(b) Reviving all the dried rivers and make trenches in all the river basins.

(c) Constructing bunds and check dams on river beds.

(d) works relating to deepening and widening canals and ponds

(e) building recharge shafts and construction of sufficient number of trenches at appropriate places

(f) building permanent water conservation structures and provision for recycling of wastewater

(g) desiltation of existing reservoirs, ponds, canals and such other water bodies

(h) recharging shafts for dried up bore wells, village ponds and hollows

(i) reviving all the lost ponds and lakes

(j) encouraging people to participate in water conservation in particular school children and villagers to build water conservation structures

(k) advising the appropriate Government to make rain water harvesting compulsory in all Government buildings, public parks and places, households and establishments and educate the masses about rainwater harvesting

(l) advising the appropriate Government to diversify water guzzling crops.

(m) giving wide publicity through radio, videos, pamphlets, booklets, hoardings, and through print and electronic media the importance of water conservation.

(n) encouraging tree plantation as a movement.

(o) such other functions as may be deemed necessary for carrying out the purposes of this Act.

4.5.9.7. Mining

The extraction of natural resources has links with water use and conservation. Mining is such activity, whose impacts include the pollution of water, as a by-product of mining activities, as well as various impacts on groundwater.\textsuperscript{423} For integrating the impact of mining on water in the regulatory framework “the Mines and Minerals (Development and Regulation) Act, 1957” lays down legal framework for the regulation of mines and

\textsuperscript{421} Id., Section 4(1).

\textsuperscript{422} Id., Section 4(2).

\textsuperscript{423} P. Cullet, Sujith Koonan (ed.) \textit{Water Law in India} 333 (Oxford University Press, New Delhi, 2011).
development of all minerals other than petroleum and natural gas. But, it makes no specific space for integrating the impact of mining on water in the regulatory framework. ‘The Mines and Minerals (Development and Regulation) Amendment Act, 2015’ amends ‘the Mines and Minerals (Development and Regulation) Act, 1957’ and acknowledges the relevance of water in several of its provisions. However, this does not amount to an integration of water law principles in mining law and, in the form proposed, would probably have little impact in practice.  

‘The National Mineral Policy (for Non-Fuel and Non-Coal Minerals) 2008’ recognises generally the impact of mining on water. It provides that the extraction of minerals on other natural resources like land, water, air and forest. Mining activity often lead to environment problems like land degradation in open cast mining and land subsidence in underground mining, deforestation, pollution of rivers and streams and so on, all affecting the ecological balance of the area. It further provides that all mining shall be undertaken within the limits of a all-inclusive sustainable development framework.

The Supreme Court in an important judgment has asked the Union Government to review ‘the National Mineral Policy, 2008’, and announce a fresh and more effective, meaningful and implementable policy.

With regard to issue of mining without an environment clearance or forest clearance or both, the court made these important summarizations:

“A mining project that commenced prior to January 27, 1994, and has obtained a No objection certificate from the SPCB prior to that date is permitted to continue its mining operations without obtaining an EC from the impact assessment agency. However, this is subject to any expansion (including an increase in the lease area) or modernisation activity after January 27, 1994, which would result in an increase in the pollution load. In that event, a prior EC is required. However, if the pollution load is not expected increase despite the proposed expansion (including an increase in the lease area) or modernisation activity, a certificate to this effect is absolutely necessary from the SPCB, which would be reviewed by the impact assessment agency.”

It was observed that “An EC is required for the renewal of a mining lease even if there is no expansion or modernisation activity or any increase in the pollution load after

424 Ibid.
427 Ibid.
January 27, 1994.”

Further, “For considering the pollution load, the base year would be 1993-94, which is to say that if the annual production after January 27, 1994, exceeds the annual production of 1993-94, it would be treated as an expansion requiring an EC.”

There is no doubt that a new mining project after January 27, 1994, would require prior EC. With effect from September 14, 2006, all mining projects having a lease area of 5 hectares or more are required to have an EC. The extraction of any mineral in such a case without an EC would amount to illegal or unlawful mining attracting the provisions of Section 21(5) of the MMDR Act.”

Following the directions of the Supreme Court, the Central Ministry of Mines has set up a Committee to review the Mineral Policy.

4.5.9.8. Electricity

Electricity is linked to water in at least two different ways. Firstly, electricity generated by water and the second key connection is falling water tables and the increasing demand for energy to pump groundwater. Electricity law does not recognise the links between access to electricity, the price of electricity and access to groundwater. Further it does not recognise any link between electricity and the realisation of fundamental right to water.

Electricity is in the concurrent List, and both Centre and the states can legislate on the subject. Central Act relating to the subject is Electricity Act, 2003. It prohibits tariff differentiation linked to different uses of electricity, something that could be used for instance to increase better access to drinking water. The lack of a water dimension pervades electricity law.

The Rural Electrification Policy, 2006 only makes a single reference to water which does no more than the existence of a link.

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428 Ibid.
429 Ibid.
430 Ibid.
431 Ibid.
433 Supra note 425 at 336.
434 Section 62, Electricity Act, 2003 provides as under:
435 Determination of tariff.- (1) The Appropriate Commission shall determine the tariff in accordance with the provisions of this Act for--

(a) supply of electricity by a generating company to a distribution licensee:

Provided that the Appropriate Commission may, in case of shortage of supply of electricity, fix the minimum and maximum ceiling of tariff for sale or purchase of electricity in pursuance of an agreement, entered into between a generating company and a licensee or between licensees, for a period not exceeding one year to ensure reasonable prices of electricity;
In the last few years, the Central Government has introduced several policy measures to revitalise the power sector with the aim of encouraging private sector participation. The most significant move to reform is the Electricity Act of 2003, a legislation aimed at liberalising the power generation sector. The reforms have had mixed success, in part due to the vast size and complexity of the sector and also the reluctance of the State Electricity Boards to adopt the new framework.  

4.5.9.8.1. National Electricity Policy

The Central Government is authorised to frame The Electricity Act 2003, inter alia, the ‘National Electricity Policy’ in consultation with ‘Central Electricity Authority’ (CEA) and State Governments. This Act also authorises the Central Government to revise or review the ‘National Electricity Policy’ from time to time.

National Electricity Policy contains the following relating to hydro-electricity generation:

Hydroelectricity is a fresh and renewable source of energy. Maximum efforts would be made on the full development of the possible and achievable hydro potential in the nation. The initiatives have been already taken and projects have already been launched to generate

(b) transmission of electricity;
(c) wheeling of electricity;
(d) retail sale of electricity;

Provided that in case of distribution of electricity in the same area by two or more distribution licensees, the Appropriate Commission may, for the promoting competition among distribution licensees, fix only maximum ceiling of tariff for retail sale of electricity.

(2) The Appropriate Commission may require a licensee or a generating company to furnish separate details, as may be specified in respect of generation, transmission and distribution for determination of tariff.

(3) The Appropriate Commission shall not, while determining the tariff under this Act, show undue preference to any consumer of electricity but may differentiate according to the consumer's load factor, power factor, voltage, total consumption of electricity during any specified period or the time at which the supply is required or the geographical position of any area, the nature of supply and the purpose for which the supply is required.

(4) No tariff or part of any tariff may ordinarily be amended, more frequently than once in any financial year, except in respect of any changes expressly permitted under the terms of any fuel surcharge formula as may be specified.

(5) The Commission may require a licensee or a generating company to comply with such procedure as may be specified for calculating the expected revenues from the tariff and charges which he or it is permitted to recover.

(6) If any licensee or a generating company recovers a price or charge exceeding the tariff determined under this section, the excess amount shall be recoverable by the person who has paid such price or charge along with interest equivalent to the bank rate without prejudice to any other liability incurred by the licensee.


Section 3 (1) of the Electricity Act 2003 provides as under:

The Central Government shall, from time to time, prepare the National Electricity Policy and tariff policy, in consultation with the State Governments and the Authority for development of the power system based on optimal utilization of resources such as coal, natural gas, nuclear substances or materials, hydro and renewable sources of energy.

Section 3 (3) of the Electricity Act 2003.
hydroelectricity of 50,000 MW capacity. Certain other projects are being strongly pursued with DPRs for projects of 33,000 MW capacities already under preparation.

Since a large proportion of our hydro power potential is located in the north and North-Eastern States like Sikkim, Uttarakhal, Himachal Pradesh and J&K, the economic development of States can be improved by harnessing speedy hydro potential. There is need to focus on the full development of these potentials at the earliest in these states. Hydel projects requires comparatively larger capital investment. Therefore, debt financing of longer tenure would need to be made available for hydro projects. Central Government is committed to policies that ensure financing of possible hydro projects.

State Governments need to review procedures for land acquisition, and other approvals/clearances for speedy implementation of hydroelectric projects. The State Governments will be supported by the Central Government by providing services of Central Public Sector Undertakings like National Hydroelectric Power Corporation (NHPC) for swift development of hydroelectric projects.

Proper implementation of National Policy on Rehabilitation and Resettlement (R&R) would be vital in this regard so as to ensure that the issues and concerns of the people affected by these projects are adequately addressed. Sufficient safeguards for the protection of environment with appropriate mechanism for monitoring of implementation of Environmental Action Plan and R&R Schemes will be taken.439

4.5.9.9. Dam Projects

There is no separate set of laws relating specifically to dam projects. The planning, approval, financing, construction, operation and maintenance of such projects take place within the constitutional and legal framework of the country.

The legislative competency of the states to plan and implement dam projects is conferred by Entry 17 in the state list.440 Whereas the centre gets this power by Entry 56 of Union List441 and Entry 20 of Concurrent List relating to economic and social planning. Centre has not made or been able to make significant use of the enabling provision of Entry 56. It is Entry 20 of Concurrent list which provides the necessary constitutional basis for the requirement of central clearance for major and medium irrigation projects.

440 Entry 17 in the State List runs as follows: Water, that is to say, water supplies, irrigation and canals, drainage and embankments, water storage and water power subject to the provisions of Entry 56 of List I.
441 Entry 56 in the Union List, which runs as follows: Regulation and development of interstate rivers and river valleys to the extent to which such regulation and development under the control of Union is declared by Parliament by law to be expedient in the public interest.
‘The Inter-State Water Disputes Act 1956’ is an important law in the context of planning and construction of dams. The awards of the tribunals constituted under the Act must be considered while planning and approving such projects. In some cases the award itself leads to the formulation or acceleration of the projects. Another central legislation is ‘the River Boards Act, 1956’ that provides only for the establishment of advisory boards, but no board have been set up under the Act and the Act has remained virtually inoperative.

Other important Central enactments relating to dam projects are ‘the Environmental protection Act, 1986’ and ‘the Forest conservation Act, 1980’. Central clearances under the Acts are an essential part of the processes of the approval of dam projects in the national plan. There are other water related laws such as ‘Wild Life Protection Act, 1972’ and ‘Water (Prevention and Control of Pollution) Act, 1974’.

There are several Acts at the state level relating to irrigation, groundwater, irrigation and drainage Acts and the rules and regulations made under these Acts concerned with irrigation, canals, tanks and maintenance of these tanks and canals. All these Acts have a bearing on the actual operation of dam projects. Currently there is some advocacy of separate legislation to provide a legal underpinning to the programme of participatory Irrigation Management that seeks to transfer the management of irrigation systems below the outlet at a certain level to farmer’s associations.442 The Andhra Pradesh Farmers Management of Irrigation Act443 is one of such legislation.

4.5.9.10. Resettlement and Rehabilitation

Large scale projects often involve issues of the displacement, resettlement and rehabilitation of people. Right to fair compensation and transparency in land acquisition are important aspects of Central legislation relating to displacement, rehabilitation and resettlement (‘LARR Act, 2013’). This Act explains the process to be followed when land is acquired for a public purpose. Additional changes from the current provisions have been made respect to (a) the process of land acquisition; (b) rights of the people affected by the acquisition; (c) methods for calculating compensation; (d) issues with respect to Rehabilitation and Resettlement in all acquisitions.

Compensation, rehabilitation and resettlement to the people affected in regions are the rules prescribed in the Act. As per the Act, fair compensation is provided to those whose lands are taken away. Under this Act there is a precision to the acquisition of land or buildings, infrastructural projects under Public or Private Entities and ensures rehabilitation

442 Ramaswamy R. Iyer, Water Perspectives, Issues, Concerns 146 (Sage Publications India Pvt. Ltd, New Delhi, 2010).
to those affected. The Act has established regulations for land acquisition to attract India’s massive industrialization sector under the public private partnership. This Act is a replacement of 1894 Land Acquisition Act, a law established under the British Rule. Major changes and related procedures were felt necessary in the land Acquisition Act, 1894. Keeping in view these required changes the new Act was passed. Salient features of this Act are as following:

- Land acquired by the government will be used only for public purposes. The Bill explains “public purposes” as “defence and national security; roads, railways, highways, and ports built by either the government or under public private project; land for the people affected; planning of the development; and settlement of people affected by the acquisition (if not resettled), implementation of government administered schemes or institutions, etc”.

- Apart from these purposes the relevant part relating particular to, inter alia, ‘public purpose’ includes “project for water harvesting and water conservation structures, sanitation”.

- “Social Impact Assessment (SIA) shall be done by the central government, with proper consultation from the Gram Sabha (and equivalent bodies)” Once the Social Impact Assessment (SIA) is done, the study shall be looked by an expert panel. The expert group shall comprise of two non-official social/rural experts, two rehabilitation experts, followed by a technical expert with SME (Subject Matter Expertise) on the topic. The SIA report shall be passed on to a committee which will make sure that the proposal’s for land acquisition is met.

- The information regarding acquiring of the land shall be sent prior to the acquisition (within 12 months prior) to the owner of the property from the date of evaluation by the SIA. Furthermore, the government shall conduct a survey of the land and the extent of land to be acquired. The objections with respect to this process shall be heard by the Collector. Following complete analysis of the land, if the government is certain to acquire, then a proper draft is to be designed. Once the declaration is published, the government shall acquire the land. No transactions shall be allowed if

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446 Id., Section 4.
447 Id., Section 7.
448 Ibid.
for the specific land from the date of preliminary notification until the process of acquisition is complete.

- In any case of urgency the above mentioned provisions are not mandatory. The urgency clause is only applicable for defence, national security or during a calamity. In such cases, before taking over the land, 80 percent of the compensation shall be paid by the government.\(^{449}\)

- This Act provides that no irrigated multi crop land shall be acquired. If under exceptional circumstances such land is acquired, the government should ensure that equivalent area of cultivable waste land shall be developed for agricultural purposes or the amount equivalent to the value of the land acquired shall be deposited with the appropriate government for investing in agriculture for enhancing food security.\(^{450}\) This is in consonance with the Food Security Act, 2013. So in case of acquisition of multi crop fertile lands, the object is to see that cultivable lands are not diminished, and thereby to ensure that there is no shortage of food production.

- In case of land-owners/landless people whose lands are affected in acquisition, rehabilitation and resettlement scheme has to be prepared.\(^{451}\)

- A special provision is made for the benefit of the people belonging to Schedule Castes and Scheduled Tribes and their lands should not be acquired as far as possible and in case of demonstrable last resort, their lands are acquired under a special development plan for their rehabilitation and resettlement.\(^{452}\)

- Land acquired for one purpose cannot be used for another purpose\(^{453}\) section 99. However if the land is rendered useless for the originally notified purpose, the

\(^{449}\) Id., Section 9.

\(^{450}\) Id., Section 10. Special provision to safeguard food security.—

(1) Save as otherwise provided in sub-section (2), no irrigated multi-cropped land shall be acquired under this Act. (2) Such land may be acquired subject to the condition that it is being done under exceptional circumstances, as a demonstrable last resort, where the acquisition of the land referred to in subsection (1) shall, in aggregate for all projects in a district or State, in no case exceed such limits as may be notified by the appropriate Government considering the relevant State specific factors and circumstances. (3) Whenever multi-crop irrigated land is acquired under sub-section (2), an equivalent area of cultivable wasteland shall be developed for agricultural purposes or an amount equivalent to the value of the land acquired shall be deposited with the appropriate Government for investment in agriculture for enhancing food-security. (4) In a case not falling under sub-section (1), the acquisition of the agricultural land in aggregate for all projects in a district or State, shall in no case exceed such limits of the total net sown area of that district or State, as may be notified by the appropriate Government: Provided that the provisions of this section shall not apply in the case of projects that are linear in nature such as those relating to railways, highways, major district roads, irrigation canals, power lines and the like.

\(^{451}\) Sections 16 and 17 of The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013.

\(^{452}\) Id., Section 41.

\(^{453}\) Id., Section 99.
appropriate government may use it for another purpose.\textsuperscript{454} If the land acquired is not utilized within a period of five years from the date of taking possession, it shall be redelivered to the original owner.\textsuperscript{455}

- Section 24 of the Act, 2013, protects certain category of persons whose lands have been notified/acquired under the Act, 1984. The provisions of the Act, 2013 will apply

(a) Where no award has been passed under section 11 of the Act, 1984 for payment of compensation,

(b) Where award has been passed under section 11 of the Act, 1984, more five years or more prior to the commencement of the Act, 2013, but physical possession has been taken or compensation has not been paid.

In the above two circumstances, the proceeds under the Act, 1984 are deemed to have lapsed. Further, where award is passed and compensation of majority land-holdings has not been deposited in the account of beneficiaries, then all the beneficiaries specified in the section 4 notification under the Act, 1984 will be entitled to compensation under the Act, 2013.\textsuperscript{456}

Compensation payable to the land-owners is provided in Schedule-I of the Act, 2013. The land-owner will get market value multiplied by one or two times (for urban and rural lands as the case may be), along with interest which includes 100\% solatium. Similarly, Schedule-II is also provided detailing out the manner in which the land-owners and landless poor will be rehabilitated and resettled.

Despite a number of changes in the law relating to displacement, academic researches as well as field experiences clearly indicate that relocated populations end up worse-off than before. The principle impoverishment risks arising from forced displacement are landlessness, joblessness, homelessness, marginalisation, increased morbidity, food insecurity, lack of access to common property and social disarticulation.\textsuperscript{457}

4.5.10. National Water Policy

‘The Ministry of Water Resources’ of the Government of India formulated the ‘National Water Policy’ to govern the planning and development of water resources and their

\textsuperscript{454} Ibid.
\textsuperscript{455} Id., Section 101.
\textsuperscript{456} Id., Section 24.
optimum utilization in 1987. ‘The National Water Policy’ was reviewed and modified in 2002 and more recently in 2012. The objective of the ‘National Water Policy’ is “to take cognisance of the existing situation and to propose a framework for creation of an overarching system of laws and institutions and for a plan of action with a unified national perspective.”\(^{458}\)

The major provisions under the policy may be summed up as under:

1. Establishing a standardized national information system with a network of data banks and data bases
2. Resource planning and recycling for providing maximum availability
3. To give importance to the impact of projects on human settlements and environment.
4. Laying the guidelines for the safety of storage dams and other water-related structures
5. Regulating the exploitation of groundwater
7. Rationalising the water rates for surface water and ground water taking into consideration the interests of small and marginal farmers.
8. Participation of farmers and voluntary agencies.

The policy also deals with water quality, water zoning, conservation of water, flood and drought management, erosion etc. The new policy includes some welcome change in priorities for water to be treated as a community resource under state ownership, and gives priority for base river flows and water as a social good for basic drinking water and sanitation needs. But the priority for agriculture needs and the increasing conflict of industry-agriculture and urban-agriculture water needs is not stressed in the draft.\(^{459}\) But, the new draft is at variance with the earlier water policy adopted a decade ago which states that drinking be accorded the highest priority followed by irrigation, hydro-power, ecology, industrial requirement, and navigation and other uses.\(^{460}\)

The new policy does have a number of positive elements that were not there in the earlier policy. But, in our view, it does not go far enough in preparing the nation for the optimum management of water resources in the 21st century. Also, since water is a State

\(^{458}\) Preamble, National Water Policy 2012.
\(^{460}\) Ibid.
subject, the States are required to formulate their own water policies on the guidelines provided by the national policy.\footnote{Water Policy and Action Plan for India 2020: An Alternative available at http://planningcommission.nic.in/reports/genrep/bkpap2020/10_bg2020.pdf (Visited on 12 December 2016).}


This Draft of 16 May 2016 was released by the Union Government to provide an overarching legal framework with principles for protection, conservation, regulation and management of water as a vital and stressed natural resource. It will be circulated as a model bill to the states, to replace the existing draft law of 2013. The draft bill talks about sharing the river water by states without violating rights of others. Water pricing and regulators, water as right, drought management, flood management, water quality and water conservation are other areas that the bill covers.

Some key provisions of the draft Bill are as under:

\begin{enumerate}
\item \textbf{Right to water for life}

Describing “water as part of life” the proposed law provides that “every person has a right to sufficient quantity of safe water for life within easy reach of the household regardless of, among others, caste, creed, religion, community, class, gender, age, disability, economic status, land ownership and place of residence.”\footnote{Section 3(1), Draft National Water Framework Bill, 2016.}

It defines “water as part of life” as the basic requirement necessary for the fundamental right of life of each human being, including drinking, cooking, bathing, sanitation, personal hygiene and related personal or domestic uses. This includes additional requirement for women for their special needs and includes water required for domestic livestock.\footnote{Id., Section 2(aa).} It provides that states responsibility for ensuring every person’s right to safe water for life shall remain even when water service provision is delegated to a private agency.\footnote{Id., Section 3(3).}

\item \textbf{Binding national water quality standards}

A binding national water quality standard for every kind of use is proposed to be introduced.\footnote{Id., Section 10.}

\item \textbf{Integrated river basin development and management plan}

An Integrated river basin development and management plan is supposed to be drawn up and all water resource projects in that basin or sub basins need to conform to that plan.\footnote{Id., Section12.}
iv. Dispute Resolution

The Draft National Water Framework Bill, 2016 in Section 29 provides that appropriate institutional arrangements shall be established at all levels within the state and beyond i.e. up to an inter-state river basin to resolve disputes through negotiations at the earliest stages to avoid recourse to adjudication as far as possible.

Here’s what the bill says about water sharing and conflicts:

- None of the states in a river-basin owns the river but as public trustees of the water resources of the river, all of them have rights to use the water of the river: Provided that such use does not violate the right to water for life of any person in the river basin.
- All basin states in a river system are equal in rights and status i.e. equality of rights means not equal but equitable shares in the river waters and there is no hierarchy of rights among them.
- Optimum and sustainable development of the inter-state rivers and river valleys should be provided by the Centre for River Basin Authority for each inter-state river basin or for a sub-basin of sub inter-state river basin.
- Each river basin authority should prepare a master plan for the basin under its jurisdiction
- The upper basin state shall adopt a cautious and minimalist approach to major interventions in inter-state rivers; provide advance information to the 25 lower basin states about plans for intervention; consult them at all stages on possible impacts; and take care to avoid significant harm or injury to them.
- All basin states shall cooperate in good faith in an inter-state river system, for an equitable, prudent and holistic use of the river waters for the benefit of all.
- To obviate and/or resolve emerging inter-state river-water disputes through negotiations, conciliation or mediation, or other such means, at the earliest stages before the disputes become acute, appropriate institutional arrangements shall be formed at all levels within the state and beyond up to an inter-state river-basin so as to avoid recourse to adjudication as far as possible.
- Existing water-related conflicts or disputes shall be reviewed and appropriate action taken in the light of the provisions of this Act.
- To collect, collate and process hydrologic data regularly from all over the country a National Water Informatics Centre shall be established.
• An appropriate agency shall be set up for each river basin/sub-basin to collect and collate all data on regular basis with regard to rainfall, river flows, area irrigated by crops and by source, utilisations for various uses by both surface and ground water.\textsuperscript{467}

v. Rejuvenation of river system

The draft law asks the government to strive for rejuvenation of river systems by ensuring ‘Aviral Dhara’ (continuous flow), ‘Nirmal Dhara’ (unpolluted flow) and ‘Swachh Kinara’ (clean and aesthetic river banks).\textsuperscript{468}

vi. People centred decentralised management

The Draft Bill provides for people-centred decentralised water management, for both surface and ground water, including local rainwater harvesting, watershed development and participatory irrigation management. At the same time the local initiatives need to be recognized, encouraged and empowered.\textsuperscript{469}

vii. Appropriate treatment and use of waste water

The Government is to make efforts for not only the appropriate treatment of wastewater but also its gainful utilisation. For achieving these goals the Government has to evolve and implement economic models that make use of the principles of recycle-reduce-and-reuse.\textsuperscript{470}

viii. Flood mitigation and management

Section 20 of the Draft National Water Framework Bill, 2016 provides that the Central Government shall develop a Decision Support System (DSS) for forecasting flood and flood inundation under the National Water Informatics Centre (NWIC). The State Governments shall also develop their own DSS to address the state-specific issues. The NWIC’s responsibility is to ensure that the central DSS and the State DSS is provided with adequate and effective linkage.

ix. Drought mitigation and management

Each State Government is required to prepare a Drought Mitigation and Management Policy and Action Plan within six months of enforcement of this Act.\textsuperscript{471}

x. Sectoral use of water

In order to bring about sectoral use of water, the Government is to ensure conformity with the Service Level Benchmarks that are prescribed for water supply, sanitation, solid


\textsuperscript{468} Section 5, Draft National Water Framework Bill,2016.

\textsuperscript{469} Id., Section 7.

\textsuperscript{470} Id., Section 9.

\textsuperscript{471} Id., Section 21.
waste management and storm water drainage. A provision has been made for the metering and pricing of urban water supply on a volumetric basis. The government has to recognise, undertake and encourage a participatory approach to irrigation management at all levels including the establishment of Water Users Associations which shall be accorded statutory powers to collect and retain a portion of Irrigation Service Fees. The industrial units have to make efforts for reducing their water footprint over time. Industries, in particular will be asked to state their water footprints in their annual reports, along with an action plan to progressively reduce it overtime. A provision related to industrial use of water says that there shall be prohibitive penalties to discourage profligate use with denial of water supply services beyond a threshold.

xi. Water resource information system

The Central Government shall develop and maintain a publicly available web based Water Resources Information System on Geographical Information System Platform.

xii. Water use prioritisation

The first priority of the Bill lies that be meeting the right to water for life. It shall also include allocation for achieving food security, supporting sustenance agriculture, sustainable livelihoods and eco-system needs. As per the new law it shall be the duty of the State at all levels, the citizens and all category of water users to protect, preserve and conserve water resources and pass them on to the next generation.

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472 Id., Section 23.
473 Id., Section 24.
474 Id., Section 2(z), defines ‘Water footprint’ means the total volume of water directly used and the water embodied in goods and services used, by an individual or community or country as a whole, or by an industry or business in its production or other commercial activity;
475 Id., Section 25.
476 Id., Section 27.
477 Id., Section 11.